

Registered AD

Ref: HZL/ Maton /MoEF/2023-24/ 2.

Date: 29.11.2023

To,

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

Sub: Six Monthly Compliance Report of EC for April '23 to September'23.

Ref: Environment Clearance vide No. J-11015/169/2009-IA.II (M) dated 17.03.2010.

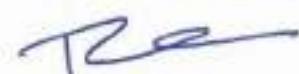
Sir,

Please find enclosed Compliance Status Report of the conditions of Environmental Clearance for the period of April '23 to September '23.

Thanking you,

Yours Sincerely,

For Maton Rock Phosphate Mine



(Ravi Kumar Dave)
Mine Manager

- CC to :
1. Scientist 'D' & In-Charge (Zonal Office), Central Pollution Control Board, Zonal Office (Central), 3rd Floor, Sahakar Bhawan, North T.T. Nagar, BHOPAL-(MP)-462 003
 2. Member Secretary, Rajasthan Pollution Control Board, 4 - Institutional Area, Jhalana Dungri, JAIPUR (RAJ) - 305001.
 3. The Regional Office, Rajasthan State Pollution Control Board, F-470, Near UCCI Building, Mewar Industrial Area, Udaipur (Raj.) -313001.
 4. Office Copy (Env. Cell)

Hindustan Zinc Limited

Maton Rock Phosphate Mines,

P.O. - Maton, Th. - Birwa, Udaipur (Rajasthan) - 313003

Tel. : [+91-294] 2342093, Fax : +91-294 - 2342092

Registered Office - Yashad Bhawan, Udaipur (Rajasthan) - 313004
www.hzlindia.com

CIN : L27204RJ1966PLC001208

Six Monthly Compliance Report of Environmental Clearance

Name of the Project : Maton Rock Phosphate Mining Project of M/s Hindustan Zinc Ltd.

Project Code :

Clearance Letter No.: J-11015/169/2009-IA.II(M) Dt. 17/03/2010

Period of Compliance Report: April'23 to September'23

Specific Conditions:

S.No.	Conditions	Compliance Status
i	Environmental clearance is granted subject to final outcome of Hon'ble supreme court of India in competent petition (c) No 412/2004 in IA No 833 in writ petition (c) no 202 in 1995, as may be applicable to this project.	The mine lease is not a part of the 261 mine leases covered in contempt petition No. 412/2004 in IA No. 833 in WP No. 202 in 1995 (Annexure 1).
ii	The environmental clearance is subject to approval of the State Land use Department, Government of Rajasthan for diversion of agricultural land for non-agricultural use.	The land was acquired under the LA Act, 1894 for mining purpose. As per the circular from GoR Dt. 1997, any land acquired under the said act for the stated purpose is deemed approved for the said purpose and need not again have to seek approval for diversion of land so acquired (Annexure 2A & 2B).
iii	The project proponent shall obtain Consent to Establish and Consent to Operate from Rajasthan State Pollution Control Board and effectively implement all the conditions stipulated therein.	The consent to establish was granted by the RSPCB vide Letter No. F(Mines)/Udaipur(Girwa)/13(1)/2009-2010/8003-8007 Dt. 17.03.2011 The latest Consent to Operate, granted by RSPCB vide No. F(Mines)/ Udaipur(Girwa)/1828(1)/2015-2016/973-977, Dt. 05/06/2020 is valid till 31/03/2023. Applied for renewal of CTO.
iv	The project proponent shall ensure that no natural watercourse and/or water resources are obstructed due to any mining operations. Adequate measures shall be taken for protection of the 1 st order and 2 nd order streams, if any emanating, passing through the mine lease during the course of mining operation.	No natural watercourse or water resources are obstructed due to mining operation as on date. During the future course of operation, if any natural water course is likely to be affected, suitable measures will be taken to ensure minimum obstruction to flow. Further, there are few 1 st order streams emanating from the mine lease area that have been protected.
v	The mine working will be restricted to above water table. For working below water table, a detailed hydro - geological study shall be carried out taking into account the mine water discharge, management of discharged water and prior approval of CGWA shall be obtained. The hydro- geological study report along with approval of CGWA will be submitted to the Ministry of Environment and Forests for reviewing	The mining operation is presently limited to above ground water level and as per IBM approved latest Scheme of Mining 2020-21 to 2024-25 it will not intersect the Ground Water Table up to 31 March 2025. Detailed hydro-geological study has been conducted to assess the hydro-geology of the area. Present depth of mining is 573 mRL the ultimate depth of mine pit is envisaged upto 520mRL where as depth of ground water table is 523 mRL & 527 mRL during pre and post

S.No.	Conditions	Compliance Status
	the conditions of environment clearance and stipulation of additional conditions, if any, as may be required.	monsoon respectively. It is expected that on intersection of ground water table, the inflow to mine pit is estimated at 1.31 cum/day. Applications in advance have been filed before the CGWA for grant of NOC for groundwater intersection on 26.03.2010 (revised application submitted on 16.07.2014) and approval awaited (Annexure 3). On grant of NoC by CGWA, copy of the same will be submitted.
vi	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.	As typical of a Rock Phosphate reserves and the hilly terrain of the deposit, no top soil found in the project area. However, any top soil encountered during land disturbance for OB storage shall be conserved and used for reclamation and plantation.
vii	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 and their phase-wise stabilization shall be carried out. There shall be three external dump(s). The OB dump(s) 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. Dump stability study shall be carried out in next six months before attaining the ultimate dump height of 50 m. The study should be carried out one of the reputed organizations like CMFRI and report submitted to the Ministry of Environment and forest. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office located at Lucknow on six monthly basis	Overburden is being stacked at earmarked dump sites as shown in IBM approved Mining plan/ Scheme of Mining. Out of total activities approved in Scheme of Mining, some of mining activities have been temporarily suspended since 01.11.2015. For progressive reclamation plantation has been started on mature part of waste dump since FY 2015-16. Waste dump stabilization study has been conducted by CIMFR and the recommendations have been implemented.
viii	Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from mine working, soil, OB and mineral dumps to prevent run off of water and flow of sediments directly into the Ahar River, The Udaisagar pond, the Bagdara Talav and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after	W.r.t to collection & utilization of rain water falling on the project area, the active mine area is situated on the top of a hill and is progressing by bench formation through top slicing. The area of mine pit, which is below general ground level, is situated at toe of the hill towards southwest. Rainwater falling on active mining area is directly collected in the mine pit. Garland drain is constructed at strategic location to channelize runoff generated around pit area into mine pit/sump which is having adequate capacity to allow settling of silt. The surface runoff

S.No.	Conditions	Compliance Status
	monsoon and maintained properly.	generated from the undisturbed slopes (hangwall) is also diverted to mine pit through peripheral garland drains which prevents water to move out of ML area. The de-siltation of mine pit takes place along with mining schedule of deepening of mine.
	Garland drain, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent runoff water and flow of sediments directly into the Ahar River, the Udaisagar pond, the Bagdara Talav 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 should be constructed at the corners of the garland drains and desilted at regular intervals.	The rainwater runoff is also generated on overburden dump (OB) site. The OB dump is situated in a natural valley and so far it's lower edges/ levels is situated below the top of valley level. Hence, it has not reached to it's maximum extent towards edges. Thus the runoff is diverted through natural slopes within valley into a siltation pond cum recharging pit measuring 150m x 60m x 1.5m, situated at the lowest point of dump. The accumulated silt of this pit is removed and stacked on OB dumps before commencement of every monsoon. In addition to above, a new approved dumping and its garland drain is under progress. In order to comply with the condition, HZL applied for obtaining NoC for construction of Anicuts on dt. 10.01.2011, but during discussion, officials referring WRD order dt. 26.07.2010, suggested HZL to opt for other means of recharge (copy of letter for NoC is enclosed as Annexure -4).
ix	Dimension of the retaining wall at the toe of over burden dump and OB benches within the mine to check run-off and siltation shall be based on the rain fall data.	Since, the OB dump is situated in a natural valley and so far it's lower edges/ levels is situated below the top of valley level. Hence, it has not reached to it's maximum extent towards edges. Retainer wall is constructed at strategic location along with suitable garland drain to ensure all rain water collection into recharge pit. In addition to above, a new approved dumping and its retaining wall is under progress.
x	Plantation shall be raised in an area of 122.3 ha including a 7.5 m wide green belt in safety zone around the mining lease by planting the native species around over burden dumps, along the roads etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha. Green belt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.	Out of mine lease area of 143.13 ha, only 114.44 ha. has been acquired along & an additional land of 80.25 ha acquired outside the mine lease. Plantation has been taken up in progressive manner to cover 33% area of the total land into green belt, including at least 7.5m wide greenbelt in the safety zone. About 8000 plants, including plantation on matured part of waste dump, have been planted during running FY 2022-23. Till date about 76,000 saplings have been planted with survival rates of above 90%. Further, the progressive green belt development plan has been prepared considering further plantation over OB dumps on maturity and shall be implemented over the

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xi	Effective safe guard measures, such as regular water sprinkling should be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading, unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	life of mine. Wet drilling is practiced to control dust at source. Regular sprinkling of water on all haulage roads with mobile tankers is ensured to suppress fugitive dust. The crusher has inbuilt water mist sprinkler to suppress dust during operation. The material storage and handling area is periodically water sprinkled to suppress dust.
xii	The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	A proposal for augmentation of Ground water resource has been submitted to CGWB/CGWA for compliance to CGWA guidelines and proposal is under approval. Additionally, so far site has neither intersected Ground Water Table nor abstracting ground water, hence no direct impact is envisaged on ground water.
xiii	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 installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Lucknow, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.	The mining operation is presently limited to above ground level and as per IBM approved latest Scheme of Mining (2020-21 to 2024-25) it will not intersect the Ground Water Table up to 31 March 2025.. Hence, there is no impact envisaged to ground water prior to that. A network of ground water locations are sampled around the mine lease area in the buffer zone and monitored every season and the report submitted to MoEF. A network of Piezometer well locations to monitor the impact on the ground water regime has been suggested by a reputed Hydrogeologist and the report submitted to CGWB/CGWA. As recommended, piezometers have been installed to monitor the impact on ground water level due to groundwater intersection and intersection will not take place up to 31 March, 2025.
xiv	Appropriate mitigation measures shall be taken to prevent pollution of the Ahar river in consultation with the State Pollution Control Board.	The surface drainage of the lease area does not connect to the Ahar River and hence no effluents or rainwater runoff from the operations shall impact the Ahar river. Copy of updated details submitted to RSPCB on action taken for prevention of pollution in Ahar river vide letter no. HZL/Maton/RSPCB/2015-16/65 dt. 18.09.2015 is also attached for reference as Annexure – 5.

S.No.	Conditions	Compliance Status
xv	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water required for the project.	Presently water required for mining operation is sourced from the Mine pit/sump and domestic water is sourced through tankers from water suppliers. An application for withdrawal of ground water through tube well is filed before CGWA 01.01.2010 (revised application submitted on 16.07.2014) and approval awaited (Annexure - 6). Copy of the same will be submitted on receiving of the same.
xvi	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board	A proposal for augmentation of Ground water resource has been submitted to CGWB/CGWA. In the mean time of processing our application, CGWA has revised it's guidelines. On advice of CGWB, Jaipur, HZL has submitted fresh application on 16.07.2014 to CGWA/CGWB in accordance with revised guidelines & designs for augmentation of ground water resources. Recharge measures will be implemented immediately on getting nod from CGWB/CGWA.
xvii	Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	All vehicles entering the mine premises are checked for PUC certificate. All vehicles used for mining operations undergo periodic maintenance and ensure controlled emissions. All mineral transportation is carried out by covered trucks only and not overloaded.
xviii	Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented	Controlled blasting is practiced and ground vibration is measured as per guidelines of DGMS & the Director Explosive. The recommendations of CIMFR for blasting is implemented and the vibrations measured are within the stipulated limits.
xix	The project proponent shall take all mitigative measures during mining operations to ensure that the buildings / structures in the nearby areas shall not be affected due to blasting	Controlled blasting is practiced and ground vibration is measured as per guidelines of DGMS & the Director Explosive. The recommendations of CIMFR for blasting is implemented and the vibrations measured are within the stipulated limits. Hence there have been no impacts on the buildings/structures in the nearby areas due to blasting. Blasting was not carried out during reporting period.
xx	Drill shall either be operated with dust extractors or equipped with water injection system.	Wet drilling is followed during mining (Annexure - 7).
xxi	Mineral handling area shall be provided with the adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient	Loading, unloading points are sprinkled with water using mobile tanker to ensure effective dust control. At transfer points of the crusher, water sprinklers are installed.

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xxii	dust control arrangements. These should be properly maintained and operated. Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and the wastewater generated during mining operation	No workshop is constructed in the mine site as all mining vehicles are serviced in the nearby city of Udaipur. No colony is constructed in mine area, as the employees commute from the nearby city of Udaipur and other villages around the mine lease. The only effluent generated due to office is treated through septic tanks and soak pits for disposal complying to discharge standards.
xxiii	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly	All permanent and contractor employees undergo pre-placement medical test and periodic medical test as per the DGMS rules.
xxiv	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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project	No construction labour is residing in the project area, as the project is located in the outskirts of Udaipur city and it has adequate infrastructure for housing and other amenities.
xxv	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered flora and fauna 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 Wild life Department. Necessary allocation of funds shall be included in the project cost. All the safeguard measures to the project site shall be effectively implemented copy of action plan shall be submitted to the Ministry of Environment and Forest and its Regional Office, Lucknow.	Based on the list of flora & fauna, authenticated by Deputy Conservator of Forest, Udaipur (North), GoR vide letter no. P/O/Survey/UaVS/North/6094 dt.19.12.2009, there is no schedule -I fauna & endangered flora in the project area (copy enclosed as Annexure -8). As stated above, mine is continuously carrying out plantation and has planted 76,000 saplings within project area (8000 during FY 2022-23). However, for fresh assessment of present status of flora & fauna in-line with suitable conservation plan, a study work was accorded to Green Future Foundation, New Delhi. GFF has completed the study.
xxvi	The critical parameters such as RSPM (Particulate matter with size less than 10µm i.e., PM10), NOX 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	The parameters of RSPM, NO _x and SO _x are periodically monitored in the core and buffer area and report submitted to RSPCB and MoEF periodically (copy of AAQ & Noise monitoring are enclosed as Annexure 9 & 10). Blasting was not carried out during reporting period. Surface and ground water samples are monitored every season (copy enclosed as Annexure - 11). The AAQ monitoring results are displayed on the board at the gate of the mines.

S.No.	Conditions	Compliance Status
	<p>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 by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance</p>	
xxvii	<p>A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval</p>	The same shall be complied prior to closure.

General Conditions

S.No.	Conditions	Status
i	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	Complied. There is no change in mining technology.
ii	No change in the calendar plan including excavation, quantum of mineral Rockphosphate and waste should be made.	Calendar plan, as per approved mine plan, is being adhered to.
iii	At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 μm i.e., PM ₁₀) & NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Five monitoring locations based on Meteorological data have been established in and around the mining lease area in the core and buffer zone. The AAQ is monitored every fortnightly for PM ₁₀ , PM _{2.5} , SO _x , NO _x and the results submitted to RSPCB and MoEF.
iv	Data on ambient air quality RSPM (Particulate matter with size less than 10 μm i.e., PM ₁₀) & NOx should be regularly submitted to the Ministry including its Regional office located at Lucknow and the State Pollution Control Board / Central Pollution Control Board once in six months.	The AAQ monitoring results are submitted to MoEF every six monthly.
v	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Water sprinkling using mobile tankers is undertaken regularly to arrest fugitive emission.
vi	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.	All machines undergo periodic maintenance. All mine workers are provided with ear plugs with at least 25dB(A) noise reduction to ensure that the exposure to noise is always below 85dB(A). Work zone noise monitoring is carried out as defined.

S.No.	Conditions	Status
vii	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 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	There is no workshop in the lease area and hence no industrial effluent generated from the project site.
viii	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. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	All workers are provided with dust mask to ensure protection against dust related occupational hazards. Periodic medical health check-up is carried out to monitor any dust related impacts.
ix	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.	A qualified environmental professional, reporting to the Mines manager & Unit Head, thus team ensures compliance to the environmental stipulations.
x	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 located at Lucknow.	Complied. The environmental expenditure are: 2010-11 - Rs. 13,76,791/- 2011-12 - Rs. 11,80,034/- 2012-13 - Rs. 56,80,534/- 2013-14 - Rs. 36,42,879/- 2014-15 - Rs. 30,16,703/- 2015-16 - Rs. 48,07,747/- 2016-17 - Rs. 31,41,428/- 2017-18 - Rs. 31,35,354/- 2018-19 - Rs. 39,07,310/- 2019-20 - Rs. 35,72,028/- 2020-21 - Rs. 39,10,056/- 2021-22 - Rs. 30,80,259/- 2022-23 Rs. 39,84,830/-
xi	The project authorities should inform to the Regional Office located at Lucknow regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Financial closure for the project was achieved in May 2010. The land development work started immediately and production of ore achieved since June 2010.
xii	The Regional Office of this Ministry located at Lucknow 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.	All necessary support shall be extended to the authorities.
Xiii	The project proponent shall submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the	The report in hardcopy and emails are submitted to RO, MoEF, Hardcopy is sent to MoEFCC, CPCB and RSPCB. Six monthly reports are regularly

S.No.	Conditions	Status
	Ministry of Environment and Forests, its Regional Office Lucknow, the respective Zonal Office of CPCB and the SPCB. The proponent shall upload the status of compliance of the EC conditions, their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Lucknow, the respective Zonal Officer of CPCB and the SPCB.	submitted in hard copies, soft copy and by e-mail. Latest compliance report was sent on 24.05.2023,
xiv	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied
xv	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ Tehsildar's Office for 30 days.	Complied.
xvi	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the Regional Office of the Ministry of Environment and Forests, at Lucknow by e-mail.	Environment statement in Form V is submitted periodically as stipulated. Environmental statement for the year 2022-23 was submitted on 28.09.2023,
xvii	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 and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located at Lucknow.	Advertised in two News papers named Dainik Bhaskar and Rajasthan Patrika on 19.03.2010 (Annexure - 12).

ANNEX(1)

MINISTER OF DEFENCE
DEPARTMENT OF DEFENCE
DEFENCE SECRETARIAL OFFICE
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DEFENCE SECRETARIAL OFFICE

The Government of India has issued a circular dated 14.07.1997 regarding the issue of a direct recruitment scheme for the posts of Group B officers in the Indian Army. The circular states that the Indian Army has decided to recruit 1000 officers in the rank of Sub Lieutenant and 1000 officers in the rank of Lieutenant through direct recruitment. The recruitment will be conducted in two phases. The first phase will be held in August 1997 and the second phase in October 1997.

Ques. What is the

Ministry of Defence
Defence Secretarial Office

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ज्यापालद् भूमि भवान्ति भविकारी
ददर्श्वा-ददृश्वार, राजहस्य
क्रमांक :- २२/१६

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संपर्क-दिव्यांगन

विनायक १५-२-४८ १५७

अवार्ड

(अन्तर्गत भारा ११, राजस्थान भूमि विवाहित प्रधिलिपि, संखे १८५३)
विषय:- राजस्थान विकालि ० के काम में शामि वासी भूमि को विवाहित कराने हेतु ।

एथावदी यथान्वयन की गई। हिन्दुस्तान बिक्रि लिंग, भया फलहरु, उदयपुर की भालवा जायर/मदूर/दरोबा जाईस के लिए भूमि घटापित यादत राष्ट्र सरकार से राष्ट्रस्तान भूमि घटापित घटियन्नम, सन् १९५३ की घाटा-४ की घटापित सनिक विभाग हाँडा खटिये मन्दिर ज़िला अंतर्गत दि. १३-६-२३ को आप्त हो जाने से भूमि घटापित घटियादी गिराव/सलूच्चर/राजघामीद- की ओर से जरिये ने दिनोंक _____ को सांवेदनिक द्वारा पैद प्रकाशित हो युक्ती के प्रीत इस दर्मियान में कांधिजान भूमि से भालवी लम्भोता पर बातचीत की गई औ आवदी लम्भोते से घटाप्त हुणे वाली भूमि या एवजाना जेने के लिए रखा गया है।

उपरोक्त प्रकारण में निम्नलिखित धारामियान की भूमि आपात्काल हो रही है। इस भूमि की सबै की गई विवरण निम्नलिखित है :—

नाम नंबर	पात्र सहस्रीका	साफारी नं.	इकाया		किलो भाविति	जग्गान	विवरण
			बोधा	विस्था			
१	२	३	४	५	६	७	८
मटुल	मिल्फ	१४२२	८-	८०	२२१६	१-८०	

मात्री कामजात से इस भूमि के मालिक पौर काशिकान की जोड़ कराई गई तो पाया गया कि प्रवाहिक होने वाली नूमि जिसका विवरण उपर दिया गया है थी। उग्रभूमि पौर काशिका ने यह दिया थी कि यहाँ पर रुद्राय है जिसकी निवासी सहस्रिमि भिर्वा के नाम पर रुद्राय है जिसकी रहस्योंका लक्षण वार-हार, विर्वा/उक्ति/स्वराम्भने की है पौर उन्होंने यह भी प्रमाणित किया है कि उपराई थी उग्रभूमि पौर काशिका ने यह दिया जावे।

पूर्व धारागियान आपसी, हम लोगों पर एकजाता के लिए तैयार हैं। ऐसी सूखत में भूमि खदानित बहिर्भास, 1833 की प्राप्ति ₹ (३) व ₹ (१) के पर्याप्तर नोटिस जारी करने की शोध आवश्यकता नहीं है।

वहसीमदार सा, विवाँ/सरकार/सेवनगति ने मार्केट मेल्हु-प्राप्ति एल्प्रैसो के प्राप्तार पर दबावाना देने के लिये स्वीकृति चाही जो काइद संश्लिष्ट है।

म अंबाप्ति नियमावली प्रपत्र १० (मुमिं प्राप्ति नियमावली अनुद्घेद ७६)

राजी नामा

— श्रीहुम्... उत्तम्... राष्ट्राभासम्... महादृष्टि... विद्युत्यन्तर्मुखी... (राजीवने गर इस्ताथार करते बासे एध चिकित्सा) इत्तदा आरा निम्न चिकित्सा चिकित्सा भूमि को पथापाणी पीछे झुकावाये थी एकम के लिए यानी राहगलि पोषित कर्ता हैं और निम्नी सरदूँका हुगारे द्वारा उठाया दुया-यामा या हातारी छोड़े अधिक यांग (सेवा) कियी कर्त्तव्य गर दाधर की गई, तुराम एह शब्दभी जावे ।

— अब यह लिपिभर पर्हि दर भावहो है या शारीर ए प्रवास किमे जाते हैं या गव बुश विना मुद्दावजा

תְּנַדֵּן וְתִדְבֹּר
תְּנַדֵּן וְתִדְבֹּר

ପ୍ରକାଶ ! - ଅଧ୍ୟାତ୍ମିକତା
ଏହାଜୀବନ ।

-3631
-27.9.17
2153.24
261247

संपादकः - डॉ. आर्जुन राज-6/प्र० ।

$$400^{\circ} \text{C} + 77^{\circ}\text{C} = 477^{\circ}\text{C}$$

ପିଲାଙ୍କା ଦେଖିବାରେ ଏହାରେ ମଧ୍ୟରେ ଏହାରେ ଏହାରେ ଏହାରେ

四七

कैट्रोप खीन जारी था ज़रूरतेवाले, 1894 के दस्तावेज़ ताबड़ी-पर
एवं शिपियन मार्गज़ोनक लार्डों के उपरोक्त भूमि का इसका नाम है—
है। मर्विधिस ट्रॉपिकल एवं अफ्रीका के दक्षिणी भूमि जा-
वाहुआरी के लक्षण विशिष्ट हैं जो खीन हैं। इनमें एक जैवि-
प्रणाली खीन वा कल्पों संकेतित विभाग चारों ओर से उभया है।

મુદ્રાજારી કરેલો પણ, ૧૯૫૬ નવેમ્બર માટે કૃતિસંગ્રહ કેન્દ્ર એ રાખે જાનું રહેશે તો તે કેવી અને કોઈ પણ વિશેષ વિશેષાનુભૂતિ નથી.

3/3 रेजल गोप्य वे दो साल, तीव्रा शर्करा वाले नहीं हैं। तो—
भूमि देव-कीद भूमि अपनी वाली शर्करा, 1924 में कर्मसुख अ. एस. एस.
वाली है तो पैती भूमि को उन्हें देना चाहिए ताकि उनकी भूमि के लिए
शर्करा बढ़ने की अप्राप्यता न न हो।
उन्हें एक खास नियम देना चाहिए।

१० अमरात्मा, राजदूत और विश्वविद्यालय, कलकत्ता।

ग्रन्थालय, राजकीय विद्यालय, काशी

272 - 2017 - 2 - 202

ANM 6X(3)



HINDUSTAN ZINC LIMITED
Maton Rock Phosphate Mine
Tehsil - Girwa, Distt. Udaipur (Raj.) - 313003
Phone : + 0294-2342093

Ref: HZL/Maton/CGWA/MiningNew/2014-15 / 4/2.

Dt 14.07.2014

To,

The Member Secretary,
Central Ground Water Authority,
West Block-II, Wing-3 (Ground),
Sector-1, R.K. Puram, New Delhi-110066

Sub: Application for grant of NOC to abstract 1.31m³/day quantity of groundwater by dewatering due to intersection of water table at Maton Rock Phosphate Mine of M/s Hindustan Zinc Limited near village Maton Tehsil Girwa Distt Udaipur situated in Girwa block

Ref: 1. Our applications dt. 26.03.2010 & subsequent correspondence dt 17.08.2010 & 19.01.2013
2. Environmental Clearance, dt. 17.03.2010, granted by MoEF for 180000 TPA production capacity

Sir,

Maton Rockphosphate Mine of Hindustan Zinc Ltd is being operated for last more than 40 years. After issuance of EIA Notification, 2006, ore production capacity of the mine continued to remain at 60000 TPA, hence grant of Environmental Clearance was not required till 16.03.2010. However for further renewal of mining lease, the MoEF granted us Environmental Clearance for enhanced capacity of 1,80,000 TPA.

Due to proposed intersection of ground water table, the estimated quantity of dewatering is 1.31m³/day. HZL submitted the application for grant of permission to abstract groundwater by dewatering vide letter dt 26.03.2010 and thereafter incorporated revisions on dt 17.08.10 & 19.01.13. As per CGWA Guidelines, rainwater harvesting/recharge schemes to the tune of 2.62m³/day (200% of the abstracted quantity) was required to be implemented. In the meantime CGWA revised its guidelines on 15.11.2012 and prescribed the new proforma of application. After the incorporation of replies to CGWA queries, fresh application for grant of permission for 1.31m³/day or 480m³/year groundwater abstraction by dewatering is submitted herewith.

To optimise the groundwater recharge quantum, we engaged M/s Water Solutions, New Delhi to conduct study for undertaking the recharge measures for the runoff generated

Inside the project area. As per the report, the recharge measures for 41876m³/year quantity could be implemented. The total groundwater recharge obligation is 15560m³/year which comprises the quantities of (i) abstraction of groundwater 14600 i.e. (7300*2) m³/year and (ii) abstraction of groundwater due to dewatering 960 i.e. (480*2) m³/year. The above recharge measures of 41876m³/year are 5-6 times of 7780 m³/year of the abstracted quantity.

Ans
We humbly request you to kindly consider our application and grant us the NOC for 1.31m³/day ground water abstraction by dewatering.

With regards

B.G.S.
(Amar Singh Gohil) Manager (Mines)
Mines Manager Hindustan Zinc Ltd.
Maton Rock Phosphate Mines
Udaipur (Raj.)

Encl: above application form

CC to : 1. Regional Director,
Central Ground Water Board,
Western Regional,
6A, Jhalana Doongri, Jaipur-302004

2. Office Copy (Env. Cell)

Name of Person/Firm	Hindustan Zinc Limited, Maton Rock Phosphate Mine Chittorgarh Dist. Udaipur
Letter Reference No. and Date	HZL/MR/02/CGWB/MR/02/001/2014-15/42 14/7/2014
Subject	Appli for grant of NOC to abstr. 1.31 m ³ /day village Khatola Tehsil Chittorgarh Dist. Udaipur
Dated signatures of diarist/dispatcher (CGWB, WR, 6-A, Jhalana Doongri, Jaipur 302 004)	P.S.C.
Remarks if any	<i>Chit 16/7/14</i>

ANNEX (4)

APPENDIX 2

HINDUSTAN ZINC LIMITED

Minton Rock Phosphate Mine
Tehsil- Girwa, Distt. Udaipur- 313004 (Raj)
Phone - 0294-2342093

January 10, 2011

To,

Executive Engineer
Irrigation Department
Udaipur (Raj)

Subject: NOC for construction of five Anicuts in respect of comply of EC condition.
MoU [Ref. F No J-11015/169/2009-I&H-(M) Dated 17.03.2010]

Su.

In order to comply with the Specific condition no. XII of the above reference (copy encd.), we have conducted study of "Rain water harvesting program for augmentation of ground water storage in buffer zone of Minton Mine" from Hydro-Geosurvey Consultant, Jodhpur. Wherein they have proposed to construct 5 Anicuts in the buffer zone (location maps are encd) i.e.

Anicut No 1 near village Kalurwas
Anicut No.2 near village Paroia
Anicut No 3 near village Bichhri
Anicut No.4 near village Kampur
Anicut No.5 near village Dundiya

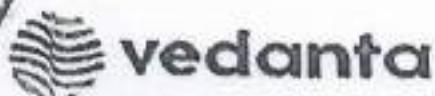
It is requested to kindly accord the NOC for the same so that we can start construction work at the earliest.

Thanking you

Yours truly,

Vishwanath
(Henzant Manager)

Manager



A T T E C H - 5



Ref. No.: Maton RSPt D/2015-16/ 65

Date: 18/09/2015

To:

The SI-H Mines,
Rajasthan State Pollution Control Board,
4, Institutional Area,
Jasana Dongri, Jaipur (Raj.) 302004.

Sub.: Grant of Consent to Operate under Section 21(4) of Air (Prevention & Control of Pollution) Act, 1981 and under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 for our Major Schedule Mineral Mine at near Village Maton, Tehsil Girwa, District - Udaipur (M.L. No.- 06/89-R-14/09).

Ref.: CTO vide no. F(Mines)/Udaipur(Girwa)/1828(1)/2015-2016/2263-2267, dt. 08.09.2015.

Sir,

With reference to point no. 10 of above referred CTO dt. 08.09.2015, we hereby submit that based on the hydrogeological study conducted by Hydro-Geosurvey Consultants Private Ltd., Jodhpur and the same mentioned in EIA, it was clearly mentioned that the surface drainage of the lease area does not connect to the Ahar River and hence no effluents or rainwater runoff from the operations shall impact the Ahar river. Also the hillock situated towards north, outside mine lease, ensures that no surface drainage can reach to Ahar river.

Further, Maton Mines operates on Zero discharge. Site has pollution control measures like wet drilling and water sprinkling on haul road. Extensive plantation also controls dust from passing through it and reaching to Ahar river.

Also, to control pollution in Ahar river, HZL entered into a green bridge project of Jheel Sanrakshan Samiti (JSS) Udaipur & Udaipur Chamber of Commerce and Industry (UCCI) and contributed Rs. 10 Lakh to the local administration for pollution mitigation in Ahar River. Copy of acknowledgement receipt of the same is enclosed herewith as Annexure - 1.

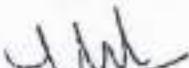
Further, HZL has entered into a tripartite agreement with Municipal Council Udaipur and Urban Improvement Trust Udaipur for laying of Sewage Trunk Line from Udaipur city to STP to divert sewage of city from entering into Ahar River and thereby avoiding pollution from entering into it. This 20 MLD STP is also set up by HZL at cost of Rs. 63 Crore at Manwa Kheda, Udaipur. Furthermore, 15% of treated water of above referred STP is released in Ahar River during dry season every year to maintain the water table in the area for the potential users or farmers and to conserve aquatic life of Ahar river.

Hindustan Zinc Limited

Maton Rock Phosphate Mines,
P.O. - Maton, Th. - Girwa, Udaipur (Rajasthan) - 313003
Tel.: (+91-294) 2342093, Fax.: +91-294-2342092
Registered Office - Yashod Bhawan, Udaipur (Rajasthan) - 313004
www.hzlindia.com
CIN - L27204RJ1966PLC001208

Thanking you.

Yours sincerely,



(V.P. Joshi)

G.M. & Unit Head **Unit Head**
Hindustan Zinc Ltd.
Malon Rock Phosphate Mines
Encl: As above, Udaipur (Raj.)

- CC : 1. The Member Secretary, Rajasthan State Pollution Control Board, 4, Institutional Area,
Jhalana Doongri, Jaipur (Raj.) - 302004.
2. The Regional Officer, Rajasthan State Pollution Control Board, F-470, Near UCCI
Building, Madri Industrial Area, Udaipur (Raj.) - 313003.
3. Office Copy (Env. Cell)


HINDUSTAN ZINC LIMITED

Maton Rock Phosphate Mine
 Tehsil - Girwa, Distt. Udaipur (Raj.) - 313003
 Phone : + 0294-2342093

Ref: HZL/Maton/CGWA/Industry/2014-15/43

Dt 14.07.2014

To,

The Member Secretary,
 Central Ground Water Authority,
 West Block-II, Wing-3 (Ground),
 Sector-1, R.K. Puram, New Delhi-110066

Sub: Application for grant of NOC to abstract 20m³/day quantity of groundwater for Industrial use at Maton Rock Phosphate Mine of M/s Hindustan Zinc Limited near village Maton Tehsil Girwa Distt Udaipur situated in Girwa block

Ref: 1. Our application dt 01.01.2010 & subsequent correspondences dt 11.02.2010, 17.08.2010 & 19.01.2013
 2. Environmental Clearance, dt 17.03.2010, granted by MoEF for 180000 TPA production capacity

Sir,

Maton Rockphosphate Mine of Hindustan Zinc Ltd is being operated for last more than 40 years. After issuance of EIA Notification, 2006, ore production capacity of the mine continued to remain at 60000 TPA, hence grant of Environmental Clearance was not required till 16.03.2010. However for further renewal of mining lease, the MoEF granted us Environmental Clearance for enhanced capacity of 1,80,000 TPA.

Operation of mine at enhanced capacity required 200m³/day groundwater for which HZL submitted application vide letter dt 01.01.2010 thereafter incorporated revisions on dt 11.02.10, 17.08.10 & 19.01.13. In the meantime CGWA revised its guidelines on 15.11.2012 and prescribed the new proforma of applications.

To reduce the uses of surface/groundwater for industrial purposes, HZL has entered into a tripartite agreement with UMC, Udaipur and UIT, Udaipur on 09.05.2012 for setting up of 20 MLD Sewage Treatment Plant (STP) at Udaipur with an investment of Rs 159 Cr. Now HZL has commissioned the plant and made arrangement of pumping and transportation to use the treated water in its units. Looking to the availability, it has been decided to use, 180m³/day of treated water for industrial activities and 20 m³/day of groundwater for domestic purposes. Accordingly a fresh application for grant of permission for 20 m³/day or 7300m³/year groundwater abstraction is submitted herewith.

To optimise the groundwater resources, we engaged M/s Water Solutions, New Delhi to propose rainwater harvesting/recharge schemes, for 40m³/day or 14600m³/year, equivalent to 200% of the abstracted quantity. As per the report, recharge measures to the tune of 41876 m³/year quantity could be implemented for the runoff generated inside the project area. It is pertinent to mention that out of 143.13 Ha lease, area of 116.49 Ha not covered in the above recharge schemes, will contribute to in-situ recharge of 36345m³/year.

Thus the total groundwater recharge obligation is 15560m³/year which comprises the quantities of (i) abstraction of groundwater 14600 i.e. (7300*2) m³/year and (ii), abstraction of groundwater due to dewatering 960 i.e. (480*2) m³/year. The above recharge measures of 41876m³/year are 5-6 times of 7780 m³/year of the abstracted quantity.

We humbly request you to kindly consider our application and grant us the NOC for 20m³/day ground water abstraction.

With regards,

ASG
(Amar Singh Gohil) Manager (Mines)
Mines Manager Hindustan Zinc Ltd.
Halcon Rock Phosphate Mines
Encl: above application form

CC to : 1. Regional Director,
Central Ground Water Board,
Western Regional,
6A, Jhalana Doongri, Jaipur-302004

2. Office Copy (Env. Cell)

Name of Person/Firm	Hindustan Zinc Ltd., Halcon Rock phosphate mines Jhalana Dist. Udaipur
Letter Reference No. and Date	HZL/madm/CGWB/mciosby/2014-15-VB 14/7/14
Subject	Request for grant of NOC, to abstract 20m ³ /day Village Halon Taluk (new) Dist. Udaipur
Dated signature or stamp/digipass (CGWB, WR, 6-A, Jhalana Doongri, Jaipur-302004)	
Remarks if any	Check 16/7/14

Annex-7

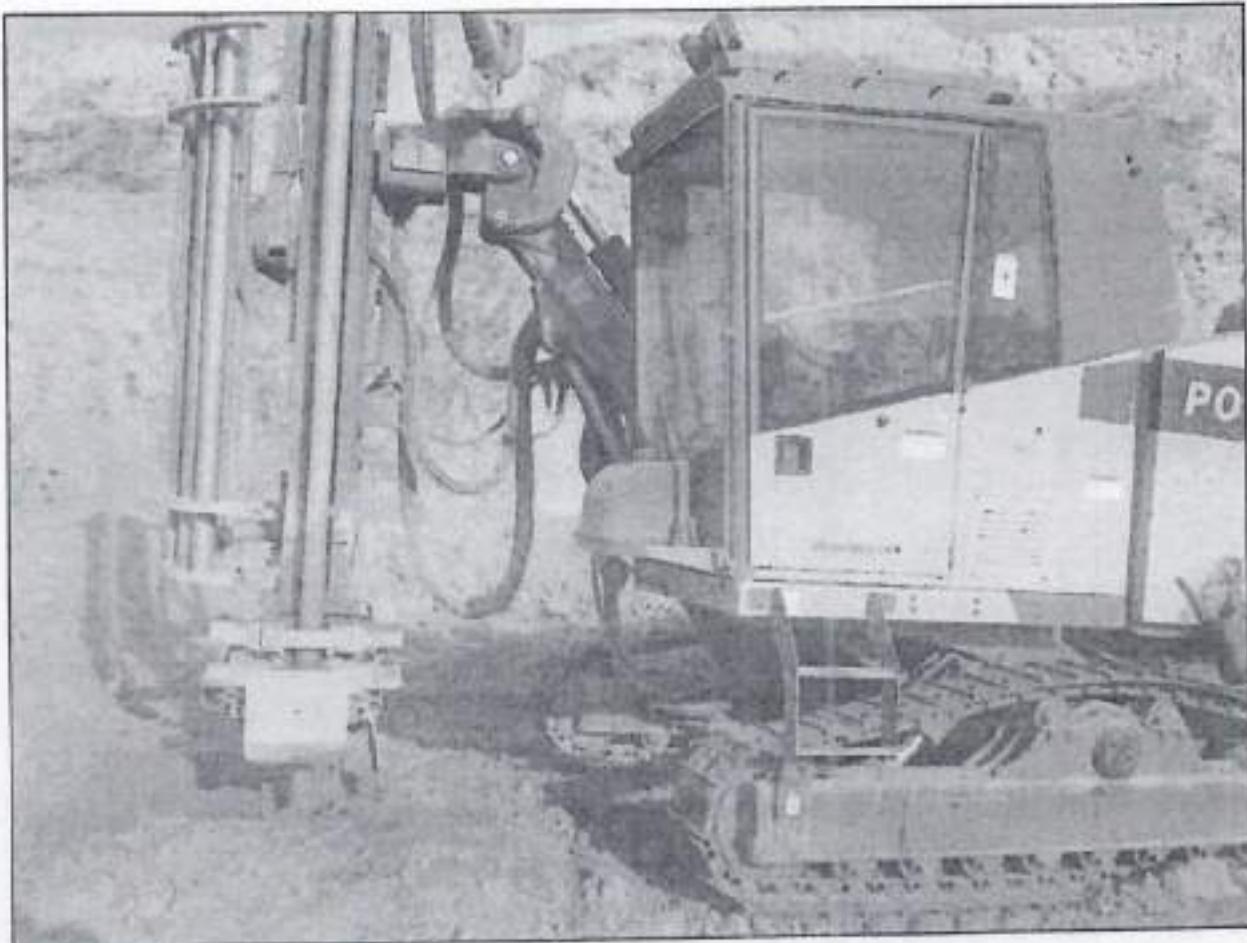


Fig : Wet Drilling

નાનારાંદ્રિય ચાપ યાન રાખક, ચદ્દયપુર (ગુજરાત)

નામનામ - શાહ / જાયલ / કલાર્સ / ૮૮૧૫ તારીખ - ૧૫ - ૧૨ - ૧૯૭૯

સાફ્ટ્વેર સેન્ટર
બીજુસાન મિલન લિમિટેડ
માન્ડો સાફ્ટ્વેર
દાદગાર

વિષા - Issue of certificate regarding National Parks, Sanctuaries, Biosphere Reserves, Wildlife corridors, Tiger/Elephant reserves (existing as well as proposed), within 10 Km of the mine lease of Muzum Mines (ML No. 689) Near village Maton, Lehsil Girwa, Distt. Udaipur (Raj.)

વર્ણન - આપણા પ્રાથમિક પણ વાયરલ નિયમ HZL/Muzum/enc/689 ડાયા ૧૨-૧૧-૧૯૭૯

નોંધાયા,

આપણા નિયમાનુભૂત પાલાળિક પાથોના પણ એ વાય એ લિસ્ટ કરી રહી છે કે જે આપણાની એ
નિયમ ૬૮/ ૧૯૭૯ ને ગુંર એવ કાર્ય ક્રીડા કા ૧૦ કિ. મી. ગુંરના નિયમની પણ કરીની નિયમની
જરૂરી નાફુલ લાલ્યાન કાર્યિનો? કાઢવાન એલિયનન રિઝાને નિયમની નાફુલ ની?

સાફ્ટ્વેર
બીજુસાન મિલન
માન્ડો સાફ્ટ્વેર
(સેન્ટર)

कार्यालय उप वन संरक्षक, उदयपुर (उत्तर)

क्रमांक—प. () सर्व/उवस/उत्तर/ ६०७५

दिनांक : १५-१२-०९

माईंस मेनेजर
हिन्दूस्तान जिंक लिमिटेड
मटून माईंस
उदयपुर

विषय :— Authentication of flora and fauna in core, & Buffer zone of Matun Mines
(ML. No. 6/89) near village Matun tehsil Girwa Distt. Udaipur (Raj.)

प्रसंग:- आपका प्रार्थना पत्र क्रमांक निम HZL/Matun/cbv/09/ दिनांक 18.11.2009

नहोदय,

उपरोक्त विषयान्तर्गत प्रासांगिक प्रार्थना पत्र को क्रम में लिखा जाता है कि आपके लिज नं.
एम.एल. ०६ / १९८९ के कोर एवं बफर क्षेत्र में पाये जाने वाले पलोरा एवं फोना वर्गी सूचीयाँ आवश्यक
कार्यवाही हेतु संलग्न प्रस्तुत हैं।

अंतिम :— उपरोक्तानुसार।

भवदीय,
उप वन संरक्षक
उदयपुर (उत्तर)



Report No. 20230613002/A

Report Issue Date: - 22.06.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date & Time of Monitoring	:	12.06.2023/10:20AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	13.06.2023
7. Period of Analysis	:	13.06.2023 to 19.06.2023
8. Name of Location	:	Mine Lease Area
9. Coordinates	:	N 24° 32' 33" - E 73° 47' 47"
10. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part 23, Part 22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1433.6	Minutes
2.	Average Flow rate for PM10	1.15	M³/ Min
3.	Ambient Temperature	30.1	°C
4.	Relative Humidity	27	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	51.69	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	25.43	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	7.91	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	11.05	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Chemist

Authorized Signatory

Amreesh Kumar
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

Note

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Report No. 20230613002/B

Report Issue Date: - 22.06.2023

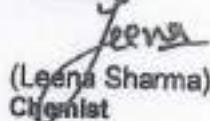
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	:	Amendment Dated: - 27.02.2023
3. Date & Time of Monitoring	:	12.06.2023/10:20AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	13.06.2023
7. Period of Analysis	:	13.06.2023 to 19.06.2023
8. Name of Location	:	Mine Lease Area
9. Coordinates	:	N 24° 32' 33" - E 73° 47' 47"
10. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30.1	°C
2.	Relative Humidity	27	%

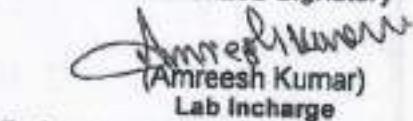
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.39	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/26	3.55	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.255	-

Tested by


 (Leena Sharma)
 Chemist

Authorized Signatory


 (Amreesh Kumar)
 Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230614002/A

Report Issue Date: - 22.06.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023
4. Sample Identification	:	13.06.2023/10:50AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/OK
7. Period of Analysis	:	14.06.2023
8. Name of Location	:	14.06.2023 to 19.06.2023
9. Coordinates	:	Umarda Village
10. Method of Sampling	:	N 24° 31' 26" - E 73° 46' 48" IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1437.5	Minutes
2.	Average Flow rate for PM10	1.17	M ³ / Min
3.	Ambient Temperature	30.4	°C
4.	Relative Humidity	29	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	62.68	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	35.75	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	10.46	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	13.19	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Chemist

Authorized Signatory

(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., Udaipur (Rajasthan)

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Report No. 20230614002/B

Report Issue Date: - 22.06.2023

TEST REPORT

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2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date & Time of Monitoring	:	13.06.2023/10:50AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	14.06.2023
7. Period of Analysis	:	14.06.2023 to 19.06.2023
8. Name of Location	:	Umarda Village
9. Coordinates	:	N 24° 31' 26" - E 73° 46' 48"
10. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30.4	°C
2.	Relative Humidity	29	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.62	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	5.20	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.347	-

Tested By

 (Leena Sharma)
 Chemist

Authorized Signatory

 Amreesh Kumar
 Lab Incharge

 Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report



Report No. 20230615005/A

Report Issue Date: - 22.06.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	14.06.2023/11:15AM
3. Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	15.06.2023
6. Sample received on	:	15.06.2023 to 19.06.2023
7. Period of Analysis	:	Lakadwas Village
8. Name of Location	:	N 24° 33' 3" - E 73° 48' 28"
9. Coordinates	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual
10. Method of Sampling	:	

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1432.8	Minutes
2.	Average Flow rate for PM10	1.13	M³/ Min
3.	Ambient Temperature	31	°C
4.	Relative Humidity	53	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m³	IS:5182 (Part-23)	63.78	100
2.	PM _{2.5}	µg/m³	WIL/SOP No. 10/25 Issue date 01.05.2019	35.04	60
3.	SO ₂	µg/m³	IS:5182 (Part-2)	10.78	80
4.	NO ₂	µg/m³	IS:5182 (Part-6)	14.14	80
5.	Lead	µg/m³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

Leena Sharma
Chemist

Authorized Signatory

Amreesh Kumar
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230615005/A

Report Issue Date: - 22.06.2023

TEST REPORT

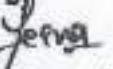
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023 14.06.2023/11:15AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	15.06.2023
7. Period of Analysis	:	15.06.2023 to 19.06.2023
8. Name of Location	:	Lakadwas Village
9. Coordinates	:	N 24° 33' 3" - E 73° 48' 28"
10. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	31	°C
2.	Relative Humidity	53	%

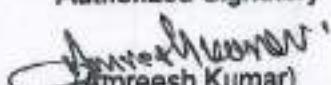
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.64	04
2.	SO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.80	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.382	-

Tested by


 (Leena Sharma)
Chemist

Authorized Signatory


 (Amreesh Kumar)
Lab Incharge

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 Page 1 of 1
 End of Report




Report No. 20230616002/A

Report Issue Date: - 22.06.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	:	Amendment Dated: - 27.02.2023
3. Date & Time of Monitoring	:	15.06.2023/11:30AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	16.06.2023
7. Period of Analysis	:	16.06.2023 to 21.06.2023
8. Name of Location	:	Maton Village
9. Coordinates	:	N 24° 33' 13" - E 73° 47' 39"
10. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1442.5	Minutes
2.	Average Flow rate for PM10	1.16	M ³ / Min
3.	Ambient Temperature	30.8	°C
4.	Relative Humidity	57	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2008
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	53.92	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	27.34	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	8.04	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	11.08	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Chemist

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Page 1 of 1
End of Report

(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)





Report No. 20230616002/B

Report Issue Date: - 22.06.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023
4. Sample Identification	:	15.06.2023/11:30AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	16.06.2023 to 21.06.2023
8. Name of Location	:	Maton Village
9. Coordinates	:	N 24° 33' 13" - E 73° 47' 39"
10. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30.8	°C
2.	Relative Humidity	57	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.42	04
2.	SO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.73	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.272	-

Tested by

(Leena Sharma)
Chemist

Authorized Signatory

(Amreesh Kumar)
Lab Incharge

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
End of Report



Report No. 20230619018/A

Report Issue Date: - 22.06.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	16.06.2023/11:55AM
3. Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	19.06.2023
6. Sample received on	:	19.06.2023 to 21.06.2023
7. Period of Analysis	:	Kharwaria Village
8. Name of Location	:	N 24° 33' 9" - E 73° 47' 3"
9. Coordinates	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual
10. Method of Sampling	:	

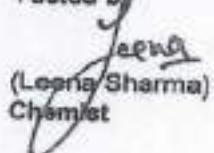
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1440.8	Minutes
2.	Average Flow rate for PM10	1.145	M³ / Min
3.	Ambient Temperature	32.2	°C
4.	Relative Humidity	56	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m³	IS:5182 (Part-23)	54.56	100
2.	PM _{2.5}	µg/m³	WIL/SOP No. 10/25 issue date 01.06.2019	27.79	80
3.	SO ₂	µg/m³	IS:5182 (Part-2)	9.84	80
4.	NO ₂	µg/m³	IS:5182 (Part-6)	11.84	80
5.	Lead	µg/m³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

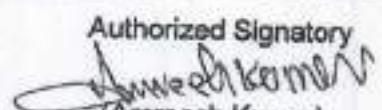
Tested by


 (Leena Sharma)
 Chemist

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 Page 1 of 1
 End of Report

Authorized Signatory

 (Amreesh Kumar)
 Lab Incharge
 Environmental & Chemical Laboratory
 Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)





Report No. 20230619018/B

Report Issue Date: - 22.06.2023

TEST REPORT

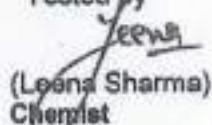
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	16.06.2023/11:55AM
3. Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	19.06.2023
6. Sample received on	:	19.06.2023 to 21.06.2023
7. Period of Analysis	:	Khanwaria Village
8. Name of Location	:	N 24° 33' 9" - E 73° 47' 3"
9. Coordinates	:	Instrument Manual
10. Method of Sampling	:	

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32.2	°C
2.	Relative Humidity	56	%

Results Ambient Air Quality

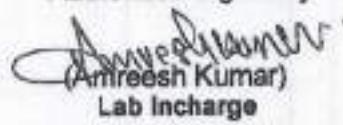
S. No	Parameters	Unit	Test Method	Results	NAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.45	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.94	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/26	0.234	-

Tested by



(Leena Sharma)
Chemist

Authorized Signatory



(Amreesh Kumar)
Lab Incharge

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 E-102, M.I.A., UDAIPUR (Rajasthan)
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 Page 1 of 1
 End of Report


Report No. 20230905002/A

Report Issue Date: - 19.09.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	04.09.2023/10:30AM
3. Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	05.09.2023
6. Sample received on	:	05.09.2023 to 18.09.2023
7. Period of Analysis	:	Mine Lease Area
8. Name of Location	:	N- 24° 32' 33" E- 73° 47' 47"
9. Coordinates	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual
10. Method of Sampling	:	

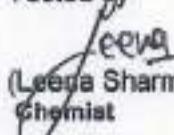
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1425.20	Minutes
2.	Average Flow rate for PM10	1.185	M ³ / Min
3.	Ambient Temperature	30.1	°C
4.	Relative Humidity	42	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	46.87	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	23.06	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	6.05	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	8.82	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

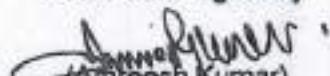
BDL- Below Detection Limit

Tested by



(Leeda Sharma)
Chemist

Authorized Signatory



(Amritesh Kumar)
Head & Dy. GM

 Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A, UDAIPUR (Rajasthan)

Note

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4. The samples will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.
5. Any discrepancy in test results should be reported within 15 days.





Report No. 20230905002/B

Report Issue Date: - 19.09.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	04.09.2023/10:30AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/OK
6. Sample received on	:	05.09.2023
7. Period of Analysis	:	05.09.2023 to 18.09.2023
8. Name of Location	:	Mine Lease Area
9. Coordinates	:	N 24° 32' 33" - E 73° 47' 47"
10. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30.1	°C
2.	Relative Humidity	42	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.32	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.73	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.208	-

Tested by

 (Leena Sharma)
 Chemist

Authorized Signatory

(Amreesh Kumar)

Head & Dy. GM

 Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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5. Any discrepancy in test results should be reported within 10 days.



Report No. 20230906002/A

Report Issue Date: - 19.09.2023

1. Name of Customer

TEST REPORT

HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

P.O. Maton, Distt. Udaipur (Rajasthan), INDIA

PO No. 2016.1201/ 5100019025 Date 13.01.2016

Amendment Dated: - 27.02.2023

05.09.2023/09:45AM

Air Sample

Sealed/Ok

06.09.2023

06.09.2023 to 18.09.2023

Umarda Village

N 24° 31' 26" - E 73° 46' 48"

IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1429.60	Minutes
2.	Average Flow rate for PM10	1.165	M ³ / Min
3.	Ambient Temperature	30.7	°C
4.	Relative Humidity	45	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 16 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	58.15	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	31.35	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	9.18	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	10.58	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Chemist

Authorized Signatory

(Amreesh Kumar)

Head & Dy. GM

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.L.A., UDAIPUR (Rajasthan)

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Report No. 20230906002/B

Report Issue Date: - 19.09.2023

TEST REPORT

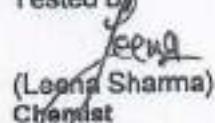
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	05.09.2023/09:45AM
3. Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	06.09.2023
6. Sample received on	:	06.09.2023 to 18.09.2023
7. Period of Analysis	:	Umarda Village
8. Name of Location	:	N 24° 31' 26" - E 73° 46' 48"
9. Coordinates	:	Instrument Manual
10. Method of Sampling	:	

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30.7	°C
2.	Relative Humidity	45	%

Results Ambient Air Quality

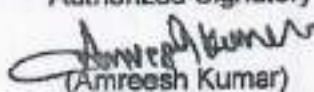
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.54	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.18	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.314	-

Tested by



(Leena Sharma)
Chemist

Authorized Signatory



(Amreesh Kumar)
Head & Dy. GM
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)
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Report No. 20230907002/A

Report Issue Date: - 19.09.2023

TEST REPORT	
1. Name of Customer	:
	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	:
4. Sample Identification	:
5. Condition of Sample	:
6. Sample received on	:
7. Period of Analysis	:
8. Name of Location	:
9. Coordinates	:
10. Method of Sampling	:
	07.09.2023 to 18.09.2023 Lakadwas Village N 24° 33' 3" - E 73° 48' 28" IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1436.50	Minutes
2.	Average Flow rate for PM10	1.170	M³/ Min
3.	Ambient Temperature	31.2	°C
4.	Relative Humidity	49	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPGB Norms) New Delhi dt. 18 th Nov. 2000
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m³	IS:5182 (Part-23)	52.96	100
2.	PM _{2.5}	µg/m³	WIL/SOP No. 10/25 Issue date 01.05.2019	28.25	60
3.	SO ₂	µg/m³	IS:5182 (Part-2)	8.20	80
4.	NO ₂	µg/m³	IS:5182 (Part-6)	9.62	80
5.	Lead	µg/m³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Chemist

Authorized Signatory

(Amreesh Kumar)
Head & Dy. GM
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230907002/B

Report Issue Date: - 19.09.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	06.09.2023/10:35AM
3. Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	07.09.2023
6. Sample received on	:	07.09.2023 to 18.09.2023
7. Period of Analysis	:	Lakadwas Village
8. Name of Location	:	N 24° 33' 3" - E 73° 48' 28"
9. Coordinates	:	Instrument Manual
10. Method of Sampling	:	

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	31.2	°C
2.	Relative Humidity	49	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) Now Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.51	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.74	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.326	-

Tested by

 (Leena Sharma)
 Chemist

Authorized Signatory

 (Amreesh Kumar)

Head & Dy. GM

 Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230908002/A

Report Issue Date: - 19.09.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023
4. Sample Identification	:	07.09.2023/10:50AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	08.09.2023
8. Name of Location	:	08.09.2023 to 18.09.2023
9. Coordinates	:	Maton Village
10. Method of Sampling	:	N 24° 33' 13" - E 73° 47' 39" IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

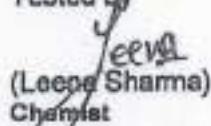
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1423.70	Minutes
2.	Average Flow rate for PM10	1.195	M³/ Min
3.	Ambient Temperature	30.9	°C
4.	Relative Humidity	50	%

Results Ambient Air Quality

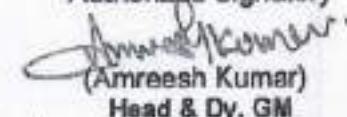
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 10 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m³	IS:5182 (Part-23)	49.17	100
2.	PM _{2.5}	µg/m³	WIL/SOP No. 10/25 Issue date 01.05.2019	25.19	60
3.	SO ₂	µg/m³	IS:5182 (Part-2)	7.58	80
4.	NO ₂	µg/m³	IS:5182 (Part-6)	9.72	80
5.	Lead	µg/m³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Leena Sharma)
Chemist

Authorized Signatory


 (Amreesh Kumar)
Head & Dy. GM

 Environmental & Chemical Laboratory
Wolkem India Limited,
 E-102, M.I.A., Udaipur (Rajasthan)
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Report No. 20230908002/B

Report Issue Date: - 19.09.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	07.09.2023/10:50AM
3. Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	08.09.2023
6. Sample received on	:	08.09.2023 to 18.09.2023
7. Period of Analysis	:	Maton Village
8. Name of Location	:	N 24° 33' 13" - E 73° 47' 39"
9. Coordinates	:	Instrument Manual
10. Method of Sampling	:	

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30.9	°C
2.	Relative Humidity	50	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.40	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.15	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.207	-

Tested by

(Leena Sharma)
Chemist

Authorized Signatory

(Amraeesh Kumar)
Head & Dy. GM
Environmental Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., Udaipur (Rajasthan)

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Report No. 20230911002/A

Report Issue Date: - 19.09.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	08.09.2023/09:55AM
3: Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	11.09.2023
6. Sample received on	:	11.09.2023 to 18.09.2023
7. Period of Analysis	:	Kharwaria Village
8. Name of Location	:	N 24° 33' 9" - E 73° 47' 3"
9. Coordinates	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual
10. Method of Sampling	:	

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1431.50	Minutes
2.	Average Flow rate for PM10	1,175	M ³ / Min
3.	Ambient Temperature	30.0	°C
4.	Relative Humidity	48	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	47.65	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	23.38	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	6.92	80
4.	NO ₂	µg/m ³	IS:5182 (Part-8)	8.65	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Chaplist

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Report No. 20230911002/B

Report Issue Date: - 19.09.2023

1. Name of Customer

TEST REPORT

HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 08.09.2023/09:55AM
 Air Sample
 Sealed/Ok
 11.09.2023
 11.09.2023 to 18.09.2023
 Kharwaria Village
 N 24° 33' 9" - E 73° 47' 3"
 Instrument Manual

2. Purchase order Number

3. Date & Time of Monitoring
4. Sample Identification
5. Condition of Sample
6. Sample received on
7. Period of Analysis
8. Name of Location
9. Coordinates
10. Method of Sampling

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30.0	°C
2.	Relative Humidity	48	%

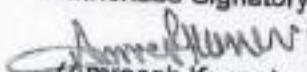
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.36	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.34	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.245	-

Tested by

Leena Sharma
 Chemist

Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1
 End of Report

Report No. 20230619020

1. Name of Customer

Report Issue Date: 28.06.2023

2. Purchase order Number

TEST REPORT

3. Date of Monitoring
 4. Sample Identification
 5. Condition of Sample
 6. Sample Received On
 7. Period of Analysis
 8. Test Methods Reference
 9. Name of location

: HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 12.06.2023
 NA
 NA
 19.06.2023
 NA
 IS: 9989- 1981 (Reaffirmed 2008)
 Mine Lease Area

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	38.6	40.1	36.5	40.2
2.	7-8 AM	42.5	46.5	40.2	46.6
3.	8-9 AM	43.2	46.5	40.5	46.6
4.	9-10 AM	44.7	46.7	42.3	46.8
5.	10-11 AM	47.5	50.1	43.5	50.4
6.	11-12 AM	49.1	51.6	45.5	51.8
7.	12-13 PM	54.4	56.9	51.2	57.1
8.	13-14 PM	53.5	56.5	51.2	56.6
9.	14-15 PM	54.0	56.5	51.2	56.6
10.	15-16 PM	52.3	53.5	50.8	53.5
11.	16-17 PM	55.1	56.9	53.6	56.9
12.	17-18 PM	50.0	55.6	43.5	56.3
13.	18-19 PM	43.3	45.6	41.2	45.7
14.	19-20 PM	42.3	43.5	40.2	43.6
15.	20-21 PM	39.8	42.1	37.5	42.2
16.	21-22 PM	36.6	38.5	34.5	38.6
Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					49.3

Note

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Report No. 20230619020

Report Issue Date: 28.06.2023

1. Name of Customer

TEST REPORT

:

HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

P.O. Maton, Distt. Udaipur (Rajasthan), INDIA

PO No. 2016.1201/ 5100019025 Date 13.01.2016

Amendment Dated: - 27.02.2023

12.06.2023

NA

NA

19.06.2023

NA

IS: 9989- 1981 (Reaffirmed 2008)

Mine Lease Area

2. Purchase order Number
3. Date of Monitoring
4. Sample Identification
5. Condition of Sample
6. Sample Received On
7. Period of Analysis
8. Test Methods Reference
9. Name of location

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	35.3	36.8	34.1	36.8
2.	23-24PM	34.3	36.5	31.2	36.7
3.	0-1 AM	34.9	36.5	33.8	36.5
4.	1-2 AM	34.9	35.6	34.2	35.6
5.	2-3 AM	34.1	35.2	32.5	35.2
6.	3-4 AM	34.0	35.2	32.5	35.2
7.	4-5 AM	35.8	36.8	34.5	36.8
8.	5-6 AM	39.4	40.8	38.2	40.8
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					36.7
Day-Night Sound Level (Ldn) = 10 log [1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)]]					
Ldn					48.6

CPCB Norms

S. No	Category of area	Day Time dB 6 A.M. to 10 P.M.	Night Time dB 10 P.M to 6 A.M.
1	Industrial Area	75.0	70.0
2	Commercial Area	65.0	55.0
3	Residential Area	55.0	45.0

Tested By

 (Leena Sharma)
 Chemist

Authorized Signatory

 (Amreesh Kumar)
 Lab Incharge

Environmental & Chemical Laboratory

Wolkem India Limited

E-102, M.L.J. UDAIPUR (Rajasthan)

- Note
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Report No. 20230619021

Report Issue Date: 28.06.2023

1. Name of Customer

TEST REPORT

: HINDUSTAN ZINC LIMITED
Rockphosphate Maton Mine
P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
PO No. 2016.1201/ 5100019025 Date 13.01.2016
Amendment Dated: - 27.02.2023
13.06.2023
NA
NA
19.06.2023
NA
IS: 9989– 1981 (Reaffirmed 2008)
Umarda Village

2. Purchase order Number

3. Date of Monitoring

4. Sample Identification

5. Condition of Sample

6. Sample Received On

7. Period of Analysis

8. Test Methods Reference

9. Name of location

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₉₀	L ₅₀	
1.	6-7 AM	46.8	48.6	42.5	48.9
2.	7-8 AM	51.8	54.2	50.1	54.2
3.	8-9 AM	52.6	54.2	50.2	54.3
4.	9-10 AM	53.4	56.3	51.2	56.4
5.	10-11 AM	53.4	54.2	51.2	54.3
6.	11-12 AM	54.0	56.2	51.2	56.3
7.	12-13 PM	52.7	54.2	51.2	54.2
8.	13-14 PM	53.2	55.0	50.9	55.1
9.	14-15 PM	54.3	56.3	51.5	56.4
10.	15-16 PM	54.2	56.5	51.2	56.7
11.	16-17 PM	53.9	56.5	51.2	56.6
12.	17-18 PM	53.5	55.2	51.2	55.3
13.	18-19 PM	54.1	56.6	52.2	56.7
14.	19-20 PM	52.3	54.2	50.8	54.2
15.	20-21 PM	51.7	53.6	50.2	53.6
16.	21-22 PM	49.6	51.2	48.6	51.2
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀)/60])					54.7

Note

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Report No. 20230619021

Report Issue Date: 28.06.2023

1. Name of Customer

TEST REPORT

2. Purchase order Number
3. Date of Monitoring
4. Sample Identification
5. Condition of Sample
6. Sample Received On
7. Period of Analysis
8. Test Methods Reference
9. Name of location

:

HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 13.06.2023
 NA
 NA
 19.06.2023
 NA
 IS: 9989- 1981 (Reaffirmed 2008)
 Umarda Village

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	46.7	48.2	45.6	48.2
2.	23-24PM	41.4	46.3	38.0	46.4
3.	0-1 AM	35.5	36.5	34.0	36.5
4.	1-2 AM	35.0	36.5	33.8	36.5
5.	2-3 AM	34.5	35.6	33.6	35.6
6.	3-4 AM	34.4	35.2	33.6	35.2
7.	4-5 AM	41.1	43.5	38.9	43.5
8.	5-6 AM	44.3	48.2	40.2	48.5
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					41.3
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					53.8

CPCB Norms

S. No	Category of area	Day Time dB	Night Time dB
		9 A.M. to 10 P.M.	10 P.M to 6 A.M.
1	Industrial Area	75.0	70.0
2	Commercial Area	65.0	55.0
3	Residential Area	55.0	45.0

Tested By

 (Leena Sharma)
 Chemist

Authorized Signatory

(Amreesh Kumar)

Lab Incharge

Environmental & Chemical Laboratory

Wolkem India Limited

E-102, M.J.A., UDAIPUR (Rajasthan)

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Report No. 20230619022

1. Name of Customer

2. Purchase order Number

3. Date of Monitoring

4. Sample Identification

5. Condition of Sample

6. Sample Received On

7. Period of Analysis

8. Test Methods Reference

9. Name of location

TEST REPORT

Report Issue Date: 28.06.2023

: HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 14.06.2023
 NA
 NA
 19.06.2023
 NA
 IS: 9989—1981 (Reaffirmed 2008)
 Lakadwas Village

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		Day	Time	Leq	
1.	6-7 AM	44.5	L ₁₀	L ₅₀	46.3
2.	7-8 AM	50.0	46.2	41.8	55.5
3.	8-9 AM	51.8	54.6	42.6	53.2
4.	9-10 AM	52.3	53.2	50.2	54.2
5.	10-11 AM	53.6	54.2	51.2	54.7
6.	11-12 AM	53.0	54.7	51.6	55.3
7.	12-13 PM	52.7	55.2	51.2	53.3
8.	13-14 PM	52.1	55.3	51.2	56.1
9.	14-15 PM	53.1	53.2	50.2	56.3
10.	15-16 PM	53.5	55.0	51.2	57.0
11.	16-17 PM	53.9	56.2	51.2	56.1
12.	17-18 PM	54.1	56.0	52.5	55.2
13.	18-19 PM	54.0	56.9	51.2	54.2
14.	19-20 PM	53.7	56.0	52.2	54.7
15.	20-21 PM	51.9	55.2	52.6	54.0
16.	21-22 PM	47.1	54.2	50.2	53.5
Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					54.2

Note

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Report No. 20230619022

Report Issue Date: 28.06.2023

1. Name of Customer

TEST REPORT

HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023

2. Purchase order Number

14.06.2023

3. Date of Monitoring

NA

4. Sample Identification

NA

5. Condition of Sample

19.06.2023

6. Sample Received On

NA

7. Period of Analysis

NA

8. Test Methods Reference

IS: 9989- 1981 (Reaffirmed 2008)

9. Name of location

Lakadwas Village

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	42.3	45.6	39.8	45.7
2.	23-24PM	35.9	38.5	34.2	36.5
3.	0-1 AM	33.8	35.7	31.2	35.8
4.	1-2 AM	33.8	34.2	32.6	34.2
5.	2-3 AM	34.4	35.2	33.5	35.2
6.	3-4 AM	35.4	38.6	33.6	38.7
7.	4-5 AM	40.8	43.2	38.6	43.3
8.	5-6 AM	42.8	45.6	40.2	45.7
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60]))					39.6
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					53.1

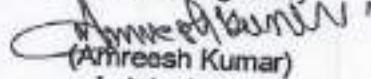
CPCB Norms

S. No	Category of area	Day Time dB 6 A.M. to 10 P.M.	Night Time dB 10 P.M to 6 A.M.
1	Industrial Area	75.0	70.0
2	Commercial Area	65.0	55.0
3	Residential Area	55.0	45.0

Tested By

Leena Sharma
(Leena Sharma)
Chemist

Authorized Signatory


 Amreesh Kumar
Lab Incharge

 Environmental & Chemical Laboratory
Wolkem India Limited

6-102, M.I.A., UDAIPUR (Rajasthan)

Note

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Report No. 20230619023

Report Issue Date: 28.06.2023

1. Name of Customer

TEST REPORT

:
 HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 15.06.2023
 NA
 NA
 19.06.2023
 NA
 IS: 9969– 1981 (Reaffirmed 2008)
 Maton Village

2. Purchase order Number

3. Date of Monitoring

4. Sample Identification

5. Condition of Sample

6. Sample Received On

7. Period of Analysis

8. Test Methods Reference

9. Name of location

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	42.0	43.2	40.2	43.3
2.	7-8 AM	42.4	43.2	41.2	43.2
3.	8-9 AM	42.5	43.2	41.5	43.2
4.	9-10 AM	45.0	46.8	42.6	46.9
5.	10-11 AM	49.9	53.8	45.9	54.1
6.	11-12 AM	53.0	55.2	50.2	55.3
7.	12-13 PM	54.7	58.2	51.2	58.4
8.	13-14 PM	54.9	56.8	53.5	56.8
9.	14-15 PM	53.4	55.8	51.2	55.9
10.	15-16 PM	60.2	62.1	58.6	62.1
11.	16-17 PM	59.4	60.3	58.6	60.3
12.	17-18 PM	57.8	61.2	54.2	61.4
13.	18-19 PM	56.8	59.5	52.3	59.8
14.	19-20 PM	53.1	55.6	50.6	55.7
15.	20-21 PM	47.9	50.2	45.9	50.3
16.	21-22 PM	44.1	47.5	41.2	47.6
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					53.4

Note

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Report Issue Date: 28.06.2023

1. Name of Customer

TEST REPORT

2. Purchase order Number
3. Date of Monitoring
4. Sample Identification
5. Condition of Sample
6. Sample Received On
7. Period of Analysis
8. Test Methods Reference
9. Name of location

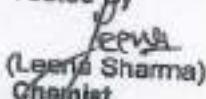
:
 HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 15.06.2023
 NA
 NA
 19.06.2023
 NA
 IS: 9989- 1981 (Reaffirmed 2008)
 Maton Village

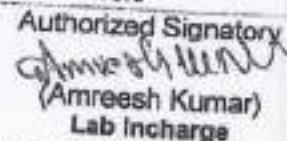
S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	38.1	39.2	35.8	39.3
2.	23-24PM	34.9	35.8	33.9	35.8
3.	0-1 AM	34.0	35.2	32.5	35.2
4.	1-2 AM	34.4	35.7	32.5	35.8
5.	2-3 AM	33.6	34.6	32.5	34.6
6.	3-4 AM	33.2	34.2	32.0	34.2
7.	4-5 AM	35.6	38.2	34.5	38.2
8.	5-6 AM	38.3	40.2	34.8	40.4
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					36.7
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					52.1

CPCB Norms

S. No	Category of area	Day Time dB	Night Time dB
		8 A.M. to 10 P.M.	10 P.M to 6 A.M.
1	Industrial Area	75.0	70.0
2	Commercial Area	65.0	55.0
3	Residential Area	55.0	45.0

Tested By


 (Leena Sharma)
 Chemist


 (Amreesh Kumar)
 Lab Incharge

Note

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 Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, Mewar Industrial Area, Udaipur - 313003 (Rajasthan)



Report No. 20230619024

Report Issue Date: 28.06.2023

1. Name of Customer
2. Purchase order Number
3. Date of Monitoring
4. Sample Identification
5. Condition of Sample
6. Sample Received On
7. Period of Analysis
8. Test Methods Reference
9. Name of location

TEST REPORT

:

HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

P.O. Maton, Distt. Udaipur (Rajasthan), INDIA

PO No. 2016.1201/ 5100019025 Date 13.01.2016

Amendment Dated: - 27.02.2023

16.06.2023

NA

NA

19.06.2023

NA

IS: 9989– 1981 (Reaffirmed 2008)

Kharwaria Village

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	43.1	44.8	41.5	44.8
2.	7-8 AM	46.0	48.2	42.8	48.4
3.	8-9 AM	47.7	51.2	43.6	51.5
4.	9-10 AM	52.7	55.6	50.0	55.7
5.	10-11 AM	53.6	55.0	51.5	55.1
6.	11-12 AM	54.4	56.3	51.2	56.5
7.	12-13 PM	55.4	58.9	51.2	59.2
8.	13-14 PM	53.4	55.2	51.2	55.3
9.	14-15 PM	54.7	57.6	51.2	57.8
10.	15-16 PM	53.9	55.4	52.6	55.4
11.	16-17 PM	53.3	55.2	50.2	55.4
12.	17-18 PM	58.4	60.0	55.7	60.1
13.	18-19 PM	55.3	56.9	51.2	57.2
14.	19-20 PM	52.7	54.2	50.6	54.3
15.	20-21 PM	45.9	48.2	43.8	48.3
16.	21-22 PM	41.8	43.2	39.5	43.3
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					53.6

Note

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Report No. 20230619024

Report Issue Date: 28.06.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	16.06.2023
3. Date of Monitoring	:	NA
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	19.06.2023
7. Period of Analysis	:	NA
8. Test Methods Reference	:	IS: 9989– 1981 (Reaffirmed 2008)
9. Name of location	:	Kharwaria Village

S. No.	Time hours	Sound Pressure Level ·dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	37.7	40.2	35.6	40.3
2.	23-24PM	35.7	37.2	34.2	37.2
3.	0-1 AM	34.1	35.6	32.8	35.6
4.	1-2 AM	33.5	35.2	32.0	35.2
5.	2-3 AM	34.0	35.2	32.6	35.2
6.	3-4 AM	33.5	34.2	32.6	34.2
7.	4-5 AM	35.3	38.2	32.6	38.3
8.	5-6 AM	39.2	41.2	36.9	41.3
Leq Night (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					37.2
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					52.3

CPCB Norms

S. No	Category of area	Day Time dB 6 A.M. to 10 P.M.	Night Time dB 10 P.M to 6 A.M.
1	Industrial Area	75.0	70.0
2	Commercial Area	65.0	55.0
3	Residential Area	55.0	45.0

Tested By

 (Leena Sharma)
 Chemist

Authorized Signatory

 (Amreesh Kumar)
 Lab Incharge

 Environmental & Chemical Laboratory
Wolkem India Limited

E-102, M.I.A., UDAIPUR (Rajasthan)

Note

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- The samples will be destroyed after 16 days from the date of issue of test certificate unless otherwise specified.
- Any discrepancy in test results should be reported within 15 days.





Report No. 20230619025

Report Issue Date: 28.06.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	
3. Date of Monitoring	:	17.06.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	19.06.2023
7. Period of Analysis	:	NA
8. Test Methods Reference	:	IS: 9989– 1981 (Reaffirmed 2008)
9. Name of location	:	Nr. Udaisagar

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	44.7	48.6	41.2	48.8
2.	7-8 AM	51.0	56.2	45.9	56.6
3.	8-9 AM	53.8	55.0	52.2	55.0
4.	9-10 AM	54.3	56.9	51.2	57.1
5.	10-11 AM	55.3	58.6	51.2	58.9
6.	11-12 AM	54.9	56.2	53.2	56.2
7.	12-13 PM	55.7	57.6	54.2	57.6
8.	13-14 PM	54.1	56.2	52.2	56.3
9.	14-15 PM	55.5	58.6	53.2	58.7
10.	15-16 PM	57.6	60.2	54.2	60.4
11.	16-17 PM	53.8	56.2	51.2	56.3
12.	17-18 PM	57.2	59.2	54.2	59.4
13.	18-19 PM	55.5	57.5	53.2	57.6
14.	19-20 PM	52.1	55.2	50.2	55.3
15.	20-21 PM	48.9	50.2	47.5	50.2
16.	21-22 PM	39.9	42.0	38.2	42.1
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					55.4

Note

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- Any discrepancy in test results should be reported within 15 days.

Page 1 of 2

Continue





Report No. 20230619025

Report Issue Date: 28.06.2023

1. Name of Customer

TEST REPORT

:

HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 17.06.2023
 NA
 NA
 19.06.2023
 NA
 IS: 9989- 1981 (Reaffirmed 2008)
 Nr. Udaisagar

2. Purchase order Number

3. Date of Monitoring

4. Sample Identification

5. Condition of Sample

6. Sample Received On

7. Period of Analysis

8. Test Methods Reference

9. Name of location

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₉₀	L ₅₀	
1.	22-23PM	39.4	41.5	38.2	41.5
2.	23-24PM	37.5	40.2	35.0	40.3
3.	0-1 AM	34.8	36.3	33.6	36.3
4.	1-2 AM	34.2	35.6	32.2	35.7
5.	2-3 AM	33.7	35.2	32.2	35.2
6.	3-4 AM	34.8	36.0	33.5	36.0
7.	4-5 AM	38.6	42.0	35.6	42.2
8.	5-6 AM	44.9	48.2	42.2	48.3
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					39.4
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					54.2

CPCB Norms

S. No	Category of area	Day Time dB 6 A.M. to 10 P.M.	Night Time dB 10 P.M to 6 A.M.
1	Industrial Area	75.0	70.0
2	Commercial Area	65.0	55.0
3	Residential Area	55.0	45.0

Tested By

 (Leena Sharma)
 Chemist

Authorized Signatory

 Amroesh Kumar
 Lab Incharge

 Environmental & Chemical Laboratory
Wolkem India Limited

E-102, M.I.A., UDAIPUR (Rajasthan)

Note

- Complaint Register is available in lab / Email ID lab.offices@wolkem.com
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- Any discrepancy in test results should be reported within 15 days.



Report No. 20230911003

Report Issue Date: 19.09.2023

1. Name of Customer

TEST REPORT

: HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 04.09.2023
 NA
 NA
 11.09.2023
 NA
 IS: 9969- 1981 (Reaffirmed 2008)
 Mine Lease Area

2. Purchase order Number

3. Date of Monitoring

4. Sample Identification

5. Condition of Sample

6. Sample Received On

7. Period of Analysis

8. Test Methods Reference

9. Name of location

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	37.2	38.2	38.9	38.3
2.	7-8 AM	41.4	46.2	38.9	46.3
3.	8-9 AM	45.9	48.2	43.6	48.3
4.	9-10 AM	44.6	47.2	42.6	47.3
5.	10-11 AM	46.3	48.2	42.6	48.4
6.	11-12 AM	51.9	53.2	50.2	53.2
7.	12-13 PM	52.5	54.1	50.2	54.2
8.	13-14 PM	53.0	54.2	51.2	54.3
9.	14-15 PM	55.2	58.2	53.6	58.2
10.	15-16 PM	55.5	58.6	53.9	58.6
11.	16-17 PM	52.0	54.3	50.3	54.3
12.	17-18 PM	53.8	56.2	51.2	56.3
13.	18-19 PM	54.0	56.2	52.6	56.2
14.	19-20 PM	48.9	51.2	45.2	51.4
15.	20-21 PM	43.6	46.2	41.5	46.3
16.	21-22 PM	42.7	43.8	41.5	43.8
Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) / 60]))					51.0

Note

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- Any discrepancy in test results should be reported within 15 days.

Report No. 20230911003

Report Issue Date: 19.09.2023

1. Name of Customer

TEST REPORT

2. Purchase order Number
3. Date of Monitoring
4. Sample Identification
5. Condition of Sample
6. Sample Received On
7. Period of Analysis
8. Test Methods Reference
9. Name of location

: HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 04.09.2023
 NA
 NA
 11.09.2023
 NA
 IS: 9989- 1981 (Reaffirmed 2008)
 Mine Lease Area

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₉₀	L ₈₀	
1.	22-23PM	36.0	38.9	33.8	39.0
2.	23-24PM	35.7	37.6	33.8	37.7
3.	0-1 AM	35.4	38.2	33.5	38.3
4.	1-2 AM	34.7	36.4	33.6	36.4
5.	2-3 AM	34.7	36.5	33.5	36.5
6.	3-4 AM	33.8	35.2	32.6	35.2
7.	4-5 AM	34.3	35.2	32.6	35.2
8.	5-6 AM	41.4	43.2	38.9	43.3
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					37.7
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					50.1

CPCB Norms

S. No	Category of area	Day Time dB		Night Time dB 10 P.M to 8 A.M
		6 A.M. to 10 P.M.	7 P.M. to 8 A.M.	
1	Industrial Area	75.0	70.0	
2	Commercial Area	65.0	55.0	
3	Residential Area	55.0	45.0	

Tested By

Leena Sharma
 Chemist

Authorized Signatory

 (Amreesh Kumar)
 Head & Dy. GM

Environmental & Clinical Laboratory
Wolkem India Limited
 E-102, M.I.A., Udaipur (Rajasthan)

- Note
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 5. Any discrepancy in test results should be reported within 15 days.

Report No. 20230911004

Report Issue Date: 19.09.2023

1. Name of Customer

TEST REPORT

: HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 05.09.2023
 NA
 NA
 11.09.2023
 NA
 IS: 9989— 1981 (Reaffirmed 2008)
 Umarda Village

2. Purchase order Number

3. Date of Monitoring

4. Sample Identification

5. Condition of Sample

6. Sample Received On

7. Period of Analysis

8. Test Methods Reference

9. Name of location

S.No.	Time hours	Sound Pressure Level dB(A)			Leq	
		Day Time	L ₁₀	L ₅₀		
1.	6-7 AM		46.2	47.6	44.5	47.6
2.	7-8 AM		51.4	53.2	49.6	53.3
3.	8-9 AM		52.6	54.2	50.2	54.3
4.	9-10 AM		54.0	56.6	51.2	56.7
5.	10-11 AM		52.2	53.2	50.2	53.3
6.	11-12 AM		53.9	56.5	51.2	56.6
7.	12-13 PM		55.9	58.7	53.8	58.8
8.	13-14 PM		54.5	56.8	52.9	56.8
9.	14-15 PM		55.3	56.9	53.8	56.9
10.	15-16 PM		55.2	57.0	53.7	57.0
11.	16-17 PM		57.0	59.6	53.5	59.8
12.	17-18 PM		57.6	60.1	54.9	60.2
13.	18-19 PM		56.4	59.2	53.6	59.3
14.	19-20 PM		52.6	54.2	50.2	54.3
15.	20-21 PM		52.4	54.2	50.2	54.3
16.	21-22 PM		46.7	48.6	45.6	48.6
Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])						
					55.5	

Note

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- Any discrepancy in test results should be reported within 15 days.



Report No. 20230911004

Report Issue Date: 19.09.2023

1. Name of Customer

TEST REPORT

: HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

P.O. Maton, Distt. Udaipur (Rajasthan), INDIA

PO No. 2016.1201/ 5100019025 Date 13.01.2016

Amendment Dated: - 27.02.2023

05.09.2023

NA

NA

11.09.2023

NA

IS: 9989— 1981 (Reaffirmed 2008)

Umarda Village

2. Purchase order Number

3. Date of Monitoring

4. Sample Identification

5. Condition of Sample

6. Sample Received On

7. Period of Analysis

8. Test Methods Reference

9. Name of location

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L₁₀	L₉₀	L_{dn}	
1.	22-23PM	45.3	48.2	42.6	48.3
2.	23-24PM	45.4	47.2	43.2	47.3
3.	0-1 AM	40.9	43.6	38.9	43.7
4.	1-2 AM	36.3	38.6	34.2	38.7
5.	2-3 AM	35.0	36.2	33.6	36.2
6.	3-4 AM	35.5	38.2	33.9	38.2
7.	4-5 AM	40.9	43.5	38.9	43.6
8.	5-6 AM	44.1	47.2	41.2	47.3
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60]))					42.9
Day-Night Sound Level (L _{dn}) = 10 log {1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)]}					
L _{dn}					54.8

CPCB Norms

S. No	Category of area	Day Time dB	Night Time dB
		6 A.M. to 10 P.M.	10 P.M to 6 A.M
1	Industrial Area	75.0	70.0
2	Commercial Area	65.0	55.0
3	Residential Area	55.0	45.0

Tested By

Leena Sharma
Chemist

Note

- Complaint Register is available in lab / Email ID: lab.office@wolkem.com
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- Any discrepancy in test results should be reported within 15 days.

Authorized Signatory

Amreesh Kumar

Head & Dy. GM

Environmental & Chemical Laboratory

Wolkem India Limited

102, JAIJI, TAPOLI (Rajasthan)

Report No. 20230911005

Report Issue Date: 19.09.2023

1. Name of Customer

TEST REPORT

: HINDUSTAN ZINC LIMITED
Rockphosphate Maton Mine
P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
PO No. 2016.1201/ 5100019025 Date 13.01.2016
Amendment Dated: - 27.02.2023
06.09.2023
NA
NA
11.09.2023
NA
IS: 9989— 1981 (Reaffirmed 2008)
Lakadwas Village

2. Purchase order Number

3. Date of Monitoring

4. Sample Identification

5. Condition of Sample

6. Sample Received On

7. Period of Analysis

8. Test Methods Reference

9. Name of location

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		Day	Time	Leq	
1.	6-7 AM	L ₁₀	L ₅₀	L ₉₀	47.3
2.	7-8 AM	44.5	47.2	41.9	
3.	8-9 AM	48.4	51.0	45.2	51.2
4.	9-10 AM	51.9	53.2	50.8	53.2
5.	10-11 AM	52.3	54.2	50.5	54.3
6.	11-12 AM	54.1	55.4	53.2	55.4
7.	12-13 PM	54.8	56.9	52.6	57.0
8.	13-14 PM	53.6	55.6	51.2	55.7
9.	14-15 PM	56.4	57.6	54.9	57.6
10.	15-16 PM	56.5	59.0	54.8	59.0
11.	16-17 PM	57.8	59.7	55.9	59.8
12.	17-18 PM	55.7	57.5	53.6	57.6
13.	18-19 PM	54.9	56.2	53.2	56.2
14.	19-20 PM	57.2	58.3	55.8	58.3
15.	20-21 PM	56.8	58.6	54.7	58.7
16.	21-22 PM	53.7	56.2	51.2	56.3
		47.8	50.2	45.2	50.3
		Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])			55.5

Note

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Report No. 20230911005

Report Issue Date: 19.09.2023

1. Name of Customer

TEST REPORT

: HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023

- 2. Purchase order Number**
3. Date of Monitoring
4. Sample Identification
5. Condition of Sample
6. Sample Received On
7. Period of Analysis
8. Test Methods Reference
9. Name of location

: 06.09.2023

: NA

: NA

: 11.09.2023

: NA

: IS: 9989– 1981 (Reaffirmed 2008)

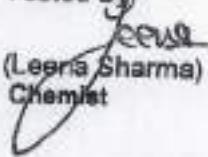
: Lakadwas Village

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L₁₀	L₅₀	L₉₀	
1.	22-23PM	43.4	47.5	40.1	47.7
2.	23-24PM	37.3	38.9	34.8	39.0
3.	0-1 AM	36.0	38.2	33.5	38.3
4.	1-2 AM	34.8	36.1	33.6	36.1
5.	2-3 AM	34.6	36.0	33.5	36.0
6.	3-4 AM	33.6	34.2	32.6	34.2
7.	4-5 AM	41.5	43.5	38.0	43.7
8.	5-6 AM	42.8	43.6	41.5	43.6
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60]))					39.8
Day-Night Sound Level (L _{DN}) = 10 log {1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10))]}					
L _{DN}					54.3

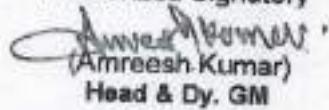
CPCB Norms

S. No	Category of area	Day Time dB 6 A.M. to 10 P.M.	Night Time dB 10 P.M to 6 A.M.
1	Industrial Area	75.0	70.0
2	Commercial Area	65.0	55.0
3	Residential Area	55.0	45.0

Tested By


 (Leena Sharma)
 Chemist

Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

Environmental & Chemical Laboratory
Wolkem India Limited

E-102, M.I.A., U.D.P.U.R (Rajasthan)

5. This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law and should not be used in any advertising media without our special permission in writing.

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4. The samples will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.
5. Any discrepancy in test results should be reported within 15 days.

Report No. 20230911006

Report Issue Date: 19.09.2023

1. Name of Customer

TEST REPORT

: HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 07.09.2023
 NA
 NA
 11.09.2023
 NA
 IS: 9989– 1981 (Reaffirmed 2008)
 Maton Village

2. Purchase order Number

3. Date of Monitoring

4. Sample Identification

5. Condition of Sample

6. Sample Received On

7. Period of Analysis

8. Test Methods Reference

9. Name of location

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		Day	Time	Leq	
1.	6-7 AM	44.4	48.2	41.5	48.3
2.	7-8 AM	47.3	48.2	46.0	48.2
3.	8-9 AM	51.3	54.2	48.0	54.4
4.	9-10 AM	52.5	56.0	46.7	56.6
5.	10-11 AM	55.6	57.6	53.9	57.6
6.	11-12 AM	55.5	56.9	53.9	56.9
7.	12-13 PM	55.7	58.2	54.2	58.2
8.	13-14 PM	55.3	57.3	53.2	57.4
9.	14-15 PM	56.0	58.2	54.7	58.2
10.	15-16 PM	56.1	58.3	53.8	58.4
11.	16-17 PM	55.8	58.2	51.8	58.5
12.	17-18 PM	54.1	56.6	51.8	56.7
13.	18-19 PM	55.0	56.3	53.3	56.3
14.	19-20 PM	53.2	54.2	51.6	54.2
15.	20-21 PM	48.5	51.0	46.6	51.1
16.	21-22 PM	43.4	45.2	41.2	45.3
Leq Day (Leq = L50 + [(L10 - L90)^2/60])					54.8

Note

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4. The samples will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.
5. Any discrepancy in test results should be reported within 15 days.

Report No. 20230911006

Report Issue Date: 19.09.2023

1. Name of Customer

TEST REPORT

: HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

P.O. Maton, Distt. Udaipur (Rajasthan), INDIA

PO No. 2016.1201/ 5100019025 Date 13.01.2016

Amendment Dated: - 27.02.2023

2. Purchase order Number

07.09.2023

3. Date of Monitoring

NA

4. Sample Identification

NA

5. Condition of Sample

11.09.2023

6. Sample Received On

NA

7. Period of Analysis

IS: 9989- 1981 (Reaffirmed 2008)

8. Test Methods Reference

Maton Village

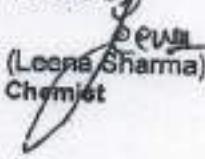
9. Name of location

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L₁₀	L₅₀	L₉₀	
1.	22-23PM	39.6	43.2	35.6	43.5
2.	23-24PM	36.7	38.5	35.0	38.6
3.	0-1 AM	35.4	37.5	33.8	37.5
4.	1-2 AM	34.7	36.0	33.0	36.0
5.	2-3 AM	35.1	36.4	33.0	36.5
6.	3-4 AM	35.4	38.4	33.6	38.5
7.	4-5 AM	39.2	40.2	38.1	40.2
8.	5-6 AM	43.1	46.5	39.8	46.7
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60]))					39.7
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					53.6

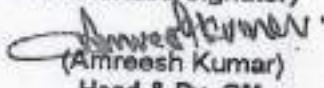
CPCB Norms

S. No	Category of area	Day Time dB 6 A.M. to 10 P.M.	Night Time dB 10 P.M. to 6 A.M.
1	Industrial Area	75.0	70.0
2	Commercial Area	65.0	55.0
3	Residential Area	55.0	45.0

Tested By


(Leena Sharma)
Chemist

Authorized Signatory


(Amreesh Kumar)
Head & Dy. GM

Environmental & Chemical Laboratory
Wolkem India Limited

Regd. Office No. 102, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan (INDIA)

- Note
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Report No. 20230911007

Report Issue Date: 19.09.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	:	Amendment Dated: - 27.02.2023
3. Date of Monitoring	:	08.09.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	11.09.2023
7. Period of Analysis	:	NA
8. Test Methods Reference	:	IS: 9969— 1981 (Reaffirmed 2008)
9. Name of location	:	Kharwaria Village

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	43.4	45.6	41.5	45.7
2.	7-8 AM	47.1	49.2	44.7	49.3
3.	8-9 AM	46.6	48.5	44.9	48.5
4.	9-10 AM	50.3	52.2	48.5	52.3
5.	10-11 AM	53.3	55.3	51.6	55.3
6.	11-12 AM	55.7	58.3	54.3	58.3
7.	12-13 PM	54.9	57.5	52.8	57.6
8.	13-14 PM	56.0	58.1	52.8	58.3
9.	14-15 PM	56.1	57.5	53.8	57.6
10.	15-16 PM	57.4	59.2	54.5	59.3
11.	16-17 PM	57.1	58.2	54.6	58.3
12.	17-18 PM	56.9	58.6	54.5	58.7
13.	18-19 PM	56.1	58.5	54.5	58.5
14.	19-20 PM	56.7	57.6	55.8	57.6
15.	20-21 PM	42.5	44.1	40.5	44.2
16.	21-22 PM	41.1	43.2	38.9	43.3
Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					53.9

Note

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Report No. 20230911007

Report Issue Date: 19.09.2023

1. Name of Customer
2. Purchase order Number
3. Date of Monitoring
4. Sample Identification
5. Condition of Sample
6. Sample Received On
7. Period of Analysis
8. Test Methods Reference
9. Name of location

TEST REPORT

: HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 08.09.2023
 NA
 NA
 11.09.2023
 NA
 IS: 9989— 1981 (Reaffirmed 2008)
 Kharwaria Village

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	36.9	38.6	34.5	38.7
2.	23-24PM	37.4	38.9	35.8	38.9
3.	0-1 AM	36.2	38.0	34.5	38.0
4.	1-2 AM	34.8	36.4	33.6	36.4
5.	2-3 AM	34.6	36.5	33.8	36.5
6.	3-4 AM	34.2	35.6	32.8	35.6
7.	4-5 AM	41.6	43.2	40.2	43.2
8.	5-6 AM	41.8	43.2	40.2	43.2
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60]))					38.8
Day-Night Sound Level (L _{dn}) = 10 log {1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)]}					
L _{dn}					52.8

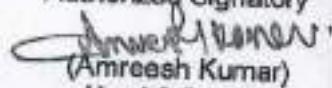
CPCB Norms

S. No	Category of area	Day Time dB 6 A.M. to 10 P.M.	Night Time dB 10 P.M to 6.A.M
1	Industrial Area	75.0	70.0
2	Commercial Area	65.0	55.0
3	Residential Area	55.0	45.0

Tested By

(Leena Sharma)
 Chemist

Authorized Signatory



(Amreesh Kumar)
 Head & Dy. GM

Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230911008

Report Issue Date: 19.09.2023

1. Name of Customer

TEST REPORT

: HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

P.O. Maton, Distt. Udaipur (Rajasthan), INDIA

PO No. 2016.1201/ 5100019025 Date 13.01.2016

Amendment Dated: - 27.02.2023

09.09.2023

2. Purchase order Number

: NA

3. Date of Monitoring

: NA

4. Sample Identification

: 11.09.2023

5. Condition of Sample

: NA

6. Sample Received On

: IS: 9989– 1981 (Reaffirmed 2008)

7. Period of Analysis

: Nr. Udaisagar

8. Test Methods Reference

: 9. Name of location

S.No.	Time hours	Sound Pressure Level dB(A) Day Time			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	45.9	47.5	43.8	47.6
2.	7-8 AM	47.6	50.2	45.2	50.3
3.	8-9 AM	51.9	53.2	50.6	53.2
4.	9-10 AM	52.7	54.2	51.2	54.2
5.	10-11 AM	56.8	58.5	53.6	58.7
6.	11-12 AM	56.8	58.2	54.5	58.3
7.	12-13 PM	56.5	58.5	54.2	58.6
8.	13-14 PM	57.7	58.9	56.5	58.9
9.	14-15 PM	54.0	56.2	52.8	56.2
10.	15-16 PM	56.9	58.5	54.5	58.6
11.	16-17 PM	56.4	58.3	54.2	58.3
12.	17-18 PM	56.0	58.5	52.6	58.7
13.	18-19 PM	58.2	59.5	55.9	59.6
14.	19-20 PM	53.6	55.6	51.2	55.7
15.	20-21 PM	49.2	52.2	47.2	52.3
16.	21-22 PM	42.2	43.5	40.2	43.6
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					55.2

Note

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Report No. 20230911008

Report Issue Date: 19.09.2023

1. Name of Customer

TEST REPORT

2. Purchase order Number
3. Date of Monitoring
4. Sample Identification
5. Condition of Sample
6. Sample Received On
7. Period of Analysis
8. Test Methods Reference
9. Name of location

: HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 09.09.2023
 NA
 NA
 11.09.2023
 NA
 IS: 9989—1981 (Reaffirmed 2008)
 Nr. Udaisagar

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	40.3	43.2	38.6	43.2
2.	23-24PM	36.5	38.6	35.0	38.6
3.	0-1 AM	34.8	36.5	33.6	36.5
4.	1-2 AM	34.9	36.5	33.5	36.5
5.	2-3 AM	35.0	36.5	33.6	36.5
6.	3-4 AM	35.7	37.5	33.6	37.6
7.	4-5 AM	41.2	43.5	38.5	43.6
8.	5-6 AM	45.1	47.2	43.5	47.2
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					40.0
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					54.0

CPCB Norms

S. No	Category of area	Day Time dB 6 A.M. to 10 P.M.	Night Time dB 10 P.M to 6 A.M.
1	Industrial Area	75.0	70.0
2	Commercial Area	65.0	55.0
3	Residential Area	55.0	45.0

Tested By

(Leena Sharma)

Chemist

Note

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Authorized Signatory

(Amreesh Kumar)
 Head & Dy. GM

Environmental & Chemical Laboratory
Wolkem India Limited

5-102, MIA, UDAIPUR (Rajasthan)



Report No. 20230612012

Report Issue Date: - 26.06.2023

TEST REPORT	
1. Name of Customer	:
	HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
2. Purchase order Number	:
	P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Sample Identification	:
4. Condition of Sample	:
5. Date & Time of Sampling	:
6. Sample received on	:
7. Period of Analysis	:
8. Name of sample & Location	:
9. Coordinates	:
10. Method of Sampling	:
IS: 3025 (Pt 1) 1987	

S. No	Environment Condition		Unit	Results		
1.	Ambient Temperature		°C	31.8		
2.	Relative Humidity		%	42		
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10600:2012	
					Acceptable	Permissible
Chemical Testing – Water- Ground Water						
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.32	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs	734.4	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025 (Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	472	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	BDL(<5)	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	172	200	500
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	57.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	6.72	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	216	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	126	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	5.4	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.0	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

Note:

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5. Any discrepancy in test results should be reported within 15 days.



Report No. 20230612012

Report Issue Date: - 26.06.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Sample Identification	:	AMENDMENT Dated: - 27.02.2023
4. Condition of Sample	:	Ground Water
5. Date & Time of Sampling	:	Sealed/Ok
6. Sample received on	:	12.06.2023/12:25PM
7. Period of Analysis	:	12.06.2023
8. Name of sample & Location	:	12.06.2023 to 23.06.2023
9. Coordinates	:	Mine Lease Area (Ground water)
10. Method of Sampling	:	N- 24° 32' 51" E- 73° 47' 25"
IS: 3025 (Pt 1) 1987		

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.72	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.10	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	52.4	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	8.4	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-00)	mg/L	8.8	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-89 to 3-100)	mg/L	74.2	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.26	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

 (Leena Sharma)
 Chemist

Authorized Signatory

 (Purush Singh)
 Sr. Chemist
 Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

Note

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Report No. 20230612013

Report Issue Date: - 26.06.2023

1. Name of Customer : HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number : Surface Water
3. Sample Identification : Sealed/Ok
4. Condition of Sample : 12.06.2023/03:30PM
5. Date & Time of Sampling : 12.06.2023
6. Sample received on : 12.06.2023
7. Period of Analysis : 12.06.2023 to 23.06.2023
8. Name of sample & Location : Bagdara Talav (Surface water)
9. Coordinates : N- 24° 31' 48" E- 73° 48' 0"
10. Method of Sampling : IS: 3025 (Pt 1) 1987

S. No	Environment Condition		Unit	Results
1.	Ambient Temperature		°C	34.1
2.	Relative Humidity		%	48
Chemical Testing – Water- Surface Water				
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.85
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.010
3.	Color	IS:3025(Part-4)	Hazen	<5
4.	Odour	IS:3025 (Part-5)	-	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1302
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	28
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	464
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	105.6
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	48
10.	Alkalinity	IS:3025(Part-23)	mg/L	344
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	294
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4600-SiO ₂ Page 4-175 to 177	mg/L	9.0
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.2
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	6.0

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Report No. 20230612013

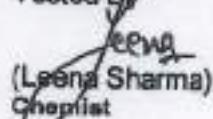
Report Issue Date: - 26.06.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
2. Purchase order Number	: P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Sample Identification	: AMENDMENT Dated: - 27.02.2023
4. Condition of Sample	: Surface Water
5. Date & Time of Sampling	: Sealed/Ok
6. Sample received on	: 12.06.2023/03:30PM
7. Period of Analysis	: 12.06.2023
8. Name of sample & Location	: Bagdara Talav (Surface water)
9. Coordinates	: N- 24° 31' 48" E- 73° 48' 0"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

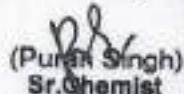
S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water – Surface Water				
17.	Chemical Oxygen Demand	IS:3025(Part-5B)	mg/L	11.21
18.	Fluoride as F-	APHA 23 rd Ed., 4500 F	mg/L	0.54
19.	Phosphate	IS:3025(Part-31)	mg/L	4.4
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	280.2
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	20.0
22.	Potassium as K	APHA 23 rd Edition, Part 3500-K (3-99 to 3-90)	mg/L	10.8
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	94.6
Chemical Testing – Residues – Surface water				
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	2.6
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.18

BDL-Below Detection Limit

Tested By


 (Leena Sharma)
 Chemist

Authorized Signatory


 (Purushottam Singh)
 Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230613003

Report Issue Date: - 26.06.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number	:	
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	13.06.2023/12:05PM
6. Sample received on	:	13.06.2023
7. Period of Analysis	:	13.06.2023 to 23.06.2023
8. Name of sample & Location	:	Kharwaria village (Ground water)
9. Coordinates	:	N- 24° 33' 12" E- 73° 47' 27"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Test Method	Unit	Results	
				%	Results
1.	Ambient Temperature		°C	32.1	
2.	Relative Humidity		%	28	
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10600:2012 Acceptable Permissible
Chemical Testing – Water- Ground Water					
1.	pH (at 27°C)	IS:3025(Part-11)	-	6.56	6.5 to 8.5
2.	Conductivity (at 25°C)	IS:3025(Part-14)	mS	2.374	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5
4.	Odour	IS:3025 (Part-5)	-	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1536	500
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	26	2000
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	588	200
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	145.6	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	53.76	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	460	200
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	404	250
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	8.7	No Relaxation
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.1	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	1

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Report No. 20230613003

Report Issue Date: - 26.06.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	:	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	13.06.2023/12:05PM
6. Sample received on	:	13.06.2023
7. Period of Analysis	:	13.06.2023 to 23.06.2023
8. Name of sample & Location	:	Kharwaria village (Ground water)
9. Coordinates	:	N- 24° 33' 12" E- 73° 47' 27"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
Chemical Testing – Water – Ground Water					Acceptable	Permissible
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F	APHA 23 rd Ed., 4500 FD	mg/L	0.83	1.0	1.5
19.	Phosphate	IS:3025(Par1-31)	mg/L	0.14	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	180.2	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	20.4	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-99 to 3-99)	mg/L	10.8	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	84.7	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.22	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230613004

Report Issue Date: - 26.06.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
2. Purchase order Number	: P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Sample Identification	: AMENDMENT Dated: - 27.02.2023
4. Condition of Sample	: Ground Water
5. Date & Time of Sampling	: Sealed/Ok
6. Sample received on	: 13.06.2023/12:30PM
7. Period of Analysis	: 13.06.2023 to 23.06.2023
8. Name of sample & Location	: Maton village (Ground water)
9. Coordinates	: N- 24° 33' 33" E- 73° 47' 33"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	32.4
2.	Relative Humidity	%	27

S. No	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012
					Acceptable Permissible

Chemical Testing – Water- Ground Water

1.	pH (at 27°C)	IS:3025(Part-11)	-	7.52	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.099	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS 3025 (Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1364	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	24	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	548	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	115.2	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	62.4	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	390	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	310	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 29 th Edition2017, 4500-SIO ₂ Page 4-175 to 177	mg/L	6.4	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.3	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20230613004

Report Issue Date: - 26.06.2023

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2. Purchase order Number	:	
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	13.06.2023/12:30PM
6. Sample received on	:	13.06.2023
7. Period of Analysis	:	13.06.2023 to 23.06.2023
8. Name of sample & Location	:	Maton village (Ground water)
9. Coordinates	:	N- 24° 33' 33" E- 73° 47' 33"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-5B)	mg/L	BDL(<5)	-	-
18.	Fluoride as F	APHA 23 rd Ed., 4500 FD	mg/L	0.77	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.24	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	250.4	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	15.3	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	8.6	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	87.2	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.29	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.13	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

(Leena Sharma)
 Chemist

Authorized Signatory

(Pulkit Singh)
 Sr.Chemist
 Environmental & Chemical Laboratory
 Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230613005

Report Issue Date: - 26.06.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	:	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	13.06.2023/01:10PM
6. Sample received on	:	13.06.2023
7. Period of Analysis	:	13.06.2023 to 23.06.2023
8. Name of sample & Location	:	Lakarwas village (Ground water)
9. Coordinates	:	N- 24° 36' 5" E- 73° 47' 47"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No	Environment Condition		Unit	Results	
				°C	%
1.	Ambient Temperature			32.9	
2.	Relative Humidity			43	
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012
Chemical Testing – Water- Ground Water			Unit	Results	Acceptable Permissible
1.	pH (at 27°C)	IS:3025(Part-11)	-	6.62	6.5 to 8.5
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.887	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5
4.	Odour	IS:3025 (Part-5)	-	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-18)	mg/L	1820	500
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	24	2000
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	588	200
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	179.2	75
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	33.60	200
10.	Alkalinity	IS:3025(Part-23)	mg/L	418	30
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	612	500
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	7.8	No Relaxation
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.4	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	1

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Report No. 20230613005

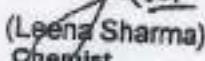
Report Issue Date: - 26.06.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	:	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	13.06.2023/01:10PM
6. Sample received on	:	13.06.2023
7. Period of Analysis	:	13.06.2023 to 23.06.2023
8. Name of sample & Location	:	Lakarwas village (Ground water)
9. Coordinates	:	N- 24° 36' 5" E- 73° 47' 47"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10600:2012 Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-5B)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.69	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.11	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	254.2	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	16.4	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-K (3-89 to 3-90)	mg/L	9.0	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-89 to 3-100)	mg/L	75.2	-	-
Chemical Testing – Residues – Ground Water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.12	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.15	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


 (Leena Sharma)

Chemist

Authorized Signatory


 (Puran Singh)
 Sr.Chemist
 Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230613006

Report Issue Date: - 26.06.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine
2. Purchase order Number	:	P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Sample Identification	:	AMENDMENT Dated: - 27.02.2023
4. Condition of Sample	:	Ground Water
5. Date & Time of Sampling	:	Sealed/Ok
6. Sample received on	:	13.06.2023/01:45AM
7. Period of Analysis	:	13.06.2023
8. Name of sample & Location	:	13.06.2023 to 23.06.2023
9. Coordinates	:	Umrada village (Ground water)
10. Method of Sampling	:	N- 24° 31' 43" E- 73° 47' 3"

S. No	Environment Condition	Test Method	Unit	Results	
				Unit	Results
1.	Ambient Temperature		°C		33.1
2.	Relative Humidity		%		36
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012
					Acceptable Permissible
Chemical Testing – Water- Ground Water					
1.	pH (at 25°C)	IS:3025(Part-11)	-	6.72	6.5 to 8.5 No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.289	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5 15
4.	Odour	IS 3025 (Part-5)	-	Agreeable	Agreeable Agreeable
5.	Total Dissolve Solid	IS:3025(Part-18)	mg/L	838	500 2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	18	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	496	200 600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	116.8	75 200
9.	Magnesium as Mg ²⁺	IS:3025(Part-48)	mg/L	48.96	30 100
10.	Alkalinity	IS:3025(Part-23)	mg/L	352	200 600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	119	250 1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5 No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	8.3	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.0	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2 1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-

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Report No. 20230613006

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1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number	:	
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	13.06.2023/01:45AM
6. Sample received on	:	13.06.2023
7. Period of Analysis	:	13.06.2023 to 23.06.2023
8. Name of sample & Location	:	Umrada village (Ground water)
9. Coordinates	:	N- 24° 31' 43" E- 73° 47' 3"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10600:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F	APHA 23 rd Ed., 4500 FD	mg/L	0.74	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.14	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	76.4	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	14.6	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	8.9	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-89 to 3-100)	mg/L	29.4	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.25	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

 (Leena Sharma)
 Chemist

Authorized Signatory

 (Puran Singh)
 Sr.Chemist

Environmental & Chemical Laboratory

Wolkem India Limited

E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230613007

Report Issue Date: - 26.06.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	:	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	13.06.2023/12:15PM
6. Sample received on	:	13.06.2023
7. Period of Analysis	:	13.06.2023 to 23.06.2023
8. Name of sample & Location	:	Kanpur village (Ground water)
9. Coordinates	:	N- 24° 34' 7" E- 73° 45' 57"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Test Method	Unit	Results	
				Limits :- IS-10500:2012	
S. No.	Parameters	Test Method	Unit	Results	
Chemical Testing – Water- Ground Water					
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.72	6.5 to 8.5
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.876	No Relaxation
3.	Color	IS:3025(Part-4)	Hazen	<5	-
4.	Odour	IS:3025 (Part-5)	-	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1210	500
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	20	2000
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	408	200
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	115.2	75
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	28.8	200
10.	Alkalinity	IS:3025(Part-23)	mg/L	380	100
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	366	500
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SO2 Page 4-175 to 177	mg/L	6.8	No Relaxation
14.	Dissolve Oxygen	IS:3025(Part-36)	mg/L	8.2	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	1

Note

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1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number	:	
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	13.06.2023/12:15PM
6. Sample received on	:	13.06.2023
7. Period of Analysis	:	13.06.2023 to 23.06.2023
8. Name of sample & Location	:	Kanpur village (Ground water)
9. Coordinates	:	N- 24° 34' 7" E- 73° 45' 57"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
Chemical Testing – Water – Ground Water					Acceptable	Permissible
17.	Chemical Oxygen Demand	IS:3025(Part-5B)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.93	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.20	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	226.4	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	27.8	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-K (3-99 to 3-90)	mg/L	7.0	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	42.2	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.98	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.14	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Chemist

Authorized Signatory

(Puram Singh)
Sr.Chemist

Environmental & Chemical Laboratory

Wolkem India Limited

E-102, M.I.A, UDAIPUR (Rajasthan)

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Report No. 20230613008

Report Issue Date: - 26.06.2023

1. Name of Customer	: HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	: AMENDMENT Dated: - 27.02.2023
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 13.06.2023/02:00PM
6. Sample received on	: 13.06.2023
7. Period of Analysis	: 13.06.2023 to 23.06.2023
8. Name of sample & Location	: Nakoli village (Ground water)
9. Coordinates	: N- 24° 31' 48" E- 73° 48' 0"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Test Method	Unit	Results	Limits :- IS-10500:2012	
					%	Acceptable Permissible
Chemical Testing – Water- Ground Water						
1.	pH (at 25°C)	IS:3025(Part-11)	-	6.87	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.280	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025 (Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	782	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	16	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	376	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	105.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	26.88	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	302	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	232	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	8.6	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.4	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20230613008

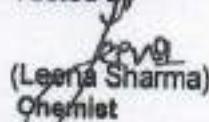
Report Issue Date: - 26.06.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number	:	
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	13.06.2023/02:00PM
6. Sample received on	:	13.06.2023
7. Period of Analysis	:	13.06.2023 to 23.06.2023
8. Name of sample & Location	:	Nakoli village (Ground water)
9. Coordinates	:	N- 24° 31' 48" E- 73° 48' 0"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
Acceptable Permissible						
Chemical Testing – Water – Ground Water						
17. Chemical Oxygen Demand		IS:3025(Part-5B)	mg/L	BDL(<5)	-	-
18. Fluoride as F		APHA 23 rd Ed., 4500 FD	mg/L	0.92	1.0	1.5
19. Phosphate		IS:3025(Part-31)	mg/L	0.36	-	-
20. Sulphate as SO ₄ ²⁻		APHA 23 rd Ed., 4500 SO ₄ E	mg/L	92.1	200	400
21. Nitrate as NO ₃		APHA 23 rd Ed., 4500 NO ₃ B	mg/L	9.9	45	No Relaxation
22. Potassium as K		APHA 23 rd Edition, Part 3500-K (3-89 to 3-90)	mg/L	7.1	-	-
23. Sodium as Na		APHA 23 rd Edition Part 3500-Na (3-89 to 3-100)	mg/L	57.2	-	-
Chemical Testing – Residues – Ground water						
24. Copper as Cu		APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25. Zinc		APHA 23 rd Ed.3111B	mg/L	0.26	5	15
26. Lead		APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27. Manganese as Mn		APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28. Iron as Fe		APHA 23 rd Ed.3111B	mg/L	0.16	0.3	No Relaxation

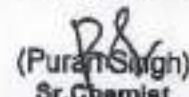
BDL-Below Detection Limit

Tested By



(Leena Sharma)
Chemist

Authorized Signatory



(Puran Singh)
Sr.Chemist

 Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 2 of 2

End of Report





Laboratory : E- 102, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan (INDIA)

INDIA LIMITED

Phone : 91 294 2494600 to 02 E-mail : info.wca@wolkem.com



www.wolkem.com

Report No. 20230613009

Report Issue Date: - 26.06.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
2. Purchase order Number	: P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Sample Identification	: AMENDMENT Dated: - 27.02.2023
4. Condition of Sample	: Ground Water
5. Date & Time of Sampling	: Sealed/Ok
6. Sample received on	: 13.06.2023/04:20PM
7. Period of Analysis	: 13.06.2023 to 23.06.2023
8. Name of sample & Location	: Dhoonimata village (Ground water)
9. Coordinates	: N- 24° 38' 9" E- 73° 52' 54"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	32.4
2.	Relative Humidity	%	27

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012
					Acceptable Permissible

Chemical Testing – Water- Ground Water

1.	pH (at 27°C)	IS:3025(Part-11)	-	7.13	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.840	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS 3025 (Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1056	600	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	18	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	424	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	92.8	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-48)	mg/L	46.08	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	304	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	332	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	8.3	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.3	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20230613009

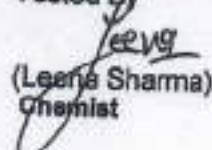
Report Issue Date: - 26.06.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number	:	Ground Water
3. Sample Identification	:	Sealed/Ok
4. Condition of Sample	:	13.06.2023/04:20PM
5. Date & Time of Sampling	:	13.06.2023
6. Sample received on	:	13.06.2023 to 23.06.2023
7. Period of Analysis	:	Dhoonimata village (Ground water)
8. Name of sample & Location	:	N- 24° 38' 9" E- 73° 52' 54"
9. Coordinates	:	
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.78	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.20	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO4 E	mg/L	84.6	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	16	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-K (3-89 to 3-90)	mg/L	9.6	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3600-Na (3-89 to 3-100)	mg/L	84.4	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.06	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.26	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.18	0.3	No Relaxation

BDL-Below Detection Limit

Tested By



(Leena Sharma)
Chemist

Authorized Signatory



(Puran Singh)
Sr.Chemist

 Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230904019

Report Issue Date: - 19.09.2023

1. Name of Customer

TEST REPORT

HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

P.O. Maton, Distt. Udaipur (Rajasthan), INDIA

PO No. 2016.1201/ 5100019025 Date 13.01.2016
 AMENDMENT Dated: - 27.02.2023

2. Purchase order Number

Ground Water

3. Sample Identification

Sealed/Ok

4. Condition of Sample

04.09.2023/11:10AM

5. Date & Time of Sampling

04.09.2023

6. Sample received on

04.09.2023 to 18.09.2023

7. Period of Analysis

Mine Lease Area (Ground water)

8. Name of sample & Location

N- 24° 32' 51" E- 73° 47' 25"

9. Coordinates

IS: 3025 (Pt 1) 1987

10. Method of Sampling

S. No.	Environment Condition	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water- Ground Water						
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.28	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs/cm	618.2	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025 (Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	422	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	BDL(<5)	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	158	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	52	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	6.7	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	204	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	116	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	4.8	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.2	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20230904019

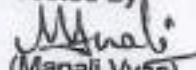
Report Issue Date: - 19.09.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	:	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	04.09.2023/11:10AM
6. Sample received on	:	04.09.2023
7. Period of Analysis	:	04.09.2023 to 18.09.2023
8. Name of sample & Location	:	Mine Lease Area (Ground water)
9. Coordinates	:	N- 24° 32' 51" E- 73° 47' 25"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

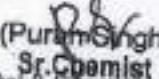
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-5B)	mg/L	BDL(<6)	-	-
18.	Fluoride as F	APHA 23 rd Ed., 4500 FD	mg/L	0.00	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.13	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	38.8	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	6.1	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3600-K (3-89 to 3-90)	mg/L	3.9	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-89 to 3-100)	mg/L	80.6	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.22	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


(Manali Vyas)
Asst.Chemist

Authorized Signatory


(Puram Singh)
Sr. Chemist
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

Note

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Report No. 20230904020

Report Issue Date: - 19.09.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number	:	
3. Sample Identification	:	Surface Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	04.09.2023/03:50PM
6. Sample received on	:	04.09.2023
7. Period of Analysis	:	04.09.2023 to 18.09.2023
8. Name of sample & Location	:	Bagdara Talav (Surface water)
9. Coordinates	:	N- 24° 31' 48" E- 73° 48' 0"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No	Environment Condition		Unit	Results
1.	Ambient Temperature		°C	33.2
2.	Relative Humidity		%	50
S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water- Surface Water				
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.72
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1,687
3.	Color	IS:3025(Part-4)	Hazen	<5
4.	Odour	IS:3025 (Part-5)	-	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1158
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	30
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	424
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	91.2
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	47.0
10.	Alkalinity	IS:3025(Part-23)	mg/L	324
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	262
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	8.2
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.3
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	2.7

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Report No. 20230904020

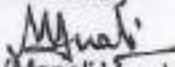
Report Issue Date: - 19.09.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	:	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Surface Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	04.09.2023/03:50PM
6. Sample received on	:	04.09.2023
7. Period of Analysis	:	04.09.2023 to 18.09.2023
8. Name of sample & Location	:	Bagdara Talav (Surface water)
9. Coordinates	:	N- 24° 31' 48" E- 73° 48' 0"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

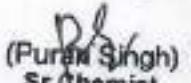
S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water – Surface Water				
17.	Chemical Oxygen Demand	IS:3025(Part-5B)	mg/L	
18.	Fluoride as F	APHA 23 rd Ed., 4500 FD	mg/L	11.21
19.	Phosphate	IS:3025(Part-31)	mg/L	0.40
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	3.8
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	245.6
22.	Potassium as K	APHA 23 rd Edition, Part 3500-K (3-89 to 3-90)	mg/L	15.8
23.	Sodium as Na	APHA 23 rd Edition Part 3600-Na (3-99 to 3-100)	mg/L	83.4
Chemical Testing – Residues – Surface water				
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	1.9
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.14

BDL-Below Detection Limit

Tested By


 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr.Chemist
 Environmental & Chemical Laboratory
 Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230905060

Report Issue Date: - 19.09.2023

1. Name of Customer

TEST REPORT

HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

P.O. Maton, Distt. Udaipur (Rajasthan), INDIA

PO No. 2016.1201/5100019025 Date 13.01.2016
 AMENDMENT Dated: - 27.02.2023

2. Purchase order Number

Ground Water

3. Sample Identification

Sealed/Ok

4. Condition of Sample

05.09.2023/11:10AM

5. Date & Time of Sampling

05.09.2023

6. Sample received on

05.09.2023 to 18.09.2023

7. Period of Analysis

Kharwaria village (Ground water)

8. Name of sample & Location

N- 24° 33' 12" E- 73° 47' 27"

9. Coordinates

IS: 3025 (Pt 1) 1987

10. Method of Sampling

S. No	Environment Condition	Test Method	Unit	Results	
				30.7	48
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable Permissible
Chemical Testing – Water- Ground Water					No Relaxation
1.	pH (at 27°C)	IS:3025(Part-11)	-	6.81	6.5 to 8.5
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.099	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5
4.	Odour	IS:3025 (Part-5)	-	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1338	Agreeable
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	16	2000
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	532	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	131.2	75
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	48.9	200
10.	Alkalinity	IS:3025(Part-23)	mg/L	436	100
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	370	600
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	1000
13.	Silica as SiO ₂	APHA 23rd Edition 2017, 4600-SiO ₂ Page 4-175 to 177	mg/L	7.4	No Relaxation
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.3	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	1

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Report No. 20230905060

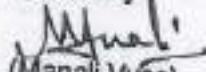
Report Issue Date: - 19.09.2023

1. Name of Customer	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	Ground Water
4. Condition of Sample	Sealed/Ok
5. Date & Time of Sampling	05.09.2023/11:10AM
6. Sample received on	05.09.2023
7. Period of Analysis	05.09.2023 to 16.09.2023
8. Name of sample & Location	Kharwaria village (Ground water)
9. Coordinates	N- 24° 33' 12" E- 73° 47' 27"
10. Method of Sampling	IS: 3025 (Pt 1) 1987

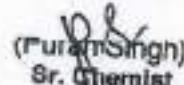
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.70	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.12	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	148.4	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	16.8	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	6.1	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	52.4	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.20	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.11	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puram Singh)
 Sr. Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR, (Rajasthan)

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Report No. 20230905061

Report Issue Date: - 19.09.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number	:	
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	05.09.2023/11:40AM
6. Sample received on	:	05.09.2023
7. Period of Analysis	:	05.09.2023 to 18.09.2023
8. Name of sample & Location	:	Maton village (Ground water)
9. Coordinates	:	N- 24° 33' 33" E- 73° 47' 33"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Test Method	Unit	Results	
				Unit	Results
1.	Ambient Temperature		°C		31.2
2.	Relative Humidity		%		47
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10600:2012 Acceptable Permissible
Chemical Testing – Water- Ground Water					
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.36	6.5 to 8.5 No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.901	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5 15
4.	Odour	IS 3025 (Part-5)	-	Agreeable	Agreeable Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1256	500 2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	16	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	496	200 800
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	116.8	75 200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	48.9	30 100
10.	Alkalinity	IS:3025(Part-23)	mg/L	380	200 600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	282	250 1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.6 No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SI02 Page 4-175 to 177	mg/L	8.1	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	8.2	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2 1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-

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Report No. 20230905061

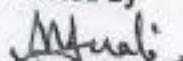
Report Issue Date: - 19.09.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine
2. Purchase order Number	:	P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Sample Identification	:	AMENDMENT Dated: - 27.02.2023
4. Condition of Sample	:	Ground Water
5. Date & Time of Sampling	:	Sealed/Ok
6. Sample received on	:	05.09.2023/11:40AM
7. Period of Analysis	:	05.09.2023
8. Name of sample & Location	:	05.09.2023 to 18.09.2023
9. Coordinates	:	Maton village (Ground water)
10. Method of Sampling	:	N- 24° 33' 33" E- 73° 47' 33" IS: 3025 (Pt 1) 1987

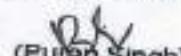
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F	APHA 23 rd Ed., 4500 FD	mg/L	0.80	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.24	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	223.6	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	9.1	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-99 to 3-90)	mg/L	5.2	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	72.4	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.28	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.11	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


(Manali Vyas)
Asst.Chemist

Authorized Signatory


(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230905062

Report Issue Date: - 19.09.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number	:	
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	05.09.2023/12:10PM
6. Sample received on	:	05.09.2023
7. Period of Analysis	:	05.09.2023 to 18.09.2023
8. Name of sample & Location	:	Lakarwas village (Ground water)
9. Coordinates	:	N- 24° 36' 5" E- 73° 47' 47"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Test Method	Unit	Results	Limits :- IS-10500:2012	
					%	Acceptable
Chemical Testing – Water- Ground Water						
1.	pH (at 27°C)	IS:3025(Part-11)	-	8.85	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.796	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025 (Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1742	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	16	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	540	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	169.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-48)	mg/L	27.8	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	388	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	570	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	6.1	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.3	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20230905062

Report Issue Date:- 19.09.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number	:	Ground Water
3. Sample Identification	:	Sealed/Ok
4. Condition of Sample	:	05.09.2023/12:10PM
5. Date & Time of Sampling	:	05.09.2023
6. Sample received on	:	05.09.2023 to 18.09.2023
7. Period of Analysis	:	Lakarwas village (Ground water)
8. Name of sample & Location	:	N- 24° 36' 5" E- 73° 47' 47"
9. Coordinates	:	
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-5B)	mg/L	BDL(<5)	-	-
18.	Fluoride as F	APHA 23 rd Ed., 4500 FD	mg/L	0.60	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	1.08	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	211.7	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	13.1	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3600-k (3-89 to 3-90)	mg/L	5.2	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3600-Na (3-89 to 3-100)	mg/L	39.8	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.32	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.12	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

(Manali Vyas)
 Asst. Chemist

Authorized Signatory

(Pulkit Singh)
 Sr. Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230905063

Report Issue Date: - 19.09.2023

1. Name of Customer	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number	
3. Sample Identification	Ground Water
4. Condition of Sample	Sealed/Ok
5. Date & Time of Sampling	05.09.2023/12:35PM
6. Sample received on	05.09.2023
7. Period of Analysis	05.09.2023 to 18.09.2023
8. Name of sample & Location	Umrada village (Ground water)
9. Coordinates	N- 24° 31' 43" E- 73° 47' 3"
10. Method of Sampling	IS: 3025 (Pt 1) 1987

S. No	Environment Condition		Unit	Results	Limits :- IS-10500:2012	
	Ambient Temperature	Relative Humidity			Acceptable	Permissible
Chemical Testing – Water- Ground Water						
1.	pH (at 25°C)	IS:3025(Part-11)	-	8.75	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.211	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS 3025 (Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	788	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	12	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	460	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	100.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	48.9	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	332	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	101	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4800-SiO ₂ Page 4-175 to 177	mg/L	6.1	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.3	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20230905063

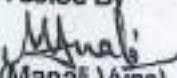
Report Issue Date: - 19.09.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA. PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	:	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	05.09.2023/12:35PM
6. Sample received on	:	05.09.2023
7. Period of Analysis	:	05.09.2023 to 18.09.2023
8. Name of sample & Location	:	Umrada village (Ground water)
9. Coordinates	:	N- 24° 31' 43" E- 73° 47' 3"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F	APHA 23 rd Ed., 4500 FD	mg/L	0.62	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.16	-	-
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO4 E	mg/L	58.4	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	8.1	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	5.8	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3600-Na (3-89 to 3-100)	mg/L	22.3	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.21	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A, UDAIPUR (Rajasthan)

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Report No. 20230905064

Report Issue Date: - 19.09.2023

1. Name of Customer

TEST REPORT

HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

P.O. Maton, Distt. Udaipur (Rajasthan), INDIA

PO No. 2016.1201/ 5100019025 Date 13.01.2016

AMENDMENT Dated: - 27.02.2023

2. Purchase order Number

Ground Water

3. Sample Identification

Sealed/Ok

4. Condition of Sample

05.09.2023/01:05PM

5. Date & Time of Sampling

05.09.2023

6. Sample received on

05.09.2023 to 18.09.2023

7. Period of Analysis

Kanpur village (Ground water)

8. Name of sample & Location

N- 24° 34' 7" E- 73° 45' 57"

9. Coordinates

IS: 3025 (Pt 1) 1987

10. Method of Sampling

S. No	Environment Condition	Test Method	Unit	Results	Limits :- IS-10500:2012	
					%	Acceptable
1.	Ambient Temperature		°C	33.5		No Relaxation
2.	Relative Humidity		%	50		
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	Acceptable
	Chemical Testing – Water- Ground Water					
1.	pH (at 27°C)	IS:3025(Part-11)	-	7.56	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.692	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025 (Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1115	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	10	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	368	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	102.4	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-48)	mg/L	26.8	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	348	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	334	250	1000
12.	Oil & Grease	IS:3025(Part-30)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	6.5	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.2	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20230905064

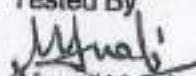
Report Issue Date: - 19.09.2023

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
2. Purchase order Number	:	
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	05.09.2023/01:05PM
6. Sample received on	:	05.09.2023
7. Period of Analysis	:	05.09.2023 to 18.09.2023
8. Name of sample & Location	:	Kanpur village (Ground water)
9. Coordinates	:	N- 24° 34' 7" E- 73° 45' 57"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

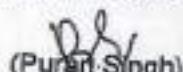
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10600:2012	
Chemical Testing – Water – Ground Water					Acceptable	Permissible
17.	Chemical Oxygen Demand	IS:3025(Part-5B)	mg/L	BDL(<5)	-	-
18.	Fluoride as F	APHA 23 rd Ed., 4500 FD	mg/L	0.70	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.19	-	-
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	188.2	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	21.2	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-80)	mg/L	4.8	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	24.5	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.06	1.6
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.96	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.13	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Purushottam Singh)
 Sr.Chemist

 Environmental & Chemical Laboratory
Wolkem India Limited
 E-102, M.I.A., UDAIPUR (Rajasthan)

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Report No. 20230905065

Report Issue Date: - 19.09.2023

1. Name of Customer

TEST REPORT

HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

P.O. Maton, Distt. Udaipur (Rajasthan), INDIA

PO No. 2016.1201/ 5100019025 Date 13.01.2016

AMENDMENT Dated: - 27.02.2023

2. Purchase order Number

Ground Water

3. Sample Identification

Sealed/Ok

4. Condition of Sample

05.09.2023/01:45PM

5. Date & Time of Sampling

05.09.2023

6. Sample received on

05.09.2023 to 18.09.2023

7. Period of Analysis

Nakoli village (Ground water)

8. Name of sample & Location

N- 24° 31' 48" E- 73° 48' 0"

9. Coordinates

IS: 3025 (Pt 1) 1987

10. Method of Sampling

S. No	Environment Condition	Test Method	Unit	Results	
				Unit	Results
1.	Ambient Temperature		°C		34.1
2.	Relative Humidity		%		42
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable Permissible
Chemical Testing – Water- Ground Water					
1.	pH (at 27°C)	IS:3025(Part-11)	-	6.93	6.5 to 8.5
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.081	No Relaxation
3.	Color	IS:3025(Part-4)	Hazen	<5	-
4.	Odour	IS 3025 (Part-5)	-	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	710	500
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	12	2000
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	344	200
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	86.0	600
9.	Magnesium as Mg ²⁺	IS:3025(Part-48)	mg/L	24.8	200
10.	Alkalinity	IS:3025(Part-23)	mg/L	280	100
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	210	600
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	250
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SO2 Page 4-175 to 177	mg/L	7.2	1000
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.3	No Relaxation
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	1

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ANNEX 12

नियमित वार्ता

वार्ता क्रमांक

वार्ता क्रमांक

Date: 27.1.

संघीय वार्ता

वार्ता क्रमांक

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NAME OF SPECIES OR TREE

FLORA WITHIN THE STUDY AREA OF MATON MINES OF MS HINDUSTAN ZINC LIMITED

S.No.	Local Name	Buffer Zone 10 KM
1	TREES	
1	BOWH	ACACIA FICIFORMIS
2	RABUL	ACACIA SENEGAL
3	ARDUSA	ARANTHIUS EXCELSIOR
4	OHOKABA	ANDROISSUS PENDULIFLORUS
5	PEEM	AZAD RACITA INDICA
6	KHAJNEA	BUTEA MONOSPERMA
7	BORDI	ZYPHUS MAMINTANA
8	VILAYATI BAKER	PSEUDOPIS JULIFLORA
9	KEEPAL	FICUS RELIGIOSA
10	BARGAD	FICUS BENJALFINSIS
11	BEI	APRIL MARMELOS
12	CONDA	CORDIA MIXA
13	KASHTA	DIPYROS MONTANA
14	KACHNAD	BAHINIA BACEMISA
15	EWI	TAXODIUS INDICA
16	EKAR	PITHEOCELODORUM DELLI
17	AAM	MANGIFERA INDICA
18	DESI BABU	ACACIA NILOTICA
19	BANSB	DENDROCHALAMUS STRICTUS
20	SHAMB	OMBERGIA SISSO
21	CHAMPA	PLUMARIA SUBRA
22	PHAJUE	PHOENIX ACULUS
23	SHRUBS	
1	AKDO	CALOTHROPSIS PROCERA
2	ANDHINATA	AGNIVANTHES ASPERA
3	AWAL	LASSIA ALBICULATA
4	DHATEERA	DHatura METAL
5	CHANISOR	ZEPHYRUS NUMMULARIS
6	THOR	DUPHOBIA NEVIIUS
24	GRASSES	
1	RAHABUT	TRICHONEURUS CATHARANTHUS
2	SAUNI	GRASSARUM MURIA
3	KAJARI	EPIMOROGO FORESTATUS
4	LAMPLA	ARISTOZA SP
5	LATNA	LATNA CAMBRA
6	DHATURA	DHATURA SP TAI
7	RAJD BENA	ZEPHYRUS NUMMULARIS



 राज कुमार सिंह
 डॉक्टर [उपर]

S.No	English Name	Scientific Name	Schedule as per wildlife protection Act, 1972
8	Cattle egret	Bubulcus ibis	IV
9	Little egret	Egretta garzetta	IV
10	Indian Horn owl	Bubo bubo	IV
11	Black Drongo	Dicrurus macrocerus	IV
12	Crow pheasant	Centropus sinensis	IV
13	Indian Roller	Coracias benghalensis	IV
14	Brahminy kite	Haliastur indus	IV

REPTILES :

1	Common garden lizard	Calotes versicolor	IV
2	Indian chameleon	Chamaeleo zeylanicus	IV
3	Indian cobra	Naja naja	II
4	Russel's viper	Vipera spp.	II
5	Kroto	Bandarus Spp.	III
6	Cat snake	Boiga spp.	II

राज्य सूची भूमि
मुख्यमंत्री (उपर्युक्त)