Ref.:HZL/RDM/ENV/2022-23/ **Date – 05.05.2022**

By Registered Post

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

Sub: – Compliance report of Environment Clearance for **Rajpura Dariba Mines, Dist: Rajsamand-313211**, Rajasthan of M/S Hindustan Zinc Limited

Ref: - Environment Clearance Letter No. **– J-11015/84/2018-IA.II (M), dated 13.04.2020**

Sir,

With reference to the above subject, we are hereby submitting the **six-monthly compliance report** of the conditions stipulated in the **Environment Clearance** for the period of **October 2021 to March 2022.**

Thanking You.

Yours faithfully

(Pushpendra Singh Dhaibhai)
Unit Head - RDM

CC: 1. Incharge (Zonal Office)
Central Pollution Control Board,
Vithal Market, Paryavaran Parisar, E-5, Area Colony, Bhopal, PIN - 462016
2. Member Secretary,
Rajasthan State Pollution Control Board,
4, Institutional Area, Jhalana Doongri, Jaipur-302004 (Raj)
3. Regional Officer,
Rajasthan State Pollution Control Board
Old Excise office building, Kalalwati Rajnagar, Rajsamand (Rajasthan), PIN – 313324
4. The Deputy Director(s)/Scientist – C
Ministry of Env., Forest and Climate Change,
Integrated Regional Office, Jaipur,
A-209 & 218, Aranya Bhawan, Mahatma Gandhi Road,
Jhalana Institutional Area,
Jaipur (Raj.) - 304002
5. O/C Env Cell

Hindustan Zinc Limited
Rajpura Dariba Lead-Zinc Mine
PO: Dariba, Railmagra Distt. Rajsamand (Raj.) - 313211
Reg. Office: Yashad Bhawan, Udaipur (Rajasthan) 313 004
CIN – "L27204RJ1966PLC001208"

Compliance Report of Environmental Clearance granted by the Ministry of Environment, Forests and Climate Change, Govt. of India

- **Name of the Project:** Expansion in production of Lead-Zinc Ore from 1.08 million TPA to 2.0 million TPA (Total Excavation 2.48 million TPA) & Lead-Zinc Ore Beneficiation from 1.2 million TPA to 2.5 million TPA from Rajpura Dariba Underground Mine (Mining lease area 1142.2106 & ML No. 166/2008), Located at Tehsil Relmagra, Distt- Rajsamand, Rajasthan, by M/S Hindustan Zinc Ltd
- **Clearance letter No.:** J-11015/84/2018-IA.II (M), dated 13.04.2020
- **Period of Compliance Report:** October 2021 to March 2022

Specific Conditions:

S.No.	A. Specific Conditions	Compliance Status
1	NOC for CGWA obtained vide LR No: 21-4(315)/WR/CGWA/2008-1905 dated 16.11.2017 wherein the permission for dewater the accumulated ground water in mining pits @446.5 m3/day due to seepage and intersection of water table was provided. This NOC is valid for 3 years i.e., up to 15.11.2020. Beyond 15.11.2020. PP shall use the ground only after obtaining approval from CGWA and State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) for expansion proposal after 15.11.2020, till the project proponent obtains such permission. Zero liquid Discharge is to be maintained from tailing dam, PP shall not use surface water without obtaining permission from the concerned authorities. Plant should be operated with 100% recycle water and fresh water shall be used only for drinking purpose which is supplied for industrial, colony and nearby villages.	• Noted. • Renewal NOC for 446.5 m3/day and Expanded capacity NOC for 2698 m3/day for dewatering of mine water due to seepage and intersection of water table vide letter dated 16.11.2020 and 07.01.2022 respectively and are valid till 15.11.2022 and 06.01.2024 respectively. • Zero Liquid discharge is maintained from tailing dam. • Surface water is being used from Matrikundia and Mansiwakal dams as per the water supply agreements. • 100% recycled water is being used for mine operations and Ore beneficiation plants. • Freshwater is being used only for drinking (domestic) purposes which is supplied for Industrial, Colony and nearby villages.
2	Out of 0.48 MTPA of waste, 0.46 MTPA shall be used to fill underground voids, 0.02 to waste dumps and not more than 0.02 MTPA shall be used for increasing the height of tailing dam. Waste should not be transported outside the mining lease area and shall be utilised within the mining lease area. the dump shall be developed in 3 benches of 7 metre high. Total height of the dump shall not be more than 21 meters (from bases level of 495 mRL i.e. upto 516 mRL). The overall slope of the dump shall not be more than 35°. Total quantity of the waste materials in waste dump shall not be more than 3.64 lakh tonne. Protective measures as proposed vis. a) overall slope angle of waste dump is maintained at less than angle of repose	• Noted. • Waste generated due to mining is used for filling of voids in stopes. • No waste is transported outside mining lease. • For the compliance reporting period, no waste was dumped on waste dumps and the entire waste generated was used for in-stope dumping for filling of mine voids. • Overall slope angle of waste dump is being maintained at less than angle of repose of broken material.

	of broken material, b) retaining wall is maintained around the waste dump to prevent roll down boulders, c) garland drain of 1 m x 1m around waste dump is excavated for collecting the rain water into the storm water pit, and d)plantation shall be done in the inactive area of the waste dump to provide additional stability etc. shall be implemented for the stability of the waste dump. The area of dump yard should not be more than 5 Ha.	• Retaining wall is maintained around the waste dump to prevent roll down boulders • Garland drain of 1 m x 1m around waste dump is maintained for collecting the rain water into the settling pits. • Plantation has been provided on the inactive area of waste dump. • Area of waste dump is less than 5 Ha.  **PLANTATION NEAR MAIN SHAFT AREA**  **PLANTATION IN MINE AREA**
3	Budget earmarked for plantation/green belt development with drip irrigation system after expansion is Rs. 1200 Lakh (Capital) and Rs. 20.0 lakh(recurring). Plantation proposed within and outside the mine lease area lease during 2018-19 to 2022-23 total 56030 saplings will be planted on 43.1 Ha area (cumulative plantation 246030 on 2331. Ha), during 2023-24 to 2027-2028 total 10660 saplings will be planted on 8.2 Ha area (cumulative plantation 256690 on 241.3 Ha). PP shall implement the protection proposed for the survival of the plantation. PP shall engage the expert agency to increase the plantation density to at least 2500 saplings/ha. PP shall develop an alternative grazing in lieu of grazing land if already used by the PP for mining activity and take NOC from the concerned authorities for use of grazing for	• Noted • Plantation is being carried out as per the plantation/greenbelt development plan submitted. • For the compliance reporting period, 50000 plants were planted in an area of 10 ha with plantation density of 5000 sapling/ha. • This high-density plantation has been carried out to increase the overall plantation density to 2500 saplings/ha. • Growth of each plant is monitored, and records are maintained. • Survival rate for the plantation has been close to 90 %.

	mining purpose. Growth of each plant needs to be monitored and record should be maintained, the record should also be maintained for no of species planted, type of species planted, survival rate etc. The budget earmarked for plantation shall be kept in separate bank account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz photographs (before and after with geo location date and time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF &CC before 1st July of every year for the activities carried out during previous year.	• Species planted – Peltophorum, Conocarpus, Bignonia Megapotamica, Spathodea, Terminalia, Molsari, Acacia, Pongamia etc.  **AREA BEFORE LAND CLEARANCE**  **AREA AFTER LAND CLEARANCE**  **AREA AFTER DIGGING OF PITS**  **AREA AFTER PLANTATION OF SAPLINGS** • Separate GL account is being maintained for plantation.

4	Approval of Revised Conservation Plan for Schedule-1 species viz Indian Peafowl, Indian Gray Horn Bill, Black Shouldwer Kite, White eyed Buzzard, Indian Monitor Lizard, Indian Flapshell Turtle/Indian Mud Turtle, Indian Python, Indian Leopard, Indian Gazelle, four horned antelope, wolf, Margh crocodile and Pantherea Pardus needs to be obtained. PP shall sigh the MOU with State Government for implementation of conservation. PP shall deposit the amount proposed for conservation plan to state Government as per demand raised by them from time to time. PP shall report the status of payment and implementation of conservation plan to Regional Office, MoEF &CC annually.	• Approval for Revised Wildlife (Schedule -1) Conservation Plan has been obtained from Chief Wildlife Warden vide letter dated 16.09.2020. • Rs. 1.32 crores have been submitted to State Government as per the Wildlife (Schedule – 1) Conservation plan through demand draft vide letter dated 12.02.2020. • MOU is being signed with State Government for implementation of Wildlife (Schedule -1) Conservation plan.
5	Budget earmarked for CER activities is Rs. 14.0 crores which include activity-1: Health, Hygiene and water a) Renovation and upgradation of Govt. Hospital (CHC Mahenduriya) (construction of additional wards, toilets, garden, mortuary, lighting etc) Budget Rs. 100 lakh; time line 1 year, b) installation of High capacity community RO in surrounding 4 villages; (1500 litres per hour capacity, auto TDS, real time data, 5000 storage, SS tank mounted vehicle to mobile ATM and water transfer 24*7 chilled water supply- Railmagra 2 Nos, Sindesarkalan, Gawadhih) Budget Rs 200 lakh @Rs. 100 lakh/year; time-line 2-year, c) construction of overhead tank and pipeline in village for uninterrupted water supply 20,000lts overhead tank at Kothdi); budget 300 Lakh; time line 1st, 2nd and 3rd year), activity -2 education – a) Holistic development of 3 government schools (additional classrooms, separate toilets, lab, computer classes, boundary wall and field development at kotdi, anjana and shivpura) budget Rs. 150 Lakh @R50 lakh/year time line 3 years, b) renovation of 20 old anganwadis (repair and maintenance work, painting, roof treatment, boundary, electricity et) budget 200 lakh @Rs.100 lakh/year t; time line 2nd and 3rd year). Activity-3 Infrastructure development a) Construction of check dam (construction of check dam at Pipaswas) Budget Rs. 100 lakh time line 1st year	• Activity wise status for the compliance reporting period is attached as Annexure – 10.

	b) B) community centres (at naya Dariba, Anjana, mahenduriya) Budget 120 lakh, time line 1st year c) Construction of stadium and playgrounds (Kabra and Gawardi) Budget 80 Lakh, time line 2nd year d) Solar lights (300 lights in surrounding 10 villages Budget 100 lakhs; timeline 1st year) e) Solar pumps water system (10 HP motor with solar panels in 5 surrounding villages: Budget 150 Lakh 100 lakh, time line 2nd and 3rd year). In addition to above Rs.2.5 crore shall be spent on i) to provide sanitary vending machine in govt. girls' schools, village govt. Health Centres and SHG Groups, ii) facilities to under privileged group for treatment of critical diseases like cancer/heart surgery, kidney/liver failure etc. in nearby village iii) to provide online library in Govt schools for referring course syllabus, employment coaching exams etc and iv) scholarship to meritorious/under privileged youth for higher education. In case the amount proposed under CER is left unspent than the same should not be diverted and kept for CER activity beyond 3rd year. At the end of life of mine if any amount remains unspent than the same should be spent in consultation with local administrations for the development of nearby villages. The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of CER activities along with proof of activities viz photographs (before and after with go-location date and time) purchase documents, photographs and geo location of the infrastructure /facilities developed, etc to the Regional Office of MoEF & CC before 1st July of every year for the activities carried out during previous year.	

6	Budget earmarked for Occupational Health Surveillance Plan shall be Rs. 204 Lakh which includes 1) IME Budget @2500 per person (Rs 25 lakh for 2019-20, Rs 6.25 for 20202-21, Rs. 2.5 lakh/annual from 2021-22 to 2030-31) 2) PME Budget @2500per person (Rs. 5 lakhs for 2019-20, Rs. 7 lakh/annual from 2020-21 to 2030-31 3) PPEs @Rs.5000 per person (Rs.100 lakh for 2019-20, Rs. 62.5 lakh/annual from 2020-21to 2030-31 4) Occupational Hygiene (Rs. 18.5 lakh/annum from 2019-20 to 2030-31 5) Quantitative and Qualitative Hygiene Survey (Rs. 53 lakhs for 2019-20, Rs. 5 lakhs from 2020-21 to 2030-31) and 6) AMC of OH software (Rs 2 lakh/annum from 2020-21 to 2030-31) The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of occupational health plan along with proof of activities viz, photographs (before and after with geo-location and date and time) purchase document, samplings reports, photograph and geolocation of the infrastructures/facilities developed, details of persons engaged for implementation of occupational health plan to the Regional Office of MoEF &CC before 1st July of every year for the activities carried out during previous year.	• Noted. • As part of Occupational health surveillance plan, IME (Initial Medical Examination) and PME (Periodical Medical Examination as per Mines rule, 1955. • Qualitative exposure assessment conducted by ISS (India) Consultancy Services Pvt. Ltd. • The overall objective of this study was to comprehensively assess the employee's exposure to chemical and physical agents (mainly noise, vibration and heat stress) and the need for further assessments for the improvement of the Occupational Health and Industrial Hygiene • Panacea software is used for management of Occupation Health data.
7	Disaster Management Plan proposed shall be implemented scrupulously. Budget allocation for the emergency preparedness is prepared and submitted. Capital and recurring expenditure is around Rs. 2.29 crores which includes 1) Rs. 0.84 Cr. For Rescue apparatus 2) Rs. 0.35 Cr. For underground ambulance 3) Rs.0.35 Cr. for underground Rescue Van 4) Rs. 0.15 Cr. for vehicle for surface movement 5) Rs.0.50 Cr. for fire tendering equipment and 6) Rs0.10 Cr. for structure for Work @ Height. The recurring budget proposed is 1.53 Cr. which includes 1) Rs.0.05 Cr. for RRRT Centre	Activities mentioned as part of Disaster Management Plan are being carried out and the status of activities is given herewith. • Rescue apparatus like Rescue Ram , spreader , hydraulic cutter, self rescuers have been procured. • Underground Rescue Van has been provided. • Structiure for Work at height has been provided.

	2) Rs.0.22 Cr. for apparatus, calibration and Maint. 3) Rs.0.78 Cr. for RTPs and training 4) Rs. 0.05 Cr. For RRRT competition 5) Rs.0.14 Cr. for firefighting organisation 6) Rs. 0.24 Cr. for Refuge chamber and self-rescuer 7) 0.05 Cr. for ambulance and rescue van The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of Disaster Manager Plan along with proof of activities viz photograph and geolocation of the infrastructures/ facilities developed, details of persons engage for implementation of Disaster Management Plan along with proof activities viz, photographs (before and after with geo location date and time) purchase documents, photographs and geo-location of the infrastructures/facilities developed, details of persons engaged for implementation of Disaster Management Plan to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.	 **RESCUE VAN**  **RESCUE APPARATUS**  **RESCUE RAM**
8	Budget earmarked for Environmental Management Plan (EMP) shall be Rs 110.50 Cr. (capital) and Rs. 6.95 Cr.(recurring) which include Dust suppression system/dust extraction system installation with dust monitoring sensor (opacity meter) at chimney sampling point (COSP) Rs. 1.2 cr (capital and 1.5 cr (recurring), timeline 1 year Tailing Dam Management / Dry tailing disposal rs. 26.20 cr (capital) and 1.96 cr(recurring), timeline 2 years Tailing Thickener Rs. 0.5 cr (capital) and Rs. 0.2 cr(recurring)time line; Surface water sprinkler Rs. 0.80 cr (capital)and 0.1 cr(recurring, timeline 1 year; Ventilation system Rs. 16.6 cr (capital and Rs. 1.0cr (recurring)time line 2 years; Mechanical road sweeper Rs. 0.80cr (capital) & 0.1cr (recurring) timeline 1 year Rain water harvesting measures/deepening of existing village tanks 30.0 cr (capital) and 0.11 cr (recurring), timeline 3 years	• Activity wise status for the compliance reporting period is given herewith. • Tailing dam Management/Dry Tailing disposal – Dry Tailing / filtration plant is being constructed and will be up & running in this financial year. **DRY TAILING PLANT AND PASTE – FILL PLANT UNDER CONSTRUCTION AT RDM** 

	Plantation/Green belt development with drip irrigation system 12.0 cr(capital) and 0.2cr (recurring) timeline 10 years Automation in Environment Monitoring (CAAQMS) 21 cr (capital) 0.2 cr (recurring)timeline 1 year Construction of garland drain, and silt settling tank and recycle system for waste dump management 0.3 cr(capital) and 0.1 cr(recurring)timeline 2 years Schedule-I fauna conservation plan cost 6.60 cr (capital) and 0.01cr (recurring) timeline 2 years Installation of Oil grease trap system and sewage treatment plant, installation with display of COD, BOD, TDS, pH display at main gate entrance 18.0 cr (capital) and 0.2 cr (recurring) timeline 18 months Water hydrant system 0.7cr (capital)and 0.10 cr (recurring) timeline 18 month High density/Paste fill 10.40 cr (capital) and 1.1.cr (recurring) Hazardous waste storage facility 0.5cr (capital) and Recurring timeline 2 years Mobile water tanker 0.3 cr (capital) and 0.05 cr (recurring) time line 1 year The amount (except occupational health) proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment report along with proof of activities viz photograph (before and after with geo location date and time) purchase documents, sampling report, photographs and geo location of the infrastructure/facilities developed, details of persons engaged in Environment Management Cell to the Regional Officer of MoEF&CC before 1st July of every year for the activities carried out during previous year.	• Plantation / greenbelt development - Plantation is being carried out as per the plantation/greenbelt development plan submitted. For the compliance reporting period, 50000 plants were planted in an area of 10 ha with plantation density of 5000 sapling/ha. • Automation in Environment Monitoring – Continuous Ambient Air Quality Monitoring Station has been installed and Commissioned. • Automation in Environment Monitoring – Digital Water Level recorders have been installed. • Schedule – I fauna conservation plan - Approval for Revised Wildlife (Schedule -1) Conservation Plan has been obtained from Chief Wildlife Warden vide letter dated 16.09.2020.  **DIGITAL WATER LEVEL RECORDER**

		• Construction of garland drain and silt settling tank - Garland drains have been provided and sedimentation pits/sumps have been constructed at the corners of the garland drains thereby allowing proper settling of sediment/silt material.  **GARLAND DRAINS AROUND WASTE DUMP** • High density / Paste fill – Paste fill plant is being installed which will be used to fill mining voids. • Mechanical road sweeper – Truck mounted road sweepers have been provided and are used to control fugitive dust emissions.  **TRUCK MOUNTED ROAD SWEEPER**
9	PP shall engage an expert agency to identify the area which has maximum possibility to be get impacted due to mining and cement plant activity. After ascertaining the area of influence the PP shall annually monitor the crop productivity of the identified area. PP shall provide the crop insurance for agricultural field falling in this area and in case of crop damage take immediate measure to mitigate the same and also ensure to pay crop loss compensation.	• Noted. • An expert agency has been engaged to identify the area which has maximum possibility to be get impacted due to mining and beneficiation plant activity. • After it was ascertained "As there was no significant reduction of crop production in the affected villages, there is no issue involved for any crop insurance to be paid to the cultivators by HZL."
10	In pursuant to Ministry's OM NO: 22-34/2018-IA.II dated 16.1.2020 to comply with the	• Noted.

	direction made by Hon'ble Supreme Court on 8.1.2020 in WP (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.	• After ceasing of operations, Re-grassing of the mining area and any other area which may have been disturbed due to other mining activities will be carried out. • Land will be restored to a condition which is fit for growth of fodder, flora, fauna etc.
B.	**Standard Conditions**	
I	**Statutory compliance**	
1	This Environmental Clearance (EC) is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Condition as may be applicable.	• Noted. • The directions of Honourable courts shall be adhered to.
2	The Project Proponent complies with all the statutory requirement and judgment of Hon'ble Supreme Court dated 2nd August 2017 in Writ Petition (Civil) No: 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.	• Noted. • Statutory compliances and judgements of Supreme Court in matter of Common Cause versus Union of India & Ors will be complied with.
3	The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective department of Mining & Geology in strict compliance of Judgement of Hon'ble Supreme Court dated 2nd August 2017 in Writ Petition (Civil) No: 114 of 2014 in matter of Common Cause versus Union of India & Ors	• Noted.
4	This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board of Wildlife, if applicable to the Project.	• Noted. • NBWL approval is not applicable to this project as there are National Parks, Wildlife Sanctuaries, Biosphere reserves, Wildlife Corridors, Ramsar sites, Tiger/Elephant reserves in Core & Buffer Zone (10 km radius) of Rajpura Dariba Mine.
5	This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.	• Forest clearance is not applicable as there is no forest area in Core and Buffer Zone (10 km radius) of Rajpura Dariba Mine • Copy of the letter received from DFO, Rajsamand is attached as **Annexure - 1.**
6	Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent of Establish/Consent to	• CTE/CTO have been obtained from Rajasthan State Pollution Control Board vide letter dated 12.01.2021 and conditions stipulated therein are being effectively implemented.

	Operate from the concerned State Pollution Control Board/committee.	• CTE & CTO were obtained before crossing the threshold production.
7	The PP shall adhere to the provision of the Mines Act, 1952 Mines and Mineral (Development & Regulation), Act 2015 and rules and regulations made there under. PP shall adhere to various circular issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.	• Noted. • Adherence to the provision of the Mines Act, 1952 Mines and Mineral (Development & Regulation), Act 2015 and rules and regulations made there under is being ensured.
8	The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.	• Noted. • Mining is being carried out in valid mine lease with consent from applicable stakeholders.
9	The Project Proponent shall follow the Mitigation measures provided in MoEF &CC OM No: Z-11013/57/2014-IA. II(M) dated 29th October 2014 titled "Impact of mining activities on Habitation Issues related to the mining Project and villages are the part of mine lease areas or Habitation and villages are surrounded by the Mine lease area"	• Noted. • Mitigation measures mentioned in the OM are being implemented • Study report concluded "The habitants of five villages have not reported any inconvenience due to illumination, blasting vibration, noise etc, as these are more than 500 m away from underground mine and beneficiation area"
10	The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.	• Noted. • Approval for drawl of surface water have been obtained in the form of Water Supply Agreements for Matrikundia and Masniwakal dam. • Approval from CGWA in the form of an NOC is obtained for withdrawal of groundwater by dewatering due to seepage and intersection of Water table.
11	A copy of EC letter will be marked to concerned Panchayat/ local NGO etc, if any, from whom suggestion/representation has been received while processing the proposal.	• Complied. • A copy of the EC letter has been marked to Tehsildar, District Industries Centre, Collector's office and Panchayat Samiti vide letter dated 04.05.2020.
12	State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional Office, District Industries Centre and Collector's Office/Tehsildar's Office for 30 days.	• Complied. • A copy of the EC letter has been marked to Tehsildar, District Industries Centre, Collector's office and Panchayat Samiti vide letter dated 04.05.2020
13	The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspaper, one of	• Complied • Advertisement of grant of EC letter was done in two local newspapers

	which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and website of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.	(Dainik Bhaskar & Rajasthan Patrika) on 19.04.2020 within 7 days of the issuance of the clearance letter. • Copy of the Advertisement is attached as **Annexure -2.**
14	The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.	• Noted. • MoEF & CC will be informed in case of change in ownership of the mining lease. • In case there is any change in ownership or mining lease is transferred than mining will be carried out only after transfer of EC.
II	**Air quality monitoring and preservation**	
15	The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Station with 1 (one in upwind and 2(two) in downwind direction based on long term climatological data about wind direction such that an angle of 120degree is made between the monitoring locations to monitor critical parameters,, relevant for mining operations, of air pollution viz PM10,)M2.5, Nos, CO and SO2 etc as per the methodology mentioned in NAAQS Notification No:B-29016/20/90/PCI/I dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building canteen etc as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 3 months in front of the Main Gate of the Mine site.	• Continuous Ambient Air Quality stations have been installed for monitoring of all required air quality parameters.  **CAAQMS - 1**
1 6	Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The fugitive dust emission from all sources shall be regularly controlled by installation of required equipment/machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppression agents may be	• Effective safeguards measures for prevention of dust generation like regular water sprinkling is being carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points.

	explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEF&CC/Central pollution control Board.	• The fugitive dust emission from all sources is being regularly controlled by installation of required equipment/machineries and preventive maintenance along with truck mounted road sweepers.  **TRUCK MOUNTED ROAD SWEEPER** • Ambient air quality is being carried out monthly and data is attached as **Annexure – 3**.
III	**Water quality monitoring and preservation**	
1	In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydrogeological study of the area.	• Due to seepage and intersection of water table during mining activities, dewatering of accumulated water in mining pits is being carried out. • Renewal NOC for 446.5 m3/day and Expanded capacity NOC for 2698 m3/day for dewatering of mine water due to seepage and intersection of water table vide letter dated 16.11.2020 and 07.01.2022 respectively and are valid till 15.11.2022 and 06.01.2024 respectively.
2	Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine leases shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug well located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on	• Monitoring of keys wells for water quality and water levels in and around the mine lease is being done regularly. • The natural water bodies and or streams which are flowing in an around the mine lease are not being disturbed. • Fresh water is being provided to villagers for their use. • Water table is being nurtured so as to not go down below the pre-mining period. Rainwater harvesting in the form of desilting and deepening of village ponds is being carried out.

	changes in ground water level and quality shall be submitted on six monthly basis to the Regional Office of the Ministry. CGWA and State Ground water Department/State Pollution Control Board	• Reports on change in ground water level and quality is being submitted and reports are attached as **Annexure – 4 and 5.**
3	Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo meter installation during the mining operation in consultation with Central Ground Water Authority/State Ground Water Department. The Report on changes in ground water level and quality shall be submitted on six monthly basis to the Regional Office of the Ministry, CGWA and State ground water department/State Pollution Control Board.	• Monitoring of ground water level and quality is done through a network of piezometers and wells in and around the lease. • Reports on change in ground water level and quality is being submitted and reports are attached as **Annexure – 4 and 5.**
4	The Project Proponent shall undertake regular monitoring of natural water course/water resources/springs and perennial nallahs existing flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/or alteration be made to water bodies during mining operation without justification and prior approval of MoEF&CC. The monitoring of water courses/bodies existing in lease area shall be carried out four time in a year viz pre monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six monthly basis.	• Regular monitoring of natural water course/water resources/springs and perennial nallahs existing flowing in and around the mine lease is being carried out. • Regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/adjacent to the mine lease and maintain its records are being maintained. • Monitoring of water courses/bodies existing in lease area is being carried out quarterly covering all four seasons pre monsoon (Apr-May), monsoon (August), post monsoon (November) and Winter (January) and the data is attached as **Annexure -6.**
5	Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run off, acid mine drainage and metal contamination in run off shall be monitored along with total	• Water generated as part of dewatering due to mining operations is utilized in wet drilling in mining ore beneficiation in beneficiation plant.

	suspended solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment Forest and Climate Change may also be referred in this regard.	• Process water that is recovered from Tailing dam is also used in beneficiation plant. • Only process water is used for dust suppression activities including sprinkling. • Monitoring report is attached as **Annexure – 7.**
6	Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEF&CC annually.	• Rainwater Harvesting structures have been prepared which involve desilting and deepening of villages in and around the mine lease area.  **DEEPENING OF MEHANDURIYA POND**
7	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through oil and grease trap.	• Industrial waste water (Workshop and waste water from the mine) is properly collected and re-used in the beneficiation plants and HEMM washing bay.
8	The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office the MoEF&CC and State Pollution Control Board/Committee.	• Water audit study has been carried out by FICCI. • Measures for reducing the consumption of water have been taken as per the findings of Water Audit.
IV	**Noise and vibration monitoring and prevention**	
9	The peak particle velocity at 500m distance or within the nearest habitation whichever is closer shall be monitored periodically as per applicable DGMS guidelines	• PPV is monitored periodically as per the applicable DGMS guidelines. • PPV ranges between 0.75 – 3.79 mm/sec at a distance of 0 to 300 m from mining activity.

10	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/masks away from the villagers and keeping the noise levels well within the prescribed limits for day/night hours.	• Floodlights / masks are oriented in such a way that they do not disturb the biological clock for villagers • Noise levels are kept within the prescribed limits for day/night hours • Noise monitoring is carried out to measure the noise levels during day/night. • Monitoring reports are attached as **Annexure – 8**.
11	The proponent shall take measures for control of noise level below 85 dBA in the work environment. The workers engaged in operations of HEMM etc should be provided with ear plugs/muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/personals/labourer are working without personal protective equipment.	• Measure are taken to control noise level below 85 dBA in the work environment. • PPE's with ear plugs and muffs are provided to individuals working in high noise areas. • Protective respiratory devices along with training, awareness and information on safety and health aspects is also provided for workers working in the dusty areas.
V	**Mining Plan**	
12	The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year wise plan was mentioned for total excavation i.e., quantum of mineral, waste over burden, inter burden and top soil etc. No change in basic mining proposal like mining technology, total excavation, mineral and waste production, lease area and scope of working (viz method of mining, overburden and dump management, OB and dump, mining, mineral transportation mode, ultimate depth of mining etc) shall not be carried out without prior approval of the Ministry of environment, forest and climate change, which entail adverse environmental impact, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt in the form to Short Term Permit (STP), query license or any other name.	• Noted. • Working parameters are being adhered to. • No change in basic mining proposal like mining technology, total excavation, mineral and waste production, lease area and scope of working (viz method of mining, overburden and dump management, OB and dump, mining, mineral transportation mode, ultimate depth of mining etc) shall not be carried out without prior approval.
13	The Project Proponent shall get the Final Mine Closure Plan along with Financial assurance approved from Indian Bureau of Mines/Department of Mining, & Geology as required under Provision of the MMDR Act, 1957 and Rules/Guidelines made there under. A	• During final closure of the mine, Final Mine Closure Plan along with Financial assurance will be approved from Indian Bureau of Mines/Department of Mining, &

	copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.	Geology as required under Provision of the MMDR Act, 1957 and Rules/Guidelines made thereunder.
14	The land use of the mine lease area at various stages of mining scheme as well as at the end of life shall be governed as per the approved Mining Plan. The excavation vis a vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.	• Land use of the mine lease area is being governed as per the approved Mining Plan. • Afforestation is being done as per approved mining plan cum Progressive Mine closure Plan. • Monitoring and management of rehabilitated areas is done until the vegetation becomes self-sustaining.
VI	**Land reclamation**	
15	The overburden (OB) generated during the mining operations shall be stacked at earmarked OB dump site(s) and it should not be kept active for a long period of time. The physical par and angle of slope shall be governed as per the parameters of the OB dumps like height, width and angle of slope shall be formed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The top soil shall be used for land reclamation and plantation.	• Since it's an underground mine, no overburden is generated. • Waste generated due to mining is used for filling of voids in stopes. • For the compliance reporting period, no waste was dumped on waste dumps and the entire waste generated was used for in-stope dumping for filling of mine voids.
16	The reject/Waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circular issued by DGMS w.r.t safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.	• Noted. • Waste generated due to mining is used for filling of voids in stopes. • For the compliance reporting period, no waste was dumped on waste dumps and the entire waste generated was used for in-stope dumping for filling of mine voids. • Overall slope angle of waste dump is being maintained at less than angle of repose of broken material.
17	The reclamation of waste dump sites shall be done in scientific manner as per the approved Mining Plan cum Progressive Mine Closure Plan.	• Reclamation of waste dump sites is being done in a scientific manner as per the approved Mining Plan cum Progressive Mine Closure Plan.
18	The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and	• Noted. • Local species have been planted which regulates local climatic parameters.

	surface run off. The selection of local species regulates local climatic parameters and help in adaption of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/compactors thereby ensuring proper filling /levelling of dump mass. In critical area, used of geo textiles/geo membranes /clay liners/ Bentonite etc. shall be undertaken for stabilization of the dump.	• The dump mass is consolidated with the help of dozer/compactors thereby ensuring proper filling /levelling of dump mass.
19	The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slop stability report shall be submitted to concerned regional office of MoEF&CC	• Dump height is not more than 30 meters.
20	Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and top soil/OB/Waste dump to prevent run off of water and flow of sediments directly into the water bodies (Nallah/River/Pond et) The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.	• Garland drains have been provided and sedimentation pits/sumps have been constructed at the corners of the garland drains thereby allowing proper settling of sediment/silt material.  **GARLAND DRAINS AROUND WASTE DUMP**
21	Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediment/silt material. The sedimentations pits/sumps shall	• Garland drains have been provided and sedimentation pits/sumps have been constructed at the corners of the garland drains thereby allowing proper settling of sediment/silt material.

	be constructed at the corners of the garland drains.	 **RETAINING WALL AROUND WASTE DUMP**
22	The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t safety in mining operation shall be strictly adhered to maintain the stability of dumps. The top soil shall be used for land reclamation and plantation purpose.	• Since it's an underground mine there is no disturbance to top soil.
VII	**Transportation**	
23	No transportation of the minerals shall be allowed in case of roads, passing through villages/ habitations. In such cases, PP shall construct a bypass road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meter) so that the adverse impact of sound and dust along with chance of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/rural roads shall be allowed in consultation with nodal state govt. department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicle from authorized pollution testing centers.	• No Transportation of minerals carried out outside the lease, passing through villages/habitations. • Vehicular emissions kept under control and regularly monitored. Pollution Under Control (PUC) certificate is mandatory for all the vehicle from authorized pollution testing centres. • PUC camps are organized on World Environment day. 

24	The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yard etc. should invariably be provided with dust suppression arrangements. The air pollution control equipment's like bag filters, vacuum suction hoods, dry fogging system shall be installed crushers, belt conveyors and other area prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.	• Water sprinkling is done on ramp/haulage road of the underground mine. • Sprinkling systems have been installed at dust generation areas. • The fugitive dust emission from all sources is being regularly controlled by installation of required equipment/machineries and preventive maintenance along with truck mounted road sweepers. • Bag filters have been installed in crusher area. • Covered conveyors are used to avoid dust while transportation. • Tyre washing system has been provided to prevent formation of fugitive emissions.  **TYRE WASHING SYSTEM**
VIII	**Green Belt**	
25	The Project Proponent shall develop green belt in 7.5 m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operation within the lease. The whole Green Belt shall be developed within first 5 years starting form windward side of the active mining area. The development of green belt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.	• Greenbelt has been developed in 190 ha. out of the total acquired land of 554.19 ha. • Greenbelt has been provided along the mine boundary in order to arrest pollution emanating from mining operations.

26	The Project Proponent shall carryout plantation/afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community area etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/Tribal Welfare Department/Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Ha. Adequate budgetary provision shall be made for protection and care of trees.	• Noted • Plantation is being carried out as per the plantation/greenbelt development plan submitted. • For the compliance reporting period, 50000 plants were planted in an area of 10 ha with plantation density of 5000 sapling/ha. • This high-density plantation has been carried out to increase the overall plantation density to 2500 saplings/ha. • Growth of each plant is monitored, and records are maintained. • Survival rate for the plantation has been close to 90 %. • Species planted – Peltophorum, Conocarpus, Bignonia Megapotamica, Spathodea, Terminalia, Molsari, Acacia, Pongamia etc.
27	The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State government in this regard. Project Proponent should essentially implement the direction of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground which provide mid-day shelter from the scorching sun, should be scrupulously guarded protected against felling and plantation of such trees should be promoted.	• Noted. • Alternative arrangements will be made for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease.
28	The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.	• Precautionary measures are being undertaken for conservation and protection of endangered flora and fauna and Schedule – 1 species during mining operations. • Approval for Revised Wildlife (Schedule -1) Conservation Plan has been obtained from Chief Wildlife Warden vide letter dated 16.09.2020.
29	And implemented in consultation with the state forest and wildlife department. A copy of wildlife conservation plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.	• MOU is being signed with State forest and Wildlife department for implementation of Wildlife (Schedule -1) Conservation plan and annual status will be shared.
IX	**Public hearing and human health issues**	

30	The Project Proponent shall appoint an Occupation Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the Mining activities, as per the DGMS guidelines. The record shall be maintained properly PP shall also carryout Occupational health check -ups in respect of workers which are having ailments like BP, Diabetes, habitual smoking etc. The check-ups shall be undertaken once in six months and necessary remedial preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half yearly basis.	• Occupational Health Monitoring is being done which includes Weight, Height, BMI, CBC, Blood Sugar Fasting and PP, Lipid Profile, Liver Function test, Kidney Function Test, Urine Examination, Audiometry, ECG, Spirometry, Chest X ray (ILO Quality 14 x 17 inches) and Blood Lead during PME and IME, Eye examination for Drivers and Welders. • Records of Health Surveillance is being maintained Digitally and Hard Copies, including the results of and the records of Physical examination and tests.
31	The Project Proponent must demonstrate commitment to work towards Zero Harm from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazard and assess their potential risk to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighbourhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for sanitation, persona hygiene, hand washing, not to defecate in open. Women health and hygiene (providing sanitary napkin) hazard of tobacco and alcohol use. The proponent shall carryout base line HRA for all the category of workers and thereafter every five years.	• Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health is being done as per Nature of Job, Age, Exposure and Work Place. Health Risk Assessment through • Qualitative exposure assessment conducted by ISS (India) Consultancy Services Pvt. Ltd. • The overall objective of this study was to comprehensively assess the employee's exposure to chemical and physical agents (mainly noise, vibration and heat stress) and the need for further assessments for the improvement of the Occupational Health and Industrial Hygiene. • Community Health risk assessment is being done with the help of Physicians from CHC/ PHC in Community with focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections. Free Medical Service is provided in Community from Dariba Mines Hospital including Investigations. • We are working with Community in Creating awareness about Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health

		and Menstrual Hygiene, hazard of tobacco and alcohol use. Regular screening and Training are being done with Specialist and NGO.
32	The proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust X-Ray chest; for Noise Audiometric; for lead Exposure Blood lead; for Welders full Ophthalmologic Assessment; for Manganese miners a complete neurological Assessment by certified neurologist, and manganese (Mn) Estimation in Blood. For Inorganic Chromium fortnightly skin inspection of hands and foreman's by a responsible person. Except routine tests all test would be carried out in a lab accredited by NABH. Records of Health surveillance must be kept for 30 years, including the results of and the records of physical examination and tests. The record of exposure due to materials like Asbestos, Hard rock Mining, Silica, Gold, Kaolin, aluminum, Iron Manganese, Chromium, Lead Uranium need to be handed over to the Mining department of the state in case the life of the mine is less than 30 years. It would be obligatory for the state mines departments to make arrangements for the safe and secure storage of the records including X Ray. Only conventional X-ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17x14 inches and of good quality)	• Our mine is Lead Zinc underground mine, the clause regarding OHS for manganese mine or inorganic chromium is not applicable to our mine. Same way exposure due to materials like Asbestos, Hard rock Mining, Silica, Gold, Kaolin, Aluminium, Iron Manganese, Chromium, Uranium are not there. • Lead monitoring in urine and blood has been carried out for all workers. • Occupational Health Monitoring is being done which includes Weight, Height, BMI, CBC, Blood Sugar Fasting and PP, Lipid Profile, Liver Function test, Kidney Function Test, Urine Examination, Audiometry, ECG, Spirometry, Chest X ray (ILO Quality 14 x 17 inches) and Eye examination for Drivers and Welders. • Records of Health Surveillance is being maintained Digitally and Hard Copies, including the results of and the records of Physical examination and tests.
33	The Proponent shall maintained a record of performance indicator for workers which includes a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5-24.9 (b) the Final Chest X-Ray compared with the base line X-rays should not show any capacities (c) At the end of their leaving job there should be no diminution in their lung functions forced expiratory volume in one second (FEV1), Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age (d) their hearing should not be affected. As a proof an audiogram (first and last need to be presented) (e) they should not have developed any persistent back pain, neck pain and the	• Noted. • Occupational Health Monitoring is being done which includes Weight, Height, BMI, CBC, Blood Sugar Fasting and PP, Lipid Profile, Liver Function test, Kidney Function Test, Urine Examination, Audiometry, ECG, Spirometry, Chest X ray (ILO Quality 14 x 17 inches) and Eye examination for Drivers and Welders. • Records of Health Surveillance is being maintained Digitally and Hard Copies, including the results of and the

	movement of their Hip, Knee and other joints should have normal range of movement (f) they should not have suffered loss of any body part. The record of the same should be submitted to the regional office, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.	records of Physical examination and tests. • All the details pertaining to health of workers is kept in Form – O.
34	The Project Proponent shall ensure that personnel working in dusty area should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.	• PPE's including protective respiratory devices such as dust masks are provided to all the personnel working in dusty area. • Regular training is provided on safety and health aspects.
35	Project Proponent shall make provision for the housing for workers/labour or shall construct labour camps within/outside (company owned land) with necessary basic infrastructure/facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.	• Housing is provided for workers/labour with necessary basic infrastructure / facilities. • Domestic waste water is treated with STP and utilized for gardening/horticultural purposes. • Domestic waste water is treated with STP in order to avoid contamination of underground water.
36	The activities proposed in Action Plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The status report on implementation of action plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration	• Noted. • All the commitments made during public hearing have been incorporated in budget of EMP and CER. • Status for activities as part of EMP and CER has been submitted against their respective points.
X	**Corporate Environment Responsibility (CER)**	
37	The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry OM No: 22-65/2017-IA. II(M) dated 1.5.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual repost of implementation of the same along with documentary proof viz photographs, purchase documents, latitude and longitude of infrastructure developed and road constructed needs to be submitted to Regional Office MoEF&CC annual along with audited statement.	• Separate GL account is being maintained. • Proposed activities implementation status has been submitted against Specific Condition No. 5

		• Documentary evidence in form of photographs is given herewith.  **COMMUNITY WATER RO**  **COMMUNITY SCHOOL – DARIBA**
38	Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain diverting the same for other purposes. The year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office.	• Separate GL account is maintained for environment protection measures. • Expenditure for the period of Oct-21 to Mar-22 is Rs. 55.63 lakhs.
XI	**Miscellaneous**	
39	The Project Proponent shall prepare digital map (land use and land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.	• Digital map (Land use and Land cover) for the entire lease area was done in November 2018. • Copy attached as **Annexure – 9.**
40	The Project authorities should inform to the Regional Office regarding date of financial closures and final approval of the Project by the concerned authorities and the date of start of land development work.	• This Environmental clearance has been granted for expansion of mines & beneficiation plan. • This is a brownfield project.
41	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEF&CC and its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board	• Six monthly compliances are being submitted to MoEF&CC, Regional Office, CPCB & RSPCB. • Last six-monthly compliance was submitted vide letter dated 10.11.2021.

42	A separate Environmental Management Cell with suitable qualified manpower should be set up under the control of a Senior Executive. The Executive shall directly report to Head of the Organization. Adequate number of qualified environmental scientists and mining engineers shall be appointed and submit a report to RO, MoEF&CC.	• A separate Environment Management Cell has been set up which is under the control of Unit head of Rajpura Dariba Mines.
43	The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data/ information/ monitoring reports	• Noted. • Full cooperation will be extended to MoEF&CC by furnishing the requisite data/ monitoring reports.

ANNEXURE – 1

कार्यालय उप वन संरक्षक, वन्यजीव, राजसमन्द

Sadhna Sikhar Road, Rajsamand Phone & Fax No. 02952-223813 Email- dcf.wl.rajsamand@gmail.com

क्रमांकः पत्रा ( ) सर्वे/उवसं/2018–19/ 7528 दिनांकः 24/9/18

निमित्त :–

Unit Head
Hindusthan zinc
Rajpura Dariba Mine
Tehsil Railmagra
Distt.Rajsamand

विषय :– Certificate regarding Non-involvement of forest area in Core and Buffer Zone. (10 km radius) of Rajpura Dariba Mine.

संदर्भ :– आपका पत्रांक UH(RDM)ENV/2018/132 Date : 28.08.2018 के क्रम में।

उपरोक्त विषयान्तर्गत संदर्भित पत्र में वर्णित Rajpura Dariba Mine क्षेत्र के चारो तरफ 10 किमी0 की परिधि में इस वन मण्डल अधीन घोषित वन क्षेत्र नही पड़ता है।

(फतेह सिंह राठौड़)
उप वन संरक्षक
वन्यजीव, राजसमन्द

ANNEXURE – 2

हिन्दुस्तान जिंक लिमिटेड

रजि. ऑफिस : यशद भवन, उदयपुर - 313 004

PBX NO. 0294-6604000, CIN-L27204RJ1966PLC001208, www.hzlindia.com

राजपुरा दरीबा लेड -जिंक खनन परियोजना
ग्राम राजपुरा दरीबा, तहसील रेलमगरा, जिला राजसमन्द(राज.)

पर्यावरण स्वीकृति प्राप्ति सूचना बाबत

सर्व साधारण को सूचित किया जाता है कि भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय नई दिल्ली के पत्र क्रमांक J-11015/84/2018-IA.II(M) दिनांक 13.04.2020 के द्वारा हिन्दुस्तान जिंक लिमिटेड की राजपुरा दरीबा खदान (एम.एल.नं 166/2008, खनन पटटा क्षेत्र 1142.2106 हैक्टेयर) की वर्तमान खनन क्षमता 1.08 मिलियन टन प्रतिवर्ष से बढाकर 2.0 मिलियन टन प्रतिवर्ष लेड जिंक खनिज अयस्क उत्पादन (कुल उत्खनन 2.48 मिलियन टन प्रति वर्ष) एवं लेड-जिंक अयस्क सज्जीकरण क्षमता 1.2 मिलियन टन प्रतिवर्ष से बढाकर 2.5 मिलियन टन प्रतिवर्ष करने हेतु पर्यावरण स्वीकृति प्रदान कर दी गई है। इसकी प्रति राजस्थान राज्य प्रदूषण नियंत्रण मंडल, जयपुर कार्यालय में उपलब्ध है साथ ही इसकी प्रति वन एवं पर्यावरण मंत्रालय, नई दिल्ली की वेबसाइट (www.parivesh.nic.in) पर उपलब्ध है। **(राम मुरारी)**

यूनिट हेड
राजपुरा दरीबा माइंस

महाप्रभुजी का प्राकट्योत्सव मनाया, बधाई भाव से नंगाड़े की स्वर लहरियां बिखरी

भास्कर न्यूज | नाथद्वारा

[illegible]

अग्निचक्र से हुआ प्राकट्य

[illegible]

बाल स्वरूपों को अलौकिक शृंगार धराया

[illegible]

सेनेटाइजेशन के महत्व संबंधी जानकारी दी

[illegible]

महाप्रज्ञ ने अपनी प्रज्ञा से लाखों लोगों के जीवन की दिशा और दशा को बदला

नाथद्वारा | [illegible]

नाथद्वारा. आचार्य महाप्रज्ञ महाप्रयाण दिवस मनाते हुए।

[illegible]

आज का पंचांग

[illegible]

दिशाशूल : पश्चिम दिशा

शुभाशुभ ज्ञानम् :

आज विशेष :

[illegible]

आज जन्मे बच्चों के नामाक्षर व राशि

समय	नक्षत्र	चरण	पाया	राशि	नामाक्षर
06:03	पूर्वाभाद्रपद	1	लोहा	कुंभ	से
11:09	पूर्वाभाद्रपद	2	लोहा	कुंभ	सो
17:54	पूर्वाभाद्रपद	3	लोहा	कुंभ	द
24:38	पूर्वाभाद्रपद	4	लोहा	मीन	दी

इनामी फिल्म पहेली : 890

बाएं से दाएं

[illegible]

ऊपर से नीचे

[illegible]

इनामी फिल्म पहेली क्रमांक-890

नाम ...
पता ...
पिन ... मोबाइल ...

फिल्म पहेली क्रमांक-890
संपादक, दैनिक भास्कर, 10, [illegible] जयपुर

फिल्म पहेली : 890

फिल्म पहेली 888 का हल

फिल्म पहेली 888 के विजेता

[illegible]

SUDOKU 2386

	7			4	2			1
	4		8				2	
8			7	6		9		
5		8				3		
	1			3			7	
		7				8		2
		1		2	3			7
	3				5		6	
2			4	9			3	

हल-2385

6	7	3	9	2	1	4	5	8
2	1	4	7	5	8	9	6	3
9	5	8	3	6	4	2	7	1
4	8	6	5	1	2	3	9	7
7	2	9	8	3	6	5	1	4
1	3	5	4	9	7	8	2	6
5	4	1	6	8	9	7	3	2
8	9	2	1	7	3	6	4	5
3	6	7	2	4	5	1	8	9

कैसे खेलें- वर्ग को 1 से 9 तक अंकों से ऐसे भरें कि आड़ी व खड़ी पंक्ति के साथ ही 3 गुणा 3 के बॉक्स में 1 से 9 तक अंक आएं। कोई अंक रिपीट न हो।

भ्रांतियां फैलाकर गुमराह करने वाले लोग मानवता के हत्यारे : कमल मुनि

[illegible]

सेन महाराज की जयंती आज, घर पर ही मनाने की अपील

[illegible]

कोरोना के संकट में थोड़ा हंस लें

मेवाड़ क्लब ने एडीएम को सौंपे 3 लाख रुपए

[illegible]

जैन ट्रस्ट ने दिए 1 लाख 11111 रुपए

[illegible]

शहीद वीर राजू रावत के बलिदान दिवस पर किया नमन

[illegible]

खाद्य सामग्री किट वितरण की रिपोर्ट रोजाना बीडीओ को दें

विधायक रावत ने किया शेष रही 9 पंचायतों का दौरा

[illegible]

मवेशियों को पकड़कर गोशाला में छोड़ा

[illegible]

जरूरतमंदों के लिए भामाशाहों ने दी राशि

[illegible]

जहरीली दवा पीने से वृद्ध की मौत

[illegible]

जरूरतमंद लोगों को बांटे 130 राशन किट, कोरोना योद्धाओं का किया सम्मान

[illegible]

आग से आधा बीघा चारा, नीम के पेड़ जले

राजसमंद. [illegible]

जंगल में बसे रूपनगर गांव में 40 परिवारों को प्रशासन ने खाद्य सामग्री वितरित की

[illegible]

नवीं पुण्यतिथि पर श्रद्धांजलि

पुलिस सेवा को गौरवान्वित करने वाले अमर शहीद श्री सोहनलाल रेगर

[illegible]

द्वितीय पुण्यतिथि

स्व. श्री नागन बिहारी नामदा

[illegible]

पन्द्रह दिनों से हो रही दूषित पानी की आपूर्ति

रोजाना खतरे से दो-दो हाथ कर रहे लैब तकनीशियन

लिंक में आने से दवाखाना रोकने पर 12 के विरुद्ध मामला

आग से फसल व घास जली मौके तक नहीं पहुंच पाई जेसीबी

निर्धारित से ज्यादा दाम वसूलने पर दो दुकानें सील

सम्पर्क पोर्टल पर डाली झूठी सूचना

हादसे में घायल ट्रक चालक ने उपचार के दौरान दम तोड़ा

अवैध रूप से खूब हो रही शराब की बिक्री

कोरोना की आड़ में अतिक्रमण, नगर परिषद ने हटाया

प्रवासी राजस्थानियों को लाने की व्यवस्था की जाए- माहेश्वरी

ANNEXURE – 3

Average Ambient Air Quality Monitoring Results

Oct – 21

Name of Monitoring Station	PM 10 (µg/m3)	PM 2.5 (µg/m3)	NO2 (µg/m3)	SO2 (µg/m3)	CO (mg/m3)
Near Laboratory	64.69	28.13	12.95	4.8	220
Near DG Set	60.42	28.72	15.87	4.6	210
Near AB - Type Quarter	75.52	27.93	9.46	4.49	270

Nov - 21

Name of Monitoring Station	PM 10 (µg/m3)	PM 2.5 (µg/m3)	NO2 (µg/m3)	SO2 (µg/m3)	CO (mg/m3)
Near Laboratory	66.54	30.52	12.91	2.93	270
Near DG Set	63.28	35.71	13.52	4.18	330
Near AB - Type Quarter	70.8	33.86	14.14	3.07	290

Dec - 21

Name of Monitoring Station	PM 10 (µg/m3)	PM 2.5 (µg/m3)	NO2 (µg/m3)	SO2 (µg/m3)	CO (mg/m3)
Near Laboratory	65.54	31.64	9.61	2.94	320
Near DG Set	56.18	22.04	9.08	3	310
Near AB - Type Quarter	67.29	26.92	10.1	3.34	310

Jan - 22

Name of Monitoring Station	PM 10 (µg/m3)	PM 2.5 (µg/m3)	NO2 (µg/m3)	SO2 (µg/m3)	CO (mg/m3)
Near Laboratory	57.88	28.94	9.2	2.37	370
Near DG Set	60.76	33.87	8.7	2.43	340
Near AB - Type Quarter	58.51	27.50	8.25	2.49	340

Feb - 22

Name of Monitoring Station	PM 10 (µg/m3)	PM 2.5 (µg/m3)	NO2 (µg/m3)	SO2 (µg/m3)	CO (mg/m3)
Near Laboratory	75.11	35.44	10.91	4.63	350
Near DG Set	74.77	27.51	10.46	3.89	310
Near AB - Type Quarter	69.36	41.23	12.2	4.28	360

Mar - 22

Name of Monitoring Station	PM 10 (µg/m3)	PM 2.5 (µg/m3)	NO2 (µg/m3)	SO2 (µg/m3)	CO (mg/m3)
Near Laboratory	68.84	25.52	10.96	2.92	310
Near DG Set	72.91	30.94	15.87	3.39	360
Near AB - Type Quarter	66.79	29.98	12.88	5.18	310

ANNEXURE – 4

Wells water Quality & Level results

Oct - 21

(All figures in ppm except pH)

Parameter	Sumer Singh Well Water	Nahar Singh Well Water
pH	7.56	7.60
Suspended Solids	8	5
Lead	BDL (<0.01)	BDL (<0.01)
Zinc	BDL (<0.01)	BDL (<0.01)
Copper	BDL (<0.01)	BDL (<0.01)
Iron	BDL (<0.01)	BDL (<0.01)
Cadmium	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)
Depth of well from Surface (ft.)	90	85
Water level in well from Surface (ft.)	77.69	5.11

BDL: Below Detection Limit

Nov - 21

(All figures in ppm except pH)

Parameter	Sumer Singh Well Water	Nahar Singh Well Water
pH	7.94	7.32
Suspended Solids	6	15
Lead	BDL (<0.01)	BDL (<0.01)
Zinc	BDL (<0.01)	0.05
Copper	BDL (<0.01)	0.03
Iron	BDL (<0.01)	0.03
Cadmium	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)
Depth of well from Surface (ft.)	90	85
Water level in well from Surface (ft.)	86.28	5.25

BDL: Below Detection Limit

Dec - 21

(All figures in ppm except pH)

Parameter	Sumer Singh Well Water	Nahar Singh Well Water
pH	8.21	7.31
Suspended Solids	8	12
Lead	BDL (<0.01)	BDL (<0.01)
Zinc	BDL (<0.01)	0.02
Copper	BDL (<0.01)	BDL (<0.01)
Iron	BDL (<0.01)	BDL (<0.01)
Cadmium	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)
Depth of well from Surface (ft.)	90	85
Water level in well from Surface (ft.)	86.97	6.07

BDL: Below Detection Limit

Jan - 22

(All figures in ppm except pH)

Parameter	Sumer Singh Well Water	Nahar Singh Well Water
pH	7.66	7.49
Suspended Solids	7	10
Lead	BDL (<0.01)	BDL (<0.01)
Zinc	BDL (<0.01)	BDL (<0.01)
Copper	BDL (<0.01)	BDL (<0.01)
Iron	BDL (<0.01)	BDL (<0.01)
Cadmium	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)
Depth of well from Surface (ft.)	90	85
Water level in well from Surface (ft.)	75.82	5.45

BDL: Below Detection Limit

Feb - 22

(All figures in ppm except pH)

Parameter	Sumer Singh Well Water	Nahar Singh Well Water
pH	8.00	7.43
Suspended Solids	6	8
Lead	BDL (<0.01)	BDL (<0.01)
Zinc	BDL (<0.01)	BDL (<0.01)
Copper	BDL (<0.01)	BDL (<0.01)
Iron	BDL (<0.01)	BDL (<0.01)
Cadmium	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)
Depth of well from Surface (ft.)	90	85
Water level in well from Surface (ft.)	86.27	6.23

BDL: Below Detection Limit

Mar - 22

(All figures in ppm except pH)

Parameter	Sumer Singh Well Water	Nahar Singh Well Water
pH	7.70	7.38
Suspended Solids	8	7
Lead	BDL (<0.01)	BDL (<0.01)
Zinc	BDL (<0.01)	BDL (<0.01)
Copper	BDL (<0.01)	BDL (<0.01)
Iron	BDL (<0.01)	BDL (<0.01)
Cadmium	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)
Depth of well from Surface (ft.)	90	85
Water level in well from Surface (ft.)	87.73	5.84

BDL: Below Detection Limit

Post - Monsoon									
Parameter	**Unit**	**K - 1**	**K - 2**	**K – 3**	**K – 4**	**K - 5**	**K - 6**	**K - 7**	**K - 8**
pH	-	7.13	7.22	7.6	7.69	7.38	7.55	7 46	7.71
EC at 25oC	µS/cm	2710	2820	810	1880	3140	3200	3220	1660
TDS	Hazen	1668	1728	456	1120	1852	1920	1928	960
Colour	NTU	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Turbidity	mg/L	3	1	2	3	3	2	1	BDL
Total Alkalinity	mg as CaCO3/l	410	210	180	350	340	370	400	290
Calcium, Ca	mg as CaCO3/l	132.26	108.22	60.12	108.22	116.23	128.26	120.24	100.2
Magnesium, Mg,	mg/L	53.5	72.96	26.75	46.21	60.8	58.37	58.37	41.34
Total Hardness	mg/L	550	570	260	460	540	560	540	420
Chlorides, Cl	mg/L	574.82	469.85	104.97	154.95	629.8	639.8	574.82	194.94
Sulphate, SO4	mg/L	280	360	105	195	230	240	300	26.4
Nitrate, NO3	mg/L	21.1	36.5	9.1	19.4	32.5	11.9	42.8	1.6
Fluoride, F	mg/L	1.4	1.35	0.9	1.3	1.2	1.3	1.35	1.1
Iron, Fe	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Lead, Pb	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cadmium, Cd	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zinc, Zn	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Copper, Cu	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chromium, Cr+6	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nickel, Ni+	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Manganese, Mn	mg/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dissolved Oxygen	mg/L	3.8	4	4.3	3.8	4.1	3.8	3.7	4

Well No.	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022
K-1	4.35	4.42	4.83	4.45	5.43	8.51
K-2	7.60	7.39	8.15	10.82	12.27	20.50
K-3	5.89	7.40	6.89	7.51	9.06	11.33
K-4	10.45	12.22	12.31	12.59	14.02	15.65
K-5	5.70	5.85	7.67	9.34	11.37	12.23
K-6	2.60	2.82	3.75	4.69	4.89	6.15
K-7	3.16	3.84	4.12	4.55	5.12	6.09
K-8	3.51	3.47	3.35	3.42	3.75	4.63

ANNEXURE – 5

Piezometer water Quality & Level results

Dec - 21 (Tailing dam)

(All figures in ppm except pH)

Parameter	PW 1	PW 2	PW 3	PW 4	PW 5	PW 6
pH	7.23	7.26	7.23	7.36	7.74	7.65
Suspended Solids	8	8	10	11	9	15
Lead	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Zinc	0.02	0.04	BDL (<0.01)	0.16	0.03	0.04
Copper	0.02	0.02	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Iron	0.05	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cadmium	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Depth of well from surface (ft.)	145	145	150	140	145	150
Water level in. well from surface (ft.)	4.59	3.28	8.23	6.56	2.95	19.91

Feb - 22 (Tailing dam)

(All figures in ppm except pH)

Parameter	PW 1	PW 2	PW 3	PW 4	PW 5	PW 6
pH	7.33	7.40	7.42	7.27	7.83	7.69
Suspended Solids	13	9	13	15	8	14
Lead	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Zinc	0.08	0.03	0.05	0.19	0.04	0.03
Copper	BDL (<0.01)	BDL (<0.01)	0.02	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Iron	0.06	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cadmium	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Depth of well from surface (ft.)	145	145	150	140	145	150
Water level in. well from surface (ft.)	5.25	3.28	9.45	4.27	3.12	21.24

Post – Monsoon						
Parameter	**Unit**	**PZ - 1**	**PZ – 2**	**PZ – 3**	**PZ – 4**	**PZ - 5**
pH	-	7 32	7.44	7.60	7.37	7.64
EC at 25oC	µS/cm	2080	1680	2280	1120	1230
TDS	Hazen	1224	1 056	1360	648	724
Colour	NTU	BDL	BDL	BDL	BDL	BDL
Turbidity	mg/L	1	2	4	BDL	2
Total Alkalinity	mg as CaCO3/l	390	260	380	170	220
Calcium, Ca	mg as CaCO3/l	120.24	76.15	96.19	40.08	44.09
Magnesium, Mg,	mg/L	51.07	43.78	46.21	21.89	17.02
Total Hardness	mg/L	510	370	430	190	180
Chlorides, Cl	mg/L	229.93	244.92	284.91	159.95	179.94
Sulphate, SO4	mg/L	115.00	145.00	180.00	79.00	42.80
Nitrate, NO3	mg/L	19.50	9.10	7.80	11.50	5.50
Fluoride, F	mg/L	1.20	1.15	1.15	1.10	1.20
Iron, Fe	mg/L	BDL	BDL	BDL	BDL	BDL
Lead, Pb	mg/L	BDL	BDL	BDL	BDL	BDL
Cadmium, Cd	mg/L	BDL	BDL	BDL	BDL	BDL
Zinc, Zn	mg/L	BDL	BDL	BDL	BDL	BDL
Copper, Cu	mg/L	BDL	BDL	BDL	BDL	BDL
Chromium, Cr+6	mg/L	BDL	BDL	BDL	BDL	BDL
Nickel, Ni+	mg/L	BDL	BDL	BDL	BDL	BDL
Manganese, Mn	mg/L	BDL	BDL	BDL	BDL	BDL
Dissolved Oxygen	mg/L	4.0	4.2	3 8	3 7	4.2

PZ No.	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022
Pz-1	Dry	3.67	3.91	4.43	4.18	5.63
Pz-2	Dry	Dry	Dry	Dry	Dry	Dry
Pz-3	1.95	2.28	2.65	3.07	3.66	5.35
Pz-4	3.05	3.32	3.88	4.65	5.05	6.17
Pz-5	11.35	12.98	13.39	14.25	14.71	15.22

ANNEXURE – 6

Surface water Quality results

Dec - 2021

Parameter	Mata ji Ka Khera Pond	Mehanduriya Pond	Kotdi Pond	Sunariya Kheda Pond
pH	7.55	7.87	7.86	7.65
Suspended Solids	7	7	6	7
Lead	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Zinc	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Copper	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Iron	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cadmium	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)

(All figures in ppm except pH)

Mar - 2022

Parameter	Mata ji Ka Khera Pond	Mehanduriya Pond	Kotdi Pond	Sunariya Kheda Pond (Dry)
pH	7.14	7.37	7.34	Dry
Suspended Solids	5	6	8	
Lead	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	
Zinc	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	
Copper	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	
Iron	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	
Cadmium	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	
Nickel	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	
Cobalt	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	

(All figures in ppm except pH)

ANNEXURE – 7

Process water Quality results

Oct - 21

Parameter	Mine Water	Tailing Dam Water	Garland Drain Water
pH	7.57	7.11	7.16
Suspended Solids	17	34	30
Lead	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Zinc	0.56	0.60	0.50
Copper	BDL (<0.01)	0.02	BDL (<0.01)
Iron	0.02	0.03	0.02
Cadmium	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)

(All figures in ppm except pH)

Nov - 21

Parameter	Mine Water	Tailing Dam Water	Garland Drain Water
pH	7.11	8.06	7.20
Suspended Solids	28	32	34
Lead	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Zinc	0.42	0.42	0.39
Copper	0.02	0.03	0.03
Iron	BDL (<0.01)	0.04	0.05
Cadmium	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)

(All figures in ppm except pH)

Dec - 21

Parameter	Mine Water	Tailing Dam Water	Garland Drain Water
pH	7.96	7.56	6.98
Suspended Solids	14	7	9
Lead	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Zinc	0.97	0.89	0.52
Copper	0.06	0.04	0.06
Iron	0.06	0.09	0.06
Cadmium	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)0	BDL (<0.01)	BDL (<0.01)

(All figures in ppm except pH)

Jan - 22

Parameter	Mine Water	Tailing Dam Water	Garland Drain Water
pH	7.53	7.81	7.05
Suspended Solids	22	11	15
Lead	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Zinc	0.94	0.92	0.47
Copper	0.02	0.05	0.05
Iron	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cadmium	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)

(All figures in ppm except pH)

Feb - 22

Parameter	Mine Water	Tailing Dam Water	Garland Drain Water
pH	7.03	7.35	7.15
Suspended Solids	25	16	21
Lead	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Zinc	0.82	0.83	0.54
Copper	0.03	0.04	0.06
Iron	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cadmium	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
Nickel	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)

(All figures in ppm except pH)

Mar - 22

Parameter	Mine Water	Tailing Dam Water	Garland Drain Water
pH	7.01	7.06	6.95
Suspended Solids	16	23	30
Lead	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Zinc	3.79	0.89	0.87
Copper	0.02	0.03	0.03
Iron	0.04	0.06	0.07
Cadmium	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
Nickel	0.02	BDL (<0.01)	BDL (<0.01)
Cobalt	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)

(All figures in ppm except pH)

ANNEXURE – 8

Average Ambient Noise Monitoring Results

Oct- 21

Name of Monitoring Station	Day Level in dB	Night Level in dB
Near Canteen	56.5	47
Near AD Block	62.5	54.7
Near Mine Office Building	53.5	44.5

Nov - 21

Name of Monitoring Station	Day Level in dB	Night Level in dB
Near Canteen	58	50.7
Near AD Block	64.7	55
Near Mine Office Building	53.9	44.3

Dec - 21

Name of Monitoring Station	Day Level in dB	Night Level in dB
Near Canteen	57.2	48.8
Near AD Block	62.7	54.1
Near Mine Office Building	55.2	46.5

Jan - 22

Name of Monitoring Station	Day Level in dB	Night Level in dB
Near Canteen	62.4	55.8
Near AD Block	62.8	53.5
Near Mine Office Building	57.5	49.3

Feb - 22

Name of Monitoring Station	Day Level in dB	Night Level in dB
Near Canteen	61.7	53.9
Near AD Block	63.5	55.6
Near Mine Office Building	58.3	51.3

Mar - 22

Name of Monitoring Station	Day Level in dB	Night Level in dB
Near Canteen	60.5	53.9
Near AD Block	63.7	55.1
Near Mine Office Building	62.3	54.0

ANNEXURE – 9

Land use mapping by digital processing of Rajpura-Dariba mining lease using remote sensing techniques

Sponsor: Hindustan Zinc Limited, Rajpura-Dariba Mine

Studied by:

Estb: 1988

Studied for:

Hydro-Geosurvey Consultants Private Limited
C-103, Shastri Nagar, Jodhpur- 342003
Phone: - 0291-2431754
Web: www.hydrogeosurvey.com, E-mail: - hydro.geosurvey@yahoo.com

November, 2018

Annexure – 10

Focus Area	Initiative	Program details	Y1- FY 21	Y1 Ach.	Y2-FY 22	Y2 Ach.
Health, Hygiene & Water	Renovation and upgradation of Govt. Hospital (CHC Mahenduriya)	Construction of additional wards, toilets, garden, mortuary, lighting, etc.	100			70.00 CHC 600.00 COVID support
	Installation of High Capacity Community RO in 4 surrounding villages	1500 Lts. Per hr capacity, auto TDS, real time data, 5000 storage, SS tank mounted vehicle to mobile ATM and water transfer. 24 * 7 chilled water supply – Railmagra 2 nos., Sindesar kalan, Gawardih,	100	100	100	100
	Construction of overhead tank and pipe line in village for uninterrupted water supply	20,000 Lts. Overhead tank at Kothdi (SK and Anoppura)	100	Proposal changed to pipeline supp by govt		15
Education	Holistic development of 3 government schools.	Additional classrooms, separate toilets, lab, computer classes, boundary wall & field development at Kotdi, Adjoining village mahenduriya, dariba, sindesar kalan, DAV & Shivpura	50	80 Mahenduriya & Dariba	50	88.5 Shivpura, Sindesar kalan ,DA Vand kotdi
	Renovation of 20 old Anganwadis	Repair & maintenance work, painting, roof treatment, boundary, electricity, etc.			100	210 (59 Angnwadi)
Infrastructure Development	Construction of Check Dam	Construction of check dam at Pipawas	100	28	20	20 (SK makanpuriya)
	Community centers	At Naya Dariba, Anjana, Mahenduriya . Shivpura, Makanpuriya,Rajpura,Anoppura	120			116.74
	Construction of stadium & playgrounds	Kabra & Gawardih, Mahenduriya, Rajpura			80	78.35
	Solar Light	300 lights in surrounding 10 villages (200 lights in 20 villages)	100	21.83	150	32.13
	Solar pump water systems	10 HP motor with Solar panels in 5 surrounding villages				
Total			**670**	**229.83**	**480**	**1330.7**