जावर माइन्स
पिन कोड - 313901
जिला - उदयपुर (राज.)

HINDUSTAN ZINC LIMITED
हिन्दुस्तान जिंक लिमिटेड

Telephone - (0294) 2723400

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

HZL/ZM/ENV/2023/ 251

Date: 12.05.2023

The Deputy Director (S), Scientist - C,
Ministry of Environment, Forest & Climate Change
Integrated Regional Office,
A- 209 & 218, Aranya Bhawan, Jhalana Institutional Area
Jaipur (Rajasthan) - 302004

Sub: – Six monthly Environment Compliance report for Zawar Group of Mines near Village-Zawar, Dist. Udaipur, Rajasthan of M/S Hindustan Zinc Limited

Ref: - Environment Clearance Letter No. – J-11015/259/2012-IA.II (M), dated 05.01.2017 & J-11015/259/2012-IA-II(M), dated 16.10.2020

Sir,

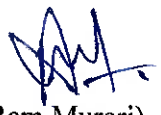
With reference to aforesaid subject and cited reference, please find enclosed six monthly compliance report for the conditions stipulated in the Environment Clearances of Zawar Group of Mines near Village-Zawar, Dist. Udaipur, Rajasthan of M/S Hindustan Zinc Limited for the period from October' 2022 to March' 2023 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,

For Hindustan Zinc Limited

Yours faithfully,



(Ram Murari)

CEO- IBU Zawar

Hindustan Zinc Ltd

CC:

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

Environment Clearance Letter No. – J-11015/259/2012-IA.II (M), dated 05.01.2017		
S.No.	**SPECIFIC CONDITIONS**	**COMPLIANCE STATUS**
1	Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Rajasthan and any other Court of Law, if any, as may be applicable to this project.	• The directions of the Hon'ble courts shall be adhered to.
2	This Environmental Clearance is subject to obtaining requisite NBWL Clearance from the Standing Committee of National Board for Wildlife, if any, applicable for this Mining project	• Not applicable, as the Jaisamand Wildlife Sanctuary and other protected areas are not falling within the 10 km of aerial distance of mine lease area. Letter certifying the same by DCF-Wildlife is attached as **Annexure-1** • Further, Zawar mine lease boundary is outside the eco sensitive zone of Jaisamand wildlife and sanctuary
3	No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.	• We have obtained Forest Diversion/ Clearance for carrying out Mining activities (total forest land: 1537.91 ha which includes diversion of 114.94 ha for surface rights and diversion of 1422.97 ha underground mining). Recent renewal of Forest diversion/ clearance was obtained vide letter no: F.No.8-1/1997-FC dated 23.01.2015
4	The project proponent shall obtain Consent to Operate from the State Pollution Control Board, Rajasthan and effectively implement all the conditions stipulated therein.	• Consent to operate have been obtained from the Rajasthan State Pollution Control Board (RSPCB) vide letter no. • **CTO for Mines:** F(Mines)/Udaipur(Sarada)/53(1)/2016-2017/5003-5007 dated 20/12/2022 valid up to 31.12.2027 • **CTO for Beneficiation Plant:** F(HDF)/Udaipur (Sarada)/1(1)/2020-2021/5368-5370 dated 28/12/2022 valid up to 31.12.2027 • The conditions stipulated therein are being implemented and complied.

5	The Proponent should install online Ambient Air Quality Monitoring System and there should be system for display of digital AAQ data within 03 months at least at three locations as per wind direction. Online provisions of pH and turbidity meters at discharge points of STP and ETP and also at water storage ponds in the mining area may be made. Project Proponent should display the result digitally in front of the main Gate of the mine site	• CAAQMS have been installed at 3 locations as per wind direction with digital display of data in front of the main gate of the mine site. Also provided pH and turbidity meters.  **DIGITAL DISPLAY**  **CAAQM STATION**  **PH & TURBIDITY METERS** • We are maintaining zero discharge from our operations.

6	The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/leveling with the help of dozer/compactors. The report on slope and stability monitoring should be sent to MoEF&CC and its Regional office every six-months.	• We are carrying out mining activities through underground mining method. Waste rock generated is backfilled into underground voids. Part of the waste rock are used for stabilizing slopes of tailing storage facilities. • Presently, there is no storage of waste rock on surface. All initial waste dumps have already been vegetated & rehabilitated.  **WASTE DUMP REHABILITATED AND TURNED INTO ROCK GARDEN**
7	The reclamation at waste dump sites shall be ecologically sustainable. Scientific reclamation has been followed. The local species may be encouraged and species are so chosen that the slope, bottom of the dumps and top of the dumps are able to sustain these species. The aspect of the dump is also a factor which regulates some climatic parameters and allows only species adopted to that micro climate. This may be recommended to be studied by hiring Expert Ecology Group.	• We are carrying out mining activities through underground mining method. Waste rock generated is backfilled into underground voids. Part of the waste rock are used for stabilizing slopes of tailing storage facilities. • Presently, there is no storage of waste rock on surface. All initial waste dumps have already been vegetated & rehabilitated.
8	There is need for regular monitoring of invertebrates and aquatic life of water bodies including the reservoir located close to the mining lease to establish that fish and other animals including the water is not contaminated with heavy metal. There could be a research on "bio accumulation of heavy metals in invertebrates" to completely establish that there is no impact of mining.	• We are regularly carrying out monitoring and studying invertebrates and aquatic life of water bodies. Study conducted by M/s JM Environet Pvt Ltd indicated that there is no adverse impact of mining operation.
9	A specialized Institution may be hired to carry out ecological survey on the plant species to evaluate their growth in terms of stunted, deformed and seed viability. The sensitive species and indicator species to heavy metal pollution may be screened out and plantation accordingly designed. Similarly, uptake of Zinc, Cadmium and lead etc. by crops and vegetables grown in the crop lands around the mining lease may be studied. Bottom sediment analysis of ponds, wells and Rivers to ascertain the level of accumulation of heavy metal may be	• We are regularly carrying out the ecological survey of plant species and plantation is carrying out regularly in and around our operation. Study conducted by M/s JM Environet Pvt Ltd indicated that there is no adverse impact of mining operation.

	done.	
10	The Proponent shall conduct an Occupational health study with respect to the pressure impact on ear drums as person goes underground and implement the recommendations.	• We conducted Occupational Health study with respect to the pressure impact on Ear drum in the underground working through M/s Sure Safety and no impact was found.
11	Project Proponent shall carry out vibration studies well before approaching any such habitats or other buildings to evaluate the zone of influence and impact of blasting on the neighborhood. Within 500 meters of such sites vulnerable to blasting vibrations, avoidance of use of explosives and adoption of alternative means of mineral extraction. A provision for monitoring of each blast should be made so that the impact of blasting on nearby habitation and dwelling units could be ascertained. The covenant of lease deed under Rule 31 of MCR 1960 provides that no mining operations shall be carried out within 50 meters of public works such as public roads and buildings or inhabited sites except with the prior permission from the Competent Authority.	• Blast Vibration monitoring is being done regularly by inhouse team. CIMFR has been engaged for blast vibration monitoring and other controlling measures. • Controlled blasting with major use of electronic detonator
12	Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. The material transfer points should invariably be provided with Bag filters and or dry fogging system. Belt-conveyors should be fully covered to avoid air borne dust; Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured.	• Water sprinkling is done on haul road in mines on regular basis to arrest fugitive dust if any. • Water sprinklers have been provided at transfer points. • Covered Conveyors have been provided to control fugitive emissions. • Roads at surface are black tarred/ cemented and Mechanised vacuum road sweepers have been deployed to clean roads on the surface to arrest fugitive dust generation.  **Mechanized vacuum road sweepers**

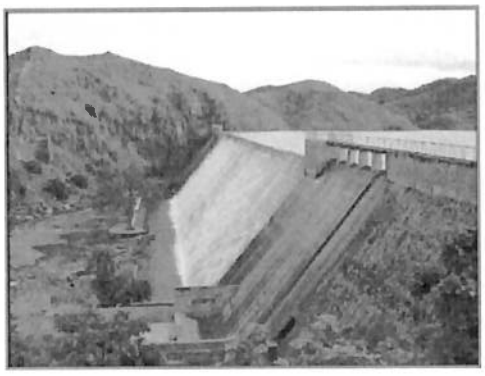
13	The monitoring of PM 2.5 in the vehicle emission shall be conducted to improve the mine environment and report submitted to the Regional Office of the MoEFCC.	• MoEF recognized laboratory are engaged for carrying out environment monitoring. Ambient PM 2.5 monitoring is done at the surface and readings are well within norms.
14	The Project Proponent reported that there are seven Schedule-I species viz. Peafowl *(Pavo cristatus)*, Osprey *(Pandion haliaetus)*, Tawny eagle *(Aquila rapax)*, Crested honey buzzard *(Pernisptilorhynchus)*, Shikra *(Accipiter badius)*, Leopard *(Pantherapardus)*, Indian pangolin *(Manis crassicaudata)* in the study area. The PP shall implement the Conservation Plan and enhance the budget for implementation of Conservation Plan for Schedule I Species and also increase the budget for plantation/green belt development. The Proponent shall implement the Wildlife Conservation Plan along with the funds so allocated with consultation of Chief Wild Life Warden of the State Govt. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office, Lucknow and the Chief Wild Life Warden of the State Govt.	• Wild life conservation plan for Schedule-1 for Zawar Mines is approved by Chief Wild Life Warden, Jaipur as per "SOP issued in May 2019". • We have deposited an amount of Rs. 3,69,00,000/- in 2022 through online transaction to the account of "Rajasthan Protected Areas, Conservator society, Udaipur". Details of online transaction done is UTR-2052671107403. Amount deposited for contribution towards conservation of wildlife and administrative cost for processing inspections, etc. • In 2021, contributed 8.8 lacs rupees to forest department towards development cum maintenance of safari park/ golden park and forest nursery. • Site has undertaken various conservation measures for conservation so far: constructed 39 check dams for soil conservation & water recharge and plantation in the lease area. Also, working areas are properly fenced/ boundary in place to avoid any interaction.
15	Proponent shall carry out monitoring of lead in the blood samples of the employees and the villagers in the areas surrounding the mine in their schedule of health check-up. The nearby water bodies shall be monitored every six months and report submitted to Regional office of the MoEFCC to ascertain impact due to lead contamination.	• Third party monitoring of lead in blood of employees and villagers is being done and continued. Monitoring reports indicate that lead level in blood are below the norms. Details enclosed in **Annexure 5** • Monitoring of nearby water bodies is conducted as part of post project monitoring and monitored data enclosed.
16	Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The Project Proponent shall complete all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing.	• We have taken appropriate actions for the issues raised during public hearing. Detailed are enclosed as **Annexure 8**.
17	Implementation of the outcome of study with regard to "optimization of blast design parameter for the safety and stability of surface structures and subsequent monitoring of vibration on the surface structures for their long term stability" which was carried out by Central Institute of Mining and Fuel Research should be ensured.	• Blast Vibration monitoring is being done regularly by inhouse team. CIMFR has been engaged for blast vibration monitoring and other controlling measures. • Controlled blasting with major use of electronic detonator
18	Continuous monitoring of radioactive elements, if any, shall be undertaken till entire mine is dewatered and report has to be submitted to MoEFCC Regional Office. Periodic monitoring of any	• Analysis done for Mine dewatering and there is absence of any radioactive elements. (Monitoring report enclosed as **Annexure 6**.

	adverse impact of Radon and its daughter products on any worker should be included in the Occupational Health Monitoring Programme.	

Environment Clearance Letter No. – J-11015/259/2012-IA.II (M), dated 05.01.2017		
S.No.	**STANDARD CONDITIONS**	**COMPLIANCE STATUS**
1	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forest and Climate Change 5 years in advance of final mine closure for approval.	• Presently, mine is in operation stage. This point is noted for future adherence and compliance.
2	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest and Climate Change.	• Complied. Mining is carried out as per Mine plan duly approved by IMB vide letter no. 584(4)(3)(1868)/2021- क्षेखानि अजम dated 15/07/2021
3	No change in the calendar plan including excavation, quantum of mineral and waste should be made.	• Calendar plan, as per approved mine plan, is being adhered to.
4	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.	• Water is drawn from Captive Tidi Dam with permission of Water Resources department, Govt. of Rajasthan vide agreement dated 17.09.1976 and amended time to time.
5	Mining shall be carried out as per the provisions outlined in mining plan approved by Indian Bureau of Mines (IBM) as well as by abiding to the guidelines of Directorate General Mines Safety (DGMS).	• Mining is being carried out as per the Mining Plan duly approved by IBM vide letter no. 584(4)(3)(1868)/2021- क्षेखानि अजम dated 15/07/2021 and as per the guidelines of DGMS.
6	The lands which are not owned by Proponent, mining will be carried out only after obtaining the consents from all the concerned land owners as per the provisions of the Mineral Concession Rules, 1960 and MMDR Act, 1957.	• Noted and Complied.
7	Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment, Forest and Climate Change its Regional Office.	• Digital processing of the entire lease area using remote sensing technique is being carried out regularly once in three years • Last study was done in August 2021. Copy of report was submitted in previous compliance report submitted in November 2021.
8	The critical parameters as per the Notification 2009 such as PM10, PM2.5, NOx and SOx etc. in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued	• Monitoring is being done for ambient air quality and effluent and monitored data are enclosed herewith. • Display board has been placed near main gate. • Required details is uploaded on company website https://www.hzlindia.com/ at Sustainability section > Environment compliance > Zawar Mines

	by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.	
9	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board	• Water sprinkling is carried out at loading, unloading and transfer points. • Closed Conveyors are provided to control fugitive emissions. • Regular water sprinkling is done at haul roads underground. • Roads are regularly cleaned via mechanized vaccum sweeper to control fugitive dust. • Ambient Air Monitoring is being carried out fortnightly at 8 stations and are within limits. • Detailed reports are enclosed as **Annexure - 2.**
10	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. The monitoring shall be carried out four times in a year pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected 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.	• Ground water level and quality is being monthly monitored through network of piezometers & wells in and around mine area. • 6 Piezometers have been provided at the downstream of tailing dam. • Monitoring reports are being submitted to MoEF, IRO, Jaipur and CPCB, Bhopal on six monthly basis as part of 6 monthly compliance of EC and to Central Ground Water Authority on yearly basis as part of annual compliance of CGWA NOC. • No natural water course and/or water resources have been obstructed due to any mining operations. • Detailed reports are enclosed as **Annexure-3**
11	Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease 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 natural water bodies and or streams which are flowing in an around the village, are not being disturbed. There are no perennial nallah in the and around the lease. • Entire fresh water requirement is sourced from a captive surface water source i.e Tidi dam. No ground water is extracted for industrial use except for the ground water intersection due to mining. • Pre-mining ground water table is not available as modern mining is going on in the area since 1950. Ground water recharge structures are being constructed for ground water recharge. • Ground water level and quality is being regularly monitored through network of piezometers & key wells in and around mine area. • Detailed reports are enclosed as **Annexure-3**
12	Regular monitoring of water quality upstream and downstream of water	• Ground water level and quality is being regularly monitored through network of piezometers & key wells

	bodies shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.	in and around mine area. • Monitoring reports are being submitted to MoEF, IRO, Jaipur and CPCB, Bhopal on six monthly basis as part of 6 monthly compliance of EC and to Central Ground Water Authority on yearly basis as part of annual compliance of CGWA NOC. • Detailed reports are enclosed as **Annexure-3**
13	Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The project proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.	• Road used for transportation of ore does not pass through any village
14	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 light/night hours.	• Mining being underground, there is no such impact. • Also, nearby villages are far away from the surface infrastructures in the core zone. • Noise level monitored are well within the limit.
15	Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. The material transfer points should invariably be provided with Bag filters and or dry fogging system. In case of Belt- conveyors facilities the system should be fully covered to avoid air borne dust; Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured.	• Being underground mines, main haulage roads are underground. • Water sprinkling is carried out to suppress fugitive dust on haul roads • All the roads used for ore transportation are tarred/ cemented.

16	Sufficient number of Gullies to be provided for better management of water. Regular Monitoring of pH shall be included in the monitoring plan and report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.	• There are no artificial gullies in the mine lease because of absence of surface waste dump.
17	There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.	• The captive Tidi dam with a capacity of 8.5 mcm constructed by HZL is a major rainwater harvesting measure form which the water is sourced for the project. • We have constructed 39 rainwater harvesting around all mines.  **TIDI DAM**  **Checkdam**  **Checkdam**
18	The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/leveling with the help of dozer/compactors.	• We are carrying out mining activities through underground mining method. Waste rock generated is backfilled in to underground voids. Part of the waste rock are used for stabilizing slopes of tailing storage facilities.

		• Presently, there is no storage of waste rock on surface. All initial waste dumps have already been vegetated & rehabilitated.
19	The reclamation at waste dump sites shall be ecologically sustainable. Scientific reclamation shall be followed. The local species may be encouraged and species are so chosen that the slope, bottom of the dumps and top of the dumps are able to sustain these species. The aspect of the dump is also a factor which regulates some climatic parameters and allows only species adopted to that micro climate.	• All the initial waste dumps have been reclaimed and became ecologically sustainable. • No fresh waste dumps in the mine lease.
20	The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time. The maximum height of the dumps shall not exceed 8m and width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.	• The project is expansion of an underground mine and beneficiation plant within existing area. Thus, no top soil is generated. • We are carrying out mining activities through underground mining method. Waste rock generated is backfilled in to underground voids. Part of the waste rock are used for stabilizing slopes of tailing storage facilities. • Presently, there is no storage of waste rock on surface. All initial waste dumps have already been vegetated & rehabilitated. • Compliance reports are submitted to MoEF, IRO Jaipur and CPCB, Bhopal on six monthly basis.
21	Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. The drains, settling tanks and check dams of appropriate size, gradient and	• The waste generated from the mine development work is dumped in the voids created due to stopping. Part of the waste rock is utilized for covering slope of tailing storage facility. • Being underground mine, there is no generation of overburden and hence OB dumps are there. • Drains are maintained at required places like around tailing storage facilities, inside beneficiation plants. The drains are cleaned and maintained on regular basis. • The concentrate from the beneficiation plant is accommodated in concentrate stockpile yards having covered sheds and is secured by stone masonry walls of appropriate height. • Concentrate from the stockpile yard is directly loaded into trucks mechanically/ manually for end use at

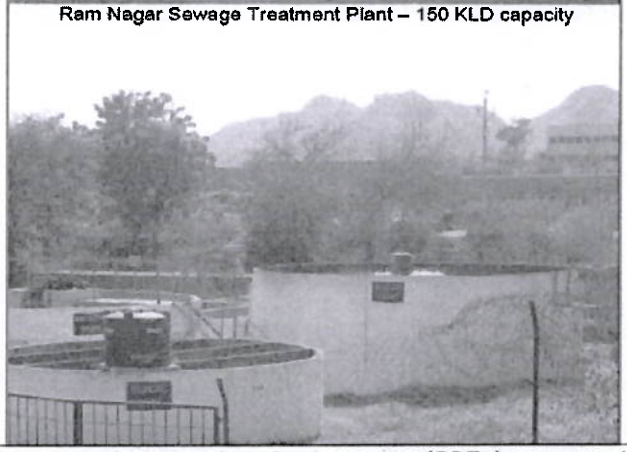
	length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.	captive smelter.
22	Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department and as per CPCB Guidelines. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.	• Till date, plantation has been done in 170.85 ha in including rehabilitated areas, around beneficiation plant, on matured tailing dam, roads and social a forestry. • Apart from this, we have carried out plantation in Plantation in nearby forest area through forest department in 75 ha in RDF 1 & RDF 2 during FY 2019-20 and 75 ha in RDF 1 & RDF 2 during FY 2021-22. We have further deposited 35 lacs in May 2022 to forest department for carrying out plantation work.
23	Project Proponent shall follow the mitigation measures provided in Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area", if any, applicable to the project.	• There is no adverse impact on the habitations as our mining activities are underground and suitable measures have been taken wrt environment management.
24	The Project Proponent shall make necessary alternative arrangements, where required, in consultation with the State Government to provide alternate areas for livestock grazing, if any. In this context, Project Proponent should implement the directions of the Hon'ble Supreme Court with regard to acquiring grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded against felling and plantation of	• No grazing land has been acquired as part of operations.

<table>
<tr><td></td><td>such trees should be promoted.</td><td></td></tr>
<tr><td>25</td><td>The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.</td><td>• Wild life conservation plan for Schedule-1 for Zawar Mines is approved by Chief Wild Life Warden, Jaipur as per "SOP issued in May 2019".
• We have deposited an amount of Rs. 3,69,00,000/- in 2022 through online transaction to the account of "Rajasthan Protected Areas, Conservator society, Udaipur". Details of online transaction done is UTR-2052671107403. Amount deposited for contribution towards conservation of wildlife and administrative cost for processing inspections, etc.
• In 2021, contributed 8.8 lacs rupees to forest department towards development cum maintenance of safari park/ golden park and forest nursery.
• Site has undertaken various conservation measures for conservation so far: constructed 39 check dams for soil conservation & water recharge and plantation in the lease area. Also, working areas are properly fenced/ boundary in place to avoid any interaction.</td></tr>
<tr><td>26</td><td>As per the Company Act, the CSR cost should be 2% of average net profit of last three years. Hence CSR expenses should be as per the Company Act/Rule for the Socio Economic Development of the neighborhood Habitats which could be planned and executed by the Project Proponent more systematically based on the Need based door to door survey by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.</td><td>• CSR expenditure is being done for the Socio Economic Development of the neighborhood based on the Need based door to door survey by established Social Institutes/Workers.
CSR HIGHLIGHTS AT ZAWAR MINES
<table><tr><th>SAKHI AND SAMADHAN</th><th>SHIKSHA SAMBAL AND MINDSPARK</th><th>KHUSHI AND NANDGHAR</th><th>SMILE ON WHEELS</th></tr><tr><td>5071 women connected though 394 SHGs, 32 VOs and 1 federation under Sakhi project.

50 Poultry units have been established at Zawar by tribal women through convergence established with Krishi Vigyan Kendra, SAKHI & BAIF, extending livelihood support to 50 Households</td><td>Shiksha Sambal Project is running in 10 Secondary and Sr. Secondary Schools at Zawar for Improving board results.

3 learning camps were organized: Summer, Diwali and Winter camps, which were focused on increasing the board results and it was attended by more than 300 students, with participation</td><td>52 Anganwadi and Nandghar centers are there in 28 operational villages of Zawar Mines Preschool education, health and nutrition facilities are being provided to more than 26,950 children up to 6 years of age as well as to pregnant and lactating women in the community. Under the Khushi project, Poshan Week was</td><td>Under Health Project doorstep medical facilities through Mobile health Van are being provided in 28 villages.</td></tr></table></td></tr>
</table>

		Preventive: Fumigation in all the 28 villages Awareness campaigns and pamphlet distribution **Curative** (in collaboration with Dept. of Animal Husbandry) Medical Camps in 8 core villages Distributed 4000 medical kits Under Sakhi Project, Poshan week was celebrated by giving training & awareness campaigns to more than 1500 women across the 28 villages of ZM	of 20+ volunteers	celebrated with nutrition related awareness sessions conducted with 500+(adolescent girls, lactating mothers and pregnant women) in our operational area	
27	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	• There are no construction labor residing in the site.			
28	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs	• Following noise control measures have been taken: o Specifying permissible noise level limit for equipment below 85 dB(A) o Acoustic enclosures with insertion loss of at least 25 dB(A) o Suitable evasee at the outlet of ventilation fans o Plantation for attenuation of noise • Employees are provided with ear plugs / muffs with proper training and awareness for its usage • Monitoring results are attached as **Annexure – 4.**			

29	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated l9th May, 1993 and 3lst December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	• Oil and grease trap is provided at workshop and water is reused for alternate uses. Zero discharge is being maintained. • Sewage is treated and reused for plantation and dust suppression. • Two STP's with combined capacity of 450 KLD have been provided  Ram Nagar Sewage Treatment Plant – 150 KLD capacity 
30	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.	• Personnel Protective Equipments (PPEs) are provided to the workers. • Initial and refreshers training are also provided covering safety and occupational health aspects. Regular safety interactions are also carried out.
31	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	• There is a separate Environment Management cell with qualified environmental professionals headed by AGM-Environment under the direct control of CEO- IBU Zawar and Corporate HSE.
32	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office.	• Being complied regularly. • Year wise expenditure are reported to MoEF, Integrated Regional Office, Jaipur. Expenses during **Oct'22 to Mar'23** is **Rs. 158.61 Lakhs.**
33	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.	• Project is expansion of existing underground mines, no land development is required.
34	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of	• Six monthly reports are being submitted on regular basis for the EC.

	Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.	
35	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	• Noted and complied.
36	A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	• No suggestion / representation has been received from any Panchayat / local NGO.
37	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.	• Copies of Environment Clearance have been submitted to RSPCB Regional Office, District Industry Centre and Collector's office/ Tehsildar's Office
38	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forest and Climate Change at www.environmentclearance.nic.in and a copy of the same should be forwarded to the Regional Office.	• It was advertised in Rajasthan Patrika and Dainik Bhaskar. • Advertisements are attached as **Annexure-7.**

Environment Clearance Letter No. – J-11015/259/2012-IA-II(M), dated 16.10.2020		
S.No.	**Specific Conditions**	**Compliance Status**
(a)	Gap plantation shall be carried in consultation with State Forest Department in the total Mining lease area where the surface rights were not acquired. These plantations shall be maintained and monitoring to be done to achieve the survival rate of 90%.	Deposited Rs 100 lacs to state forest department in FY 2020-21 and carried out plantation in 25 ha and 50 ha under RDF-1 & 2 scheme of forest department. A part from this, carried out 2500 nos. of plantation at tailing storage facility and 1000 nos. as gap plantation in mine area.
(b)	The conversation plan for Schedule-I species reported in the study are namely. 1 reptilian (Bengal Monitor Lizard), 3 avifaunal (Osprey, Indian Peafowl and White rumped Vulture), 2 mammalians (Indian Pangolin and Indian Leopard) and 1 butterfly (Crimson Rose) should be prepared and implemented in consultation with State Forest Department including the recommendations of the Chief Wildlife Warden.	• Wild life conservation plan for Schedule-1 for Zawar Mines is approved by Chief Wild Life Warden, Jaipur as per "SOP issued in May 2019". • We have deposited an amount of Rs. 3,69,00,000/- in 2022 through online transaction to the account of "Rajasthan Protected Areas, Conservator society, Udaipur". Details of online transaction done is UTR-2052671107403. Amount deposited for contribution towards conservation of wildlife and administrative cost for processing inspections, etc. • In 2021, contributed 8.8 lacs rupees to forest department towards development cum maintenance of safari park/ golden park and forest nursery. • Site has undertaken various conservation measures for conservation so far: constructed 39 check dams for soil conservation & water recharge and plantation in the lease area. Also, working areas are properly fenced/ boundary in place to avoid any interaction.
(c)	As proposed no additional water shall be used for the proposed expansion. The requirement shall e met from the existing daily water demand of 14,000 KLD, out of which 2,400 KLD water is used for mining purpose, 8,600 KLD for beneficiation plant and 3,000 KLD for domestic use which is drawn from Tidi Dam through pipeline.	Total water requirement for Mines, beneficiation and domestic purposes is kept below the 14,000 cum/ day/. Source of fresh water is Tidi dam (surface water).
(d)	The project proponent should obtain the NOC from the CGWA regarding the intersection of workings with the groundwater table.	NOC for ground water intersection from CGWA for all the four operating mines i.e. Mochia Mines, Balaria Mine, Baroi Mine and Zawarmala mine are in place and are under renewal.
(e)	Mist spraying arrangements shall be provided to suppress the dust emission at the loading, crushing and transfer points. The effective water spraying arrangements shall be made at the tailing dam to control the air borne dust.	We have provided suitable water spraying arrangement for water spraying to arrest fugitive dust generation. Also, moisture is maintained in ore while loading and crushing. Water is sprinkled in the tailing storage facility on regular basis.
(f)	The project proponent should implement all the additional measures that are proposed in the present application.	Noted and complied.

ANNEXURE-1

Office of The Deputy Conservator of Forests Wildlife Udaipur

Sajjangarh, Udaipur Post Box No.161, Phone No.0294&2800009
Email ID -dcfwludz@gmail.com

F.9(10) Survey/DCFWL/ Udr/2016-17/ 11715 Date : 29/11/16

TO,

V.Jayaraman
VP & Head - EOHS
Hindustan Zinc Limited
Yashad Bhawan, Udaipur

Sub : Issue of certification regarding Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/ Elephant Reserves (exiting as well as proposed), if any within 10 km of the Zawar mine lease.

Ref: Hindustan zinc Limited, Udaipur Letter No. Nil Date:24.11.2016

Dear sir,

With reference to the above mentioned subject certified G.T.Sheet & details of GPS Co-ordinates of two blocks submitted by you is verified by Forest Range Officer Jaisamand based on his factual report by vide letter no. 602 dated 29.11.2016 saying that no National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves & Jaisamand wildlife Sanctuary within 10 km of submitted Zawar mine lease area.

Hence this is certified that Jaisamand Wildlife Sanctuary & other P.A.'s mentioned above are not falling in 10 km of aerial distance of mine lease area.

Encl. : Certified G.T.Sheet

Sincerely

(Dr.T.Mohanraj)
Deputy Conservator of Forests
Wildlife Udaipur

F.9(10) Survey/DCFWL/ Udr/2016-17/ Date :

Copy to

1 Deputy Conservator of Forests, Udaipur
2 Forest Range Officer, Wildlife Jaisamand

-Sd-

(Dr.T.Mohanraj)
Deputy Conservator of Forests
Wildlife Udaipur

ANNEXURE – 2

AIR MONITORING AT ZAWAR GROUP OF MINES								
STACK MONITORING (All units are in mg/Nm3)								
Sampling Points	Parameters	Prescribed Limits	**Oct-22**	**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar- 23**
Mochia Crusher Stack	SPM	150	30.59	26.21	32.45	21.56	23.34	29.17
Balaria Crusher Stack	SPM	150	32.80	44.61	30.13	21.97	28.65	23.81
DE - 2 (Mill 2)	SPM	150	37.26	31.80	21.59	23.42	22.85	24.88
DG Set 6 MW	SPM	75	-	-	-	-	-	47.76
	NOX (as NO2) (At 15% O2, dry basis in ppm)	710	-	-	-	-	-	320
	CO	150	-	-	-	-	-	126
	NMHC (as C)	100	-	-	-	-	-	45

AMBIENT AIR QUALITY MONITORING (All units are in µg/m3)							
Oct-22							
S.No.	STATIONS	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	Pb
1	Mill Office	67.27	26.90	3.99	13.21	340	0.18
2	Mochia Mine	58.87	26.27	3.10	12.48	330	0.17
3	Balaria Mine	49.61	24.33	3.59	13.19	340	0.20
4	Administrative Block	55.31	30.09	3.61	10.92	310	0.17
5	Zawar Mala Mine	76.06	31.65	3.82	11.93	330	0.18
6	Baroi Mine	75.27	27.94	3.46	11.45	300	0.21
Prescribed Limits		**100**	**60**	**80**	**80**	**2000**	**1**

Nov-22							
S.No.	STATIONS	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	Pb
1	Mill Office	68.80	41.01	3.10	12.26	330	0.20
2	Mochia Mine	78.90	38.05	3.93	11.10	340	0.19
3	Balaria Mine	79.16	36.41	3.98	11.67	340	0.16
4	Administrative Block	63.68	25.52	4.31	15.39	300	0.13
5	Zawar Mala Mine	70.32	30.63	3.42	11.01	310	0.13
6	Baroi Mine	66.82	32.74	3.63	9.99	280	0.11
Prescribed Limits		**100**	**60**	**80**	**80**	**2000**	**1**

AMBIENT AIR QUALITY MONITORING (All units are in µg/m3)							
Dec-22							
S.No.	STATIONS	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	Pb
1	Mill Office	74.43	33.02	5.26	12.80	390	0.10
2	Mochia Mine	80.52	32.51	5.27	13.03	310	0.11
3	Balaria Mine	75.31	32.94	4.75	12.78	330	0.11
4	Administrative Block	72.87	36.60	5.16	13.75	270	0.14
5	Zawar Mala Mine	83.81	36.44	5.49	12.70	250	0.15
6	Baroi Mine	79.26	32.43	5.05	13.51	260	0.15
Prescribed Limits		**100**	**60**	**80**	**80**	**2000**	**1**

Jan-23							
S.No.	STATIONS	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	Pb
1	Mill Office	79.45	31.34	5.28	12.58	380	0.1
2	Mochia Mine	64.82	29.01	4.04	12.48	430	0.09
3	Balaria Mine	70.11	30.64	4.85	12.34	370	0.14
4	Administrative Block	72.65	27.70	3.62	12.66	360	0.09
5	Zawar Mala Mine	77.02	30.12	5.30	12.27	340	0.1
6	Baroi Mine	68.04	25.32	5.09	12.63	320	0.1
Prescribed Limits		**100**	**60**	**80**	**80**	**2000**	**1**

Feb-23							
S.No.	STATIONS	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	Pb
1	Mill Office	76.05	33.07	5.45	12.51	360	0.09
2	Mochia Mine	78.37	36.98	5.33	12.44	380	0.09
3	Balaria Mine	72.13	35.57	5.36	12.82	350	0.15
4	Administrative Block	64.64	37.89	4.90	12.76	390	0.13
5	Zawar Mala Mine	69.41	41.56	4.96	13.81	360	0.13
6	Baroi Mine	78.82	33.46	3.55	12.58	370	0.09
Prescribed Limits		**100**	**60**	**80**	**80**	**2000**	**1**

AMBIENT AIR QUALITY MONITORING (All units are in µg/m3)							
Mar-23							
S.No.	STATIONS	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	Pb
1	Mill Office	70.81	30.94	5.52	14.79	350	0.11
2	Mochia Mine	75.44	30.35	6.50	13.59	370	0.11
3	Balaria Mine	62.13	25.52	3.44	13.16	330	0.11
4	Administrative Block	72.59	28.08	5.26	14.09	360	0.1
5	Zawar Mala Mine	74.15	27.73	3.42	13.33	320	0.09
6	Baroi Mine	71.31	30.17	5.87	15.11	340	0.11
Prescribed Limits		**100**	**60**	**80**	**80**	**2000**	**1**

ANNEXURE – 3

Ground Water Quality at Zawar Group of Mines								
Nov-22								
S.No.	Parameters	IS : 10500:2012		Zawarmata Hand pump	Zawarmata Well	Naka Well	Mahadev ki Nal Well	Tiger Well
		Acceptable	Permissible					
1	pH	6.5-8.5	No Relaxation	7.16	7.61	7.24	7.32	6.76
2	Chlorides	250	1000	68.49	83.17	68.49	83.17	63.60
3	TSS	-	-	4	6	6	3	8
4	Zinc	5	15	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
5	Lead	0.01	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
6	Iron	1.0	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
7	Copper	0.05	1.5	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
8	Cadmium	0.003	No Relaxation	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)
9	Cyanides	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
10	Nickel	0.02	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
11	Cobalt	-	-	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
12	Chromium	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
Except pH all values are in mg/lt.								

Ground Water Quality at Zawar Group of Mines								
Dec-22								
S.No.	Parameters	IS : 10500:2012		Zawarmata Hand pump	Zawarmata Well	Naka Well	Mahadev ki Nal Well	Tiger Well
		Acceptable	Permissible					
1	pH	6.5-8.5	No Relaxation	7.50	7.49	7.17	7.23	7.01
2	Chlorides	250	1000	63.07	93.62	73.91	93.62	68.99
3	TSS	-	-	8	8	7	6	13
4	Zinc	5	15	0.15	BDL(<0.01)	0.23	BDL(<0.01)	0.03
5	Lead	0.01	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
6	Iron	1.0	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
7	Copper	0.05	1.5	0.02	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
8	Cadmium	0.003	No Relaxation	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)
9	Cyanides	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
10	Nickel	0.02	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
11	Cobalt	-	-	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)

12	Chromium	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)

Except pH all values are in mg/lt.

Ground Water Quality at Zawar Group of Mines

Jan-23

S.No.	Parameters	IS : 10500:2012		Zawarmata Hand pump	Zawarmata Well	Naka Well	Mahadev ki Nal Well	Tiger Well
		Acceptable	Permissible					
1	pH	6.5-8.5	No Relaxation	7.91	7.61	7.60	7.65	7.48
2	Chlorides	250	1000	57.00	95.01	74.10	90.26	47.50
3	TSS	-	-	9	7	5	8	3
4	Zinc	5	15	0.11	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
5	Lead	0.01	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
6	Iron	1.0	No Relaxation	0.04	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
7	Copper	0.05	1.5	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
8	Cadmium	0.003	No Relaxation	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)
9	Cyanides	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
10	Nickel	0.02	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
11	Cobalt	-	-	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
12	Chromium	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)

Except pH all values are in mg/lt.

Ground Water Quality at Zawar Group of Mines

Mar-23

S.No.	Parameters	IS : 10500:2012		Zawarmata Hand pump	Zawarmata Well	Naka Well	Mahadev ki Nal Well	Tiger Well
		Acceptable	Permissible					
1	pH	6.5-8.5	No Relaxation	7.50	7.27	7.08	7.22	7.02
2	Chlorides	250	1000	61.26	100.5	67	86.14	78.49
3	TSS	-	-	3	7	6	22	4
4	Zinc	5	15	0.09	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
5	Lead	0.01	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
6	Iron	1.0	No Relaxation	0.10	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
7	Copper	0.05	1.5	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
8	Cadmium	0.003	No Relaxation	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)	BDL<(0.001)
9	Cyanides	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
10	Nickel	0.02	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
11	Cobalt	-	-	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)

12	Chromium	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
13	Total Organic Carbon	-	-	BDL (<1)	BDL (<1)	BDL (<1)	1.50	BDL (<1)
Except pH all values are in mg/lt.								

Piezometer Well Water Quality at Zawar Group of Mines

Dec-22

S.No.	Parameters	IS : 10500:2012		Near Bridge Vala Patel House (Pz – 01)	Near In front of Old Tailing Dam (Pz –02)	Near Tailing Dam Pump House (Pz –03)	Near Magazine Area (Pz -04)	Near Below Tailing Pipe Lines (Pz –05)	Near Way to Tailing Dam Road (Pz –06)
		Acceptable	Permissible						
1	pH	6.5-8.5	No Relaxation	7.67	6.56	7.80	7.26	7.38	7.34
2	Chlorides	250	1000	55.19	59.13	35.48	41.39	41.39	41.39
3	Zinc	5	15	BDL (<0.01)	0.72	0.07	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
4	Lead	0.01	No Relaxation	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
5	Iron	1.0	No Relaxation	0.04	0.09	0.05	0.12	0.02	0.27
6	Copper	0.05	1.5	BDL (<0.01)	BDL (<0.01)	0.02	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
7	Cadmium	0.003	No Relaxation	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
8	Nickel	0.02	No Relaxation	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
9	Chromium	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
10	Cyanide	0.05	-	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
11	Cobalt	-	-	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
Except pH all values are in mg/lt									

Piezometer Well Water Quality at Zawar Group of Mines									
Mar-23									
S.No.	Parameters	IS : 10500:2012		Near Bridge Vala Patel House (Pz – 01)	Near In front of Old Tailing Dam (Pz –02)	Near Tailing Dam Pump House (Pz –03)	Near Magazine Area (Pz -04)	Near Below Tailing Pipe Lines (Pz –05)	Near Way to Tailing Dam Road (Pz –06)
		Acceptable	Permissible						
1	pH	6.5-8.5	No Relaxation	6.99	7.09	7.69	7.13	7.68	7.37
2	Chlorides	250	1000	47.86	47.86	61.26	71.79	63.17	61.26
3	Zinc	5	15	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
4	Lead	0.01	No Relaxation	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
5	Iron	1.0	No Relaxation	0.18	0.08	0.24	0.14	0.49	0.14
6	Copper	0.05	1.5	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
7	Cadmium	0.003	No Relaxation	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
8	Nickel	0.02	No Relaxation	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
9	Chromium	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
10	Cyanide	0.05	-	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
11	Cobalt	-	-	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
12	Total Organic Carbon	-	-	1.50	1.35	1.50	BDL(<1)	6.0	BDL(<1)
Except pH all values are in mg/lt									

Tidi Upstream and Downstream Water Quality at Zawar Group of Mines

Nov-22 (Except pH all values are in mg/lt)					
S.No.	Parameters	IS : 10500:2012		Tidi Upstream	Tidi Downstream
		Acceptable	Permissible		
1	pH	6.5-8.5	No Relaxation	7.96	7.98
2	Chlorides	250	1000	58.71	62.62
3	TSS	-	-	7	7
4	Zinc	5	15	BDL (<0.01)	BDL (<0.01)
5	Lead	0.01	No Relaxation	BDL (<0.01)	BDL (<0.01)

6	Iron	0.3	No Relaxation	BDL (<0.01)	BDL (<0.01)
7	Copper	0.05	1.5	BDL (<0.01)	BDL (<0.01)
8	Cadmium	0.003	No Relaxation	BDL (<0.001)	BDL (<0.001)
9	Cyanides	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
10	Nickel	0.02	No Relaxation	BDL (<0.01)	BDL (<0.01)
11	Cobalt	-	-	BDL (<0.01)	BDL (<0.01)
12	Chromium	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
13	Sulphate	200	400	16.53	19.16

Dec-22 (Except pH all values are in mg/lt)					
S. No.	Parameters	IS : 10500:2012		Tidi Upstream	Tidi Downstream
		Acceptable	Permissible		
1	pH	6.5-8.5	No Relaxation	7.91	8.01
2	Chlorides	250	1000	65.04	65.04
3	TSS	-	-	12	10
4	Zinc	5	15	0.13	0.04
5	Lead	0.01	No Relaxation	BDL (<0.01)	BDL (<0.01)
6	Iron	0.3	No Relaxation	BDL (<0.01)	BDL (<0.01)
7	Copper	0.05	1.5	0.03	0.02
8	Cadmium	0.003	No Relaxation	BDL (<0.001)	BDL (<0.001)
9	Cyanides	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
10	Nickel	0.02	No Relaxation	BDL (<0.01)	BDL (<0.01)
11	Cobalt	-	-	BDL (<0.01)	BDL (<0.01)
12	Chromium	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
13	Sulphate	200	400	43.83	39.16

Jan-23 (Except pH all values are in mg/lt)					
S. No.	Parameters	IS : 10500:2012		Tidi Upstream	Tidi Downstream
		Acceptable	Permissible		
1	pH	6.5-8.5	No Relaxation	7.85	8.20
2	Chlorides	250	1000	66.5	66.5
3	TSS	-	-	17	14
4	Zinc	5	15	0.02	0.05
5	Lead	0.01	No Relaxation	BDL (<0.01)	BDL (<0.01)
6	Iron	0.3	No Relaxation	BDL (<0.01)	BDL (<0.01)
7	Copper	0.05	1.5	BDL (<0.01)	BDL (<0.01)
8	Cadmium	0.003	No Relaxation	BDL (<0.001)	BDL (<0.001)
9	Cyanides	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
10	Nickel	0.02	No Relaxation	BDL (<0.01)	BDL (<0.01)
11	Cobalt	-	-	BDL (<0.01)	BDL (<0.01)
12	Chromium	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
13	Sulphate	200	400	170.83	190.00

Mar-23 (Except pH all values are in mg/lt)					
S. No.	Parameters	IS : 10500:2012		Tidi Upstream	Tidi Downstream
		Acceptable	Permissible		
1	pH	6.5-8.5	No Relaxation	8.06	8.13
2	Chlorides	250	1000	78.4	72.55
3	TSS	-	-	22	17
4	Zinc	5	15	0.04	0.06
5	Lead	0.01	No Relaxation	BDL (<0.01)	BDL (<0.01)

6	Iron	0.3	No Relaxation	BDL (<0.01)	BDL (<0.01)
7	Copper	0.05	1.5	BDL (<0.01)	BDL (<0.01)
8	Cadmium	0.003	No Relaxation	BDL (<0.001)	BDL (<0.001)
9	Cyanides	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
10	Nickel	0.02	No Relaxation	BDL (<0.01)	BDL (<0.01)
11	Cobalt	-	-	BDL (<0.01)	BDL (<0.01)
12	Chromium	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
13	Sulphate	200	400	189.5	193.7

Ground Water Level Monitoring at Zawar Group of Mines

S.No.	Piezometers	Oct -22 (m)	Nov-22 (m)	Dec-22(m)	Jan-23 (m)	Feb-23 (m)	Mar-23(m)
1.	Near Bridge (Vala Patel House) (Pz – 01)	0.73	0.94	1.08	1.11	1.95	2.09
2.	Near In front of Old Tailing Dam (Pz – 02)	3.97	4.21	4.92	4.97	5.39	5.47
3.	Near Tailing Dam Pump House(Pz – 03)	1.81	2.01	2.38	2.36	2.99	3.10
4.	Near Magazine Area(Pz – 04)	3.51	3.94	4.36	4.39	5.13	5.27
5.	Near Below Tailing Pipe Lines(Pz – 05)	2.62	2.87	3.27	3.24	3.91	4.01
6.	Near Way to Tailing Dam Road(Pz – 06)	1.16	1.27	1.71	1.73	2.19	2.37

S.No.	Wells in the area	Oct-22 (m)	Nov-22 (m)	Dec-22(m)	Jan-23 (m)	Feb-23 (m)	Mar-23(m)
1.	Zawarmata Well	2.78	3.11	3.59	1.28	1.73	2.21
2.	Mahadev ki Nal Well	1.10	0.95	2.05	4.28	4.66	1.75

DETAILS OF QUARTERLY STP ANALYSIS REPORT

S.No.	PARAMETERS	Standard	Ashok Nagar			Ram Nagar		
			Oct-22	Nov-22	Dec-22	Oct-22	Nov-22	Dec-22
1	Total Suspended Solids	Not to exceed 100 mg/l	16	11	29	23	10	18
2	pH Value	Between 5.5 to 9.0	7.12	7.11	7.16	7.09	7.09	7.55
3	Oil and Grease	Not to exceed 10 mg/l	2	2	5	4	2	4

4	Total Residual Chlorine	Not to exceed 1.0 mg/l	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1
5	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	1.45	1.71	6.71	2.52	1.53	2.37
6	Total Kjeldahl Nitrogen (as N)	Not to exceed 100 mg/l	8.06	5.51	23.76	7.72	6.69	8.32
7	Biochemical Oxygen Demand (3 days at 27°C)	Not to exceed 30 mg/l	6.29	7.00	14.33	14.44	7.17	13.33
8	Sulphide (as S)	Not to exceed 2.0 mg/l	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1
9	Nitrate Nitrogen	Not to exceed 10 mg/l	4.59	4.18	4.14	5.12	5.86	4.31
10	Chlorides	Not to exceed 1000 mg/l	95.01	110.89	101.25	90.26	81.96	96.42
11	Sulphates	Not to exceed 1000 mg/l	27.00	44.37	15.87	32.75	37.37	29.11
12	Chemical Oxygen Demand	Not to exceed 250 mg/l	30.72	43.26	97.66	94.40	49.92	80.22

DETAILS OF QUARTERLY STP ANALYSIS REPORT

S.No.	PARAMETERS	Standard	Ashok Nagar			Ram Nagar		
			Jan-23	Feb-23	Mar-23	Jan-23	Feb-23	Mar-23
1	Total Suspended Solids	Not to exceed 100 mg/l	28	30	10	13	25	12
2	pH Value	Between 5.5 to 9.0	7.29	7.12	7.00	7.39	6.77	7.32

3	Oil and Grease	Not to exceed 10 mg/l	4	5	3	2	5	3
4	Total Residual Chlorine	Not to exceed 1.0 mg/l	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1
5	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	9.17	9.19	8.04	8.39	6.77	7.49
6	Total Kjeldahl Nitrogen (as N)	Not to exceed 100 mg/l	21.34	22.84	18.72	15.23	13.76	15.41
7	Biochemical Oxygen Demand (3 days at 27°C)	Not to exceed 30 mg/l	9.5	15	9.40	6.75	16.67	8.17
8	Sulphide (as S)	Not to exceed 2.0 mg/l	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1
9	Nitrate Nitrogen	Not to exceed 10 mg/l	5.07	2.98	1.73	6.88	1.27	2.02
10	Chlorides	Not to exceed 1000 mg/l	110.89	115.71	110.89	71.35	125.35	102.73
11	Sulphates	Not to exceed 1000 mg/l	35.25	35.71	41.14	30.50	43.43	41.43
12	Chemical Oxygen Demand	Not to exceed 250 mg/l	83.90	115.71	78.62	38.27	112.11	58.66

Tailing Dam Reclaim Water (Except pH all values are in mg/lt.)								
S.No	**Parameters**	**Standard**	**Oct-22**	**Nov-22**	**Dec-22**	**Jan-23**	**Feb-23**	**Mar-23**
1	pH	5.5-9.0	7.21	7.09	7.32	7.07	7.43	7.37
2	Chlorides	-	133.01	134.99	149.80	81	96.42	77.14

3	TSS	100	24	16	22	32	16	22
4	Oil and Grease	10	3	2	3	2	2	3
5	BOD 3 days at 27°C	30	9.55	6.83	8.80	6.67	6.25	13.0
6	COD	250	76.80	46.22	55.81	32.38	36.48	87.36
7	Zinc	5	0.34	0.20	0.47	0.99	0.65	0.03
8	Lead	0.1	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
9	Iron	3	BDL(<0.01)	0.04	0.03	BDL(<0.01)	0.04	BDL(<0.01)
10	Copper	3	0.04	0.05	0.06	BDL(<0.01)	0.04	BDL(<0.01)
11	Cadmium	2	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.0001)
12	Cyanides	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
13	Nickel	3	0.07	BDL(<0.01)	0.04	BDL(<0.01)	0.06	BDL(<0.01)
14	Cobalt	-	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
15	Chromium	2	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)

ANNEXURE – 4

AMBIENT NOISE MONITORING AT ZAWAR GROUP OF MINES [in dB (A)]		
Stations/Month	**Dec-22**	
	Day	Night
Mill Office	68.3	59.7
Central Mochia Mine	56.8	48.8
Balaria Mine	63.4	51.6
Administrative Block	58.3	47.3
Zawar Mala Mine	59.7	50.4
North Baroi Mine	58.6	50.8
Hydrofill Plant	60.3	51.8
Dry Tailing Plant	58.9	50.9
Hospital	51.3	40.5
Ramnagar Colony	53.5	42.7
West Mochia Mine	60.8	51.7
Central Baroi Mine	63.6	52.7
Permissible Limit	**75 dB (A)**	**65 dB (A)**

AMBIENT NOISE MONITORING AT ZAWAR GROUP OF MINES [in dB (A)]		
Stations/Month	**Mar-23**	
	Day	Night
Mill Office	59.2	51.6
Central Mochia Mine	58.2	50.1
Balaria Mine	61.3	52.5
Administrative Block	58.4	47.8
Zawar Mala Mine	57.9	50.3
North Baroi Mine	57.1	48.4
Hydrofill Plant	60.9	51.5
Dry Tailing Plant	58.7	50.3
Hospital	51.7	40.3
Ramnagar Colony	50.8	40.4
West Mochia Mine	60.1	51.4
Central Baroi Mine	59.5	51.2
Permissible Limit	**75 dB (A)**	**65 dB (A)**

ANNEXURE – 5

No.	Name	AGE	Gender	Unit	Date	Lead µg/l
1	AMIT KUMAR	26	Male	Zawarmala	19/10/2022	89.9
2	KALU LAL PEMA	39	Male	Mochia	20/10/2022	77.99
3	KALU SINGH CHAND SINGH	32	Male	Mochia	20/10/2022	42.87
4	PREM KUMAR MEENA	25	Male	Mochia	20/10/2022	58.03
5	PREM KUMRA MEENA	30	Male	Mochia	20/10/2022	87.19
6	PRITAM GHATODE	25	Male	Mochia	20/10/2022	55.18
7	SURJIT KUMAR PAL	28	Male	Mochia	20/10/2022	88.96
8	SURJIT SINGH	30	Male	Mochia	20/10/2022	100.5
9	KACHIRA VAISAJI	40	Male	Mill	20/10/2022	68.85
10	KALU LAL	32	Male	Mill	20/10/2022	104.94
11	KAMLESH SUTHAR	39	Male	CPP	20/10/2022	29.82
12	LAXMAN MEENA	43	Male	Mill	20/10/2022	79.94
13	LAXMI	23	Female	Mill	20/10/2022	39.33
14	MANISH GUPTA	30	Male	Admin	20/10/2022	49.38
15	MANISH KUMAR	34	Male	CPP	20/10/2022	15.85
16	MEGHA SAWAJI	35	Male	Mill	20/10/2022	71.59
17	MONTU MAKWANA	35	Male	Mochia	20/10/2022	41.9
18	MUKESH GOPAWAT	30	Male	Mill	20/10/2022	93.7
19	NANAJI RUPA	37	Male	Mill	20/10/2022	87.94
20	NARENDRA SHEKTWAT	30	Male	Mill	20/10/2022	80.23
21	NISHU KHAN	34	Male	CPP	20/10/2022	34.47
22	P K BHATT	57	Male	Admin	20/10/2022	34.11
23	PUJA BANIK	23	Male	Mill	20/10/2022	15.33
24	PUSHKAR CHOUHAN	31	Male	Mill	20/10/2022	79.31
25	RAM LAL	45	Male	Mill	20/10/2022	90.03
26	RANJAN KUMAR SINGH	37	Male	Mill	20/10/2022	80.28
27	RAVI MEENA	29	Male	Mill	20/10/2022	67.97
28	ROHIT BHATI	24	Male	Admin	20/10/2022	85.31
29	SABARINATH SINGH	34	Male	Mill	20/10/2022	101.56
30	SANJAY MEENA	32	Male	Mill	20/10/2022	95.79
31	SATYAM JAISWAL	26	Male	Mochia	20/10/2022	66.2
32	SAWA MEENA	49	Male	Mill	20/10/2022	97.64
33	SHANKAR LAL TAWER	38	Male	Mill	20/10/2022	86.93
34	SHREYANKA DAS	27	Female	Mill	20/10/2022	41.64
35	SOURAV CHANDRA	28	Male	Mill	20/10/2022	69.3
36	TADEPALLI BALU	21	Male	CPP	20/10/2022	88.7
37	ANIL SEN	24	Male	Admin	21/10/2022	38.1
38	DEVKUMAR	53	Male	Admin	21/10/2022	56.06
39	DINESH KUMAR DAROGA	24	Male	Baroi	21/10/2022	63.06
40	DR. PRAVEEN KOTWANI	59	Male	Admin	21/10/2022	30.78
41	DURGESH CHOUDHARY	25	Male	Admin	21/10/2022	77.65

42	GAURAV MATHUR	47	Male	Admin	21/10/2022	26.24
43	HEMALATA LOHAR	41	Female	Admin	21/10/2022	29.08
44	LAXMAN SINGH	27	Male	Admin	21/10/2022	30.79
45	SARITA LAHA	34	Female	Admin	21/10/2022	60.73
46	SHAHRUKH PATHAN	28	Male	Baroi	21/10/2022	78.34
47	UPENDHAR RAPOLU	36	Male	Baroi	21/10/2022	61.93
48	VIKAS MISHRA	25	Male	Admin	21/10/2022	75.97
49	AJAY CHOUHAN	26	Male	Mill	21/10/2022	96.77
50	AKASH PITALIYA	32	Male	Mill	21/10/2022	96.89
51	AMIT MISHRA	22	Male	Mill	21/10/2022	107.58
52	BASANTI LAL MEENA	42	Male	Mill	21/10/2022	82.78
53	DILIP KUMAR MEENA	32	Male	Mill	21/10/2022	88.46
54	DURGESH KUMAR PASWAN	25	Male	Mill	21/10/2022	98.25
55	HARISH CHOUBISA	41	Male	Mill	21/10/2022	86.31
56	JAGDISH MEENA	29	Male	Mill	21/10/2022	53.13
57	JITENDRA KUSHWAHA	35	Male	Mill	21/10/2022	92.02
58	KALU	20	Male	Mill	21/10/2022	79.67
59	LAXMAN	47	Male	Mill	21/10/2022	33.77
60	MD. RAISH SHAH	24	Male	Mill	21/10/2022	92.37
61	MOHAN LAL MEENA	40	Male	Mill	21/10/2022	95.63
62	RAJENDRA KUMAR VAISHNAV	36	Male	Mill	21/10/2022	96.29
63	RAJENDRA MEENA	30	Male	Mill	21/10/2022	44.03
64	RAJSHREE GANDHI	24	Female	Mill	21/10/2022	49.13
65	RAJU REBARI	26	Male	Mill	21/10/2022	79.12
66	ROHIT SUKHWAL	26	Male	Mill	21/10/2022	91.26
67	VIJENDRA HADA	28	Male	Mill	21/10/2022	47.9
68	VIKASH PETWAL	25	Male	Mill	21/10/2022	65.22
69	LUKARANJAN	28	Male	Zawarmala	21/10/2022	52.89
70	UTKARSH RISHAV	26	Male	Zawarmala	21/10/2022	62.75
71	SUMEET SINGH RAJAWAT	34	Male	Zawarmala	21/10/2022	38.31
72	PRATYUSH SONI	33	Male	Zawarmala	21/10/2022	29.52
73	SANDHYA RASAKATLA	25	Female	Zawarmala	21/10/2022	78.57
74	MD. ASIF IKBAL	32	Male	Zawarmala	21/10/2022	42.48
75	SOURAV KUMAR SHARMA	22	Male	Zawarmala	21/10/2022	35.93
76	KAMINI PRADHAN	26	Female	Zawarmala	21/10/2022	30.6
77	ALOK DWIVEDI	24	Male	Mochia	21/10/2022	72.65
78	AMIT KUMAR VERMA	30	Male	Mochia	21/10/2022	48.19
79	ANIL KHATIK	24	Male	Mochia	21/10/2022	47.39
80	ANIL KUMAR	32	Male	Mochia	21/10/2022	68.33
81	BACHA KHARWAR	40	Male	Mill	21/10/2022	75.74
82	BADRI LAL MEENA VALA JI	34	Male	Mochia	21/10/2022	49.26
83	BHAGWAN LAL MEENA	37	Male	Mochia	21/10/2022	57.4
84	BHERU LAL KANHAIYA LAL	29	Male	Mill	21/10/2022	66.63
85	BHUPENDRA YADAV	31	Male	Mill	21/10/2022	51.11

86	BISHWAJIT BEHERA	27	Male	Mochia	21/10/2022	48.52
87	BUDDHADEV BERA	34	Male	Mochia	21/10/2022	52.23
88	BUKYA PRUTHVI RAJ NAIK	24	Male	Mochia	21/10/2022	47.72
89	DAL CHAND	43	Male	Mill	21/10/2022	89.49
90	DALJEET SINGH	42	Male	Mochia	21/10/2022	25.83
91	DEVILAL SHANKAR JI	26	Male	Mill	21/10/2022	68.7
92	DHARMA RAMA JI	38	Male	Mill	21/10/2022	83.52
93	DHARMA SAVJI	38	Male	Mill	21/10/2022	89.76
94	DHUL CHAND MEENA	29	Male	Mochia	21/10/2022	57.34
95	DHULA MEENA LALU JI	40	Male	Mochia	21/10/2022	76.7
96	DILIP KUMAR MEENA	26	Male	Mochia	21/10/2022	79.29
97	FARID AHMED	55	Male	Mochia	21/10/2022	36.55
98	GUNURU VENKATESH	24	Male	Mill	21/10/2022	63.78
99	HEERA LAL SAHU	35	Male	Mochia	21/10/2022	77.37
100	HEMRAJ CHOUDARY	40	Male	Mochia	21/10/2022	49.87
101	HOMA MEGHA JI	36	Male	Mochia	21/10/2022	51.24
102	IMRAN KHAN	24	Male	Mochia	21/10/2022	51.76
103	INDER LAL MEENA	29	Male	Mochia	21/10/2022	77.47
104	JAI KRISHNA DAMOR	30	Male	Mill	21/10/2022	90.2
105	JANUSZ RYSZARD	60	Male	Admin	21/10/2022	28.42
106	JITENDRA MEGHWAL	30	Male	Mill	21/10/2022	45.8
107	KALU LAL MEENA MAVA LAL	30	Male	Mochia	21/10/2022	46.51
108	KALU LAL MEENA SHANKAR LAL	32	Male	Mill	21/10/2022	81.63
110	KESHA GOMA JI	38	Male	Mill	21/10/2022	69.28
111	KHAN JAMA KHAN	55	Male	Mochia	21/10/2022	93.17
113	LADDAN	29	Male	Mill	21/10/2022	105.26
114	LAXMAN LAL PINJA MEENA	54	Male	Mill	21/10/2022	96
115	MOHAN LAL MEENA KALU JI	52	Male	Mochia	21/10/2022	48.22
116	MUKESH KUMAR JAT	34	Male	Mill	21/10/2022	98.01
117	MUKESH KUMAR MEENA RAMESH C	26	Male	Mill	21/10/2022	39.57
118	MUKESH KUMAR RAM	31	Male	Mill	21/10/2022	74.98
119	NAINA VERMA	24	Female	Mochia	21/10/2022	43.71
120	NANA LAL BHIMA	35	Male	Mill	21/10/2022	111.81
121	NARAN MEENA	54	Male	Mochia	21/10/2022	68.41
122	NARAYAN LAL MEENA MAN JI	35	Male	Mill	21/10/2022	34.42
123	NARENDRA KUMAR	37	Male	Mochia	21/10/2022	90.43
124	OMMAN VERGHESE	47	Male	Mochia	21/10/2022	39.91
125	PRABHU LAL MEENA PANCHA JI	38	Male	Mochia	21/10/2022	62.65
126	PRAHLAD HARIJAN	35	Male	Mill	21/10/2022	115.59
127	PRAKASH AMRA JI	30	Male	Mill	21/10/2022	89.3
128	PRASHANT GUPTA	31	Male	Admin	21/10/2022	31.4
129	PRATEEK TAK	27	Male	Mochia	21/10/2022	52.55
130	PREM SINGH	52	Male	Mochia	21/10/2022	77.85
131	RAJA RAM	45	Male	Mochia	21/10/2022	72.01

132	RAJENDRA KUMAR FATEH LAL JI	56	Male	Mochia	21/10/2022	97.37
133	RAJENDRA NATH GOSWAMI	31	Male	Mochia	21/10/2022	43.62
135	RAM CHANDRA JEEVA	48	Male	Mochia	21/10/2022	52.25
136	RAMESH MEENA NATHU	35	Male	Mill	21/10/2022	94.81
137	RANVEER KANA RAM	52	Male	Mill	21/10/2022	74.77
138	RAVAT VIRENDRA	27	Male	Mochia	21/10/2022	27.04
139	RITESH KUMAR GOPAL	32	Male	Mochia	21/10/2022	52.67
140	SHAILESH KUMAR TIWARI	23	Male	Mill	21/10/2022	113.85
141	SHANKAR DEVAJI	35	Male	Mill	21/10/2022	88.08
142	SHIV SHING DHUL SINGH	55	Male	Mochia	21/10/2022	56.73
143	SITARAM BHAGWAN LAL	35	Male	Mill	21/10/2022	69.58
144	SOHAN LAL BHIMA	44	Male	Mochia	21/10/2022	73.22
145	SURAJ MAL MEENA	30	Male	Mill	21/10/2022	42.25
146	TANNU SHARMA	38	Male	Mochia	21/10/2022	70.69
147	UDAI LAL MEENA	53	Male	Mill	21/10/2022	35.09
148	VASU MEGHWAL	32	Male	Mill	21/10/2022	87.22
149	VIJAY SINGH	54	Male	Mochia	21/10/2022	75.77
150	VIKRAM SINGH THALAL	26	Male	Mill	21/10/2022	81.04
151	VINOD KUMAR	30	Male	Admin	21/10/2022	31.51

ANNEXURE- 6

Original

ULR NO: TC531220000000851F TC-5312

Modern Test Centre

- (Accredited To AERB vide certificate No: AERB/RSD/ACC-16/R-3/2017/1073)
- (Accredited To NABL through ISO/IEC 17025:2017)
- (Recognized by BIS vide OSL Code-5123116)

Off:-Gandhi Nagar 5th line Extn. East, Berhampur-760001, Dist-Ganjam (Odisha)
Lab:-Neelanchala Nagar 3rd lane, Berhampur-760010, Dist-Ganjam (Odisha), Phone:-0680 2403321-22
Visit us: www.moderntestcenter.com Mail: - moderntestcenter@gmail.com
Ref: - 26308/MTC/LF/7.8/14/2020 DATE: 20/07/2020

TEST CERTIFICATE

Issued to: M/s. Hindustan Zinc Limited, Zawar Mines
PO: Zawar Mines
Udaipur, Pin: 313901.

LOCATION: BALARIYA MINE

Customer Reference No: Nil Dt. 08/07/2020
Date of Receipt: 20/07/2020

Date of Initiation of Test : 20/07/2020
Date of Completion of Test: 20/07/2020

TEST CERTIFICATE NO: 2113 18896 **DATE: 20/07/2020**

TEST CERTIFICATE AS PER IS 14194 (PART- 1& PART-2): 2013

PART A: *PARTICULARS OF SAMPLE SUBMITTED*

a) Nature of sample	: Dewatering Water	f) Quantity	: 1 No's
b) Grade / Variety/ Type/Class/Size etc	: 1 lit bottle	g) Mode of packing	: Packed in Carton
c) Brand Name, if any	: Not available	h) Condition of Seal of Certifying Body Or the Regulatory authority	: Not applicable
d) Name of the test suggested	: Beta Emitters & Alpha Emitters		
e) Batch No. & Date of Manufacture /Collection/Sampling	: Batch No: Not Specified : DOS: 06/07/2020	I) Any other information	: No Specific Observation

PART B: *SUPPLIMENTARY INFORMATIONS*

a) Reference to sampling ~~by lab~~/submitted by party : Sample submitted by SCS Enviro Services, Jaipur, Rajasthan
By Lab: i) Location : ----------
ii) Date & time of collection : ----------
iii) Name of lab representative (Wherever applicable) : ----------
b) Supporting documents like graphs, tables, Sketches for the measurements taken and The results derived, if any to be attached : ---------
c) Deviation from the test methods as Prescribed in relevant ISS / Work Instructions, if any : No deviation
d) Deviation from environmental condition, if any : No deviation

PART C: *TEST RESULTS*

Sl. No	Parameter	Specified value maximum as per IS 10500:2012	Result
1	Beta Emitters	1 $Bq.l^{-1}$	BDL
2	Alpha Emitters	0.1 $Bq.l^{-1}$	BDL

N.B:- BDL is below detection limit of the detector.
The DL for Beta Emitters is 0.134 $Bq.l^{-1}$
The DL for Alpha Emitters is 0.007 $Bq.l^{-1}$

PART D: *REMARKS*

1) The results stated above relates to the sample tested only.
2) This report in full or in part shall not be published, advertised, used for any legal action unless prior permission has been secured from the competent Authority of the laboratory.
3) The sample shall be kept for three month after the test and can be returned on request or shall be destroyed. Any customer complain or by regulatory authority shall be entertained, if and only if the complain is registered within one month from date of report.

For Modern Test Centre
Signature with seal
Authorised Signatory

2140

Original

TC-5312

ULR NO: TC531220000000852F

Modern Test Centre

- (Accredited To AERB vide certificate No: AERB/RSD/ACC-16/R-3/2017/1073)
- (Accredited To NABL through ISO/IEC 17025:2017)
- (Recognized by BIS vide OSL Code-5123116)

Off:-Gandhi Nagar 5th line Extn. East, Berhampur-760001, Dist-Ganjam (Odisha)
Lab:-Neelanchala Nagar 3rd lane, Berhampur-760010, Dist-Ganjam (Odisha), Phone:-0680 2403321-22
Visit us: www.moderntestcenter.com Mail: - moderntestcenter@gmail.com
Ref: - 26309/MTC/LF/7.8/14/2020 DATE: 20/07/2020

TEST CERTIFICATE

Issued to: M/s. Hindustan Zinc Limited, Zawar Mines
PO: Zawar Mines
Udaipur, Pin: 313901.

LOCATION: BAROI MINE

Customer Reference No: Nil Dt. 08/07/2020
Date of Receipt: 20/07/2020

Date of Initiation of Test : 20/07/2020
Date of Completion of Test: 20/07/2020

TEST CERTIFICATE NO: 2113 18897 **DATE: 20/07/2020**

TEST CERTIFICATE AS PER IS 14194 (PART- 1& PART-2): 2013

PART A: *PARTICULARS OF SAMPLE SUBMITTED*

a) Nature of sample	: Dewatering Water	f) Quantity	: 1 No's
b) Grade / Variety/ Type/Class/Size etc	: 1 lit bottle	g) Mode of packing	: Packed in Carton
c) Brand Name, if any	: Not available	h) Condition of Seal of Certifying Body Or the Regulatory authority	: Not applicable
d) Name of the test suggested	: Beta Emitters & Alpha Emitters	i) Any other Information	: No Specific Observation
e) Batch No. & Date of Manufacture /Collection/Sampling	: Batch No: Not Specified : DOS: 06/07/2020		

PART B: *SUPPLIMENTARY INFORMATIONS*

a) Reference to sampling ~~by lab~~/submitted by party : Sample submitted by SCS Enviro Services, Jaipur, Rajasthan
By Lab: i) Location : ----------
ii) Date & time of collection : ----------
iii) Name of lab representative (Wherever applicable) : ----------
b) Supporting documents like graphs, tables, Sketches for the measurements taken and The results derived, if any to be attached : ---------
c) Deviation from the test methods as Prescribed in relevant ISS / Work Instructions, if any : No deviation
d) Deviation from environmental condition, if any : No deviation

PART C: *TEST RESULTS*

Sl. No	Parameter	Specified value maximum as per IS 10500:2012	Result
1	Beta Emitters	1 $Bq.l^{-1}$	BDL
2	Alpha Emitters	0.1 $Bq.l^{-1}$	BDL

N.B:- BDL is below detection limit of the detector.
The DL for Beta Emitters is 0.134 $Bq.l^{-1}$
The DL for Alpha Emitters is 0.008 $Bq.l^{-1}$

PART D: *REMARKS*

1) The results stated above relates to the sample tested only.
2) This report in full or in part shall not be published, advertised, used for any legal action unless prior permission has been secured from the competent Authority of the laboratory.
3) The sample shall be kept for three month after the test and can be returned on request or shall be destroyed. Any customer complain or by regulatory authority shall be entertained, if and only if the complain is registered within one month from date of report.

For Modern Test Centre
Shankar Kunja
Signature with seal
Authorised Signatory

21401

Original

ULR NO: TC531220000000853F TC-5312

Modern Test Centre

- (Accredited To AERB vide certificate No: AERB/RSD/ACC-16/R-3/2017/1073)
- (Accredited To NABL through ISO/IEC 17025:2017)
- (Recognized by BIS vide OSL Code-5123116)

Off:-Gandhi Nagar 5th line Extn. East, Berhampur-760001, Dist–Ganjam (Odisha)
Lab:-Neelanchala Nagar 3rd lane, Berhampur–760010, Dist–Ganjam (Odisha), Phone:-0680 2403321-22
Visit us: www.moderntestcenter.com Mail: - moderntestcenter@gmail.com
Ref: - 26310/MTC/LF/7.8/14/2020 DATE: 20/07/2020

TEST CERTIFICATE

Issued to: M/s. Hindustan Zinc Limited, Zawar Mines
PO: Zawar Mines
Udaipur, Pin: 313901.

LOCATION: MOCHIA MINE

Customer Reference No: Nil Dt. 08/07/2020
Date of Receipt: 20/07/2020

Date of Initiation of Test : 20/07/2020
Date of Completion of Test: 20/07/2020

TEST CERTIFICATE NO: 2113 18898 **DATE: 20/07/2020**

TEST CERTIFICATE AS PER IS 14194 (PART- 1& PART-2): 2013

PART A: *PARTICULARS OF SAMPLE SUBMITTED*

a) Nature of sample	: Dewatering Water	f) Quantity	: 1 No's
b) Grade / Variety/ Type/Class/Size etc	: 1 lit bottle	g) Mode of packing	: Packed in Carton
c) Brand Name, if any	: Not available	h) Condition of Seal of Certifying Body Or the Regulatory authority	: Not applicable
d) Name of the test suggested	: Beta Emitters & Alpha Emitters		
e) Batch No. & Date of Manufacture /Collection/Sampling	: Batch No: Not Specified : DOS: 06/07/2020	i) Any other information	: No Specific Observation

PART B: *SUPPLIMENTARY INFORMATIONS*

a) Reference to sampling ~~by lab~~/submitted by party : Sample submitted by SCS Enviro Services, Jaipur, Rajasthan
By Lab: i) Location : ----------
ii) Date & time of collection : ----------
iii) Name of lab representative (Wherever applicable) : ----------
b) Supporting documents like graphs, tables, Sketches for the measurements taken and The results derived, if any to be attached : ---------
c) Deviation from the test methods as Prescribed in relevant ISS / Work Instructions, if any : No deviation
d) Deviation from environmental condition, if any : No deviation

PART C: *TEST RESULTS*

Sl. No	Parameter	Specified value maximum as per IS 10500:2012	Result
1	Beta Emitters	1 $Bq.l^{-1}$	BDL
2	Alpha Emitters	0.1 $Bq.l^{-1}$	BDL

N.B:- BDL is below detection limit of the detector.
The DL for Beta Emitters is 0.134 $Bq.l^{-1}$
The DL for Alpha Emitters is 0.007 $Bq.l^{-1}$

PART D: *REMARKS*

1) The results stated above relates to the sample tested only.
2) This report in full or in part shall not be published, advertised, used for any legal action unless prior permission has been secured from the competent Authority of the laboratory.
3) The sample shall be kept for three month after the test and can be returned on request or shall be destroyed. Any customer complain or by regulatory authority shall be entertained, if and only if the complain is registered within one month from date of report.

For Modern Test Centre
Shankar Khatri
Signature with seal
Authorised Signatory
21402

Original

ULR NO: TC531220000000850F TC-5312

Modern Test Centre

- (Accredited To AERB vide certificate No: AERB/RSD/ACC-16/R-3/2017/1073)
- (Accredited To NABL through ISO/IEC 17025:2017)
- (Recognized by BIS vide OSL Code-5123116)

Off:-Gandhi Nagar 5th line Extn. East, Berhampur-760001, Dist-Ganjam (Odisha)
Lab:-Neelanchala Nagar 3rd lane, Berhampur-760010, Dist-Ganjam (Odisha), Phone:-0680 2403321-22
Visit us: www.moderntestcenter.com Mail: - moderntestcenter@gmail.com
Ref: - 26307/MTC/LF/7.8/14/2020 DATE: 20/07/2020

TEST CERTIFICATE

Issued to: M/s. Hindustan Zinc Limited, Zawar Mines
PO: Zawar Mines
Udaipur, Pin: 313901.

LOCATION: ZAWARMALA MINE

Customer Reference No: Nil Dt. 08/07/2020
Date of Receipt: 20/07/2020

Date of Initiation of Test : 20/07/2020
Date of Completion of Test: 20/07/2020

TEST CERTIFICATE NO: 2113 18895 **DATE: 20/07/2020**

TEST CERTIFICATE AS PER IS 14194 (PART- 1& PART-2): 2013

PART A: *PARTICULARS OF SAMPLE SUBMITTED*

a) Nature of sample	: Dewatering Water	f) Quantity	: 1 No's
b) Grade / Variety/ Type/Class/Size etc	: 1 lit bottle	g) Mode of packing	: Packed in Carton
c) Brand Name, if any	: Not available	h) Condition of Seal of Certifying Body Or the Regulatory authority	: Not applicable
d) Name of the test suggested	: Beta Emitters & Alpha Emitters		
e) Batch No. & Date of Manufacture /Collection/Sampling	: Batch No: Not Specified : DOS: 06/07/2020	i) Any other information	: No Specific Observation

PART B: *SUPPLIMENTARY INFORMATIONS*

a) Reference to sampling ~~by lab~~/submitted by party : Sample submitted by SCS Enviro Services, Jaipur, Rajasthan
By Lab: i) Location : ----------
ii) Date & time of collection : ----------
iii) Name of lab representative (Wherever applicable) : ----------
b) Supporting documents like graphs, tables, Sketches for the measurements taken and The results derived, if any to be attached : ---------
c) Deviation from the test methods as Prescribed in relevant ISS / Work Instructions, if any : No deviation
d) Deviation from environmental condition, if any : No deviation

PART C: *TEST RESULTS*

Sl. No	Parameter	Specified value maximum as per IS 10500:2012	Result
1	Beta Emitters	1 $Bq.l^{-1}$	BDL
2	Alpha Emitters	0.1 $Bq.l^{-1}$	BDL

N.B:- BDL is below detection limit of the detector.
The DL for Beta Emitters is 0.114 $Bq.l^{-1}$
The DL for Alpha Emitters is 0.007 $Bq.l^{-1}$

PART D: *REMARKS*

1) The results stated above relates to the sample tested only.
2) This report in full or in part shall not be published, advertised, used for any legal action unless prior permission has been secured from the competent Authority of the laboratory.
3) The sample shall be kept for three month after the test and can be returned on request or shall be destroyed. Any customer complain or by regulatory authority shall be entertained, if and only if the complain is registered within one month from date of report.

For Modern Test Centre
Shankar Khatri
Signature with seal
Authorised Signatory

21399

Annexure - 7

DAINIK BHASKAR, Udaipur Edition 10.01.2017 Page 1

राजस्थान

हिन्दुस्तान ज़िंक लिमिटेड

पर्यावरण स्वीकृति प्राप्ति बाबत सूचना

RAJASTHAN PATRIKA, Udaipur Edition 10.01.2017, Page 7

राजस्थान पत्रिका, उदयपुर मंगलवार 10.01.2017

हिन्दुस्तान ज़िंक लिमिटेड

पर्यावरण स्वीकृति प्राप्ति बाबत सूचना

ANNEXURE-8

Compliance status of Commitments made during previous public hearing

S. No.	Issues	Action taken
1	Appreciation for education especially Girls education.	• 29 meritorious girls from our nearby villages supported for higher education by getting them enrolled for post-graduation at Ringus College. • HZL is lending support in improving the board results of students under Shiksha Sambal Project in 10 Govt Schools and as a part of which 3 camps were organized bringing together 600+ students of these Schools (Summer Camp, Diwali Learning Camp & Winter Camp) for better coverage and preparation of the exams • Two students of Nevatalai Village has been selected under Unchi Udan Project and is carrying out their coaching for engineering competitive exams in Udaipur with CSR Project Partner 'Resonance'.
		
2	Demand for set-up of more industries in the area for employment generation.	The expansion has increased direct and indirect employment in the area. Apart from this, HZL is carrying out CSR activities for livelihood generation (promoting micro enterprise through Sakhi women and agri based livelihood opportunities hrough Samadhan project). As a way to improve the livelihood of rural women, a Poultry initiative was inaugurated in which 50 women were identified and provided 20 chicks along with poultry kit

S. No.	Issues	Action taken
		A Namkeen Unit was inaugurated at Paduna which has employed 12 women from the nearby villages in the production of 12 types of Snacks Brought together 700+ farmers to open Farmer Producer Organization(Zawat Matha FPO) which provides seeds, fertilizers, machinaries etc at subsidised rates
3	Appreciation for maintaining good environment and plantation in the area.	We are regularly carrying out plantation in and around our mine operations. Over last 5 years, we have completed planation in 225 ha area through forest department under RDF scheme-1&2. In 2021, also planted in 75 ha through forest department under RDF scheme-1&2. Planted 2500 nos. of plantation at tailing storage facility and 1000 nos. as gap plantation in mine area.
4	Chances of dust generation from Tailing Dam.	Various dust control measures like water sprinkling is being done continuously and same will be continued. Compaction of tailing after disposal is being done.
5	General problem of tree felling by villagers in the area.	• Awareness imparted to the local community for not cutting the trees in coordination with Forest department. • Through CSR program, HZL is promoting developing "Ultra High-density plantation" and providing required plantation. Also, training is being imparted to the farmers for proper nourishment of plantation. Photograph enclosed. • Hi-Tech Plantation of Strawberry and English vegetables is been practiced out by 5 farmers. • Plantation drive is been carried out by Sakhi women in 7 panchayats.
		

S. No.	Issues	Action taken
		 
6	Improvement of road network in the area. (Maintenance and augmentation of Tidi Zawar Road)	- Construction of Zawar to Tidi road of around 3.5 KM in PPP mode with PWD department was carried out. This has provided convenience to the locals for better connectivity with National highway. Photograph enclosed. - In addition to this, 180 m cc internal road constructed at Nevatalai panchayat and 200 m cc road constructed at Tidi panchayat, the service is being utilized by the community members. - Constructed 3 interior roads in the village of Zawar which has a stretch of 1km
	 **Construction of Zawar to Tidi road of around 3.5 KM in PPP mode with PWD department**	
7	Water conservation and harvesting measures.	New Rain water harvesting structures (39 structures) along with deepening / de-silting of existing rain water harvesting structures for the period of FY 17 to FY 22

S. No.	Issues	Action taken
8	Drinking water problem- Kanpur village	Regular supply of drinking water to the villagers of Kanpur has been ensured through tankers and installed water supply system.