

Registered AD

Ref: HZL/ Maton /MoEF/2024-25/ 29

Date: 29.11.2024

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'24 to Sept'24.

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'24 to Sept'24.

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, Sahkar 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)

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 24 to Sept 24

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 south-west. 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.. 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 life of mine.
xi	Effective safe guard measures, such as regular water sprinkling should be carried	Wet drilling is practiced to control dust at source. Regular sprinkling of water on all

S.No.	Conditions	Compliance Status
	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.	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.
xv	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water required for the	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

S.No.	Conditions	Compliance Status
	project.	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 dust control arrangements. These should be properly maintained and operated.	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.
xxii	Sewage treatment plant shall be installed for the colony. ETP shall also be provided	No workshop is constructed in the mine site as all mining vehicles are serviced in the nearby

S.No.	Conditions	Compliance Status
	for the workshop and the wastewater generated during mining operation	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. PQ/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. 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 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	The parameters of RSPM, NOx and SOx 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.

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	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	
xxvii	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	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 Rockphospahte 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 10µm i.e., PM ₁₀) & NO _x 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 10µm i.e., PM ₁₀) & NO _x 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.
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	There is no workshop in the lease area and hence no industrial effluent generated from the project site.

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	December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	
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/- 2023-24 Rs. 14,26,194/-
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 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	The report in hardcopy and emails are submitted to RO, MoEF., Hardcopy is sent to MoEFCC, CPCB and RSPCB. Six monthly reports are regularly submitted in hard copies, soft copy and by e-mail. Latest compliance report was sent on 25.05.2024.

S.No.	Conditions	Status
	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.	
xiv	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ 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 Bhashkar and Rajasthan Patrika on 19.03.2010 (Annexure – 12).

Section 1. The purpose of this Act is to provide for the establishment of a national system of parks and monuments, and to provide for the management and protection of such parks and monuments.

Section 2.

The Secretary of the Interior shall have the honor and duty to acquire, by purchase, donation, or otherwise, any land or interest in land which he may deem it to be in the public interest to acquire, and to reserve, set apart, and designate as a national park, monument, or other national reservation, and to manage and protect the same.

Section 3.

Section 4.

Section 5.

न्यायालय भूमि अधिपति अधिकारी,
उदयपुर-समुच्चय, राजसमन्द
क्रमांक :- 27/76

उदयपुर

सय-विजयन

दिनांक 25-2-80 150

अवार्ड

(अन्तर्गत भाग 11, राजस्थान भूमि अधिपति अधिनियम, सन् 1953)
विषय :- हिन्दुस्तान जिक लि० के कार्य में आने वाली भूमि को अधिपति करने हेतु ।

अधिलेखी अधिलेखन की गई । हिन्दुस्तान जिक लि० नया कतहपुरा, उदयपुर की शाखा जायद/मटून/दरीबा माईस के लिए भूमि अधिपति वांछित राज्य सरकार से राजस्थान भूमि अधिपति अधिनियम, सन् 1953 की धारा 4 की निशानि लानिज विभाग द्वारा जस्मि नम्बर 30-2-73 दि. 13-6-73 को प्राप्त हो जाने से भूमि अधिपति अधिकारी गिरवा/समुच्चय/राजसमन्द की धोर से जस्मि न. की सार्वजनिक स्थानों पर प्रकाशित हो चुकी है और इस दमियान में कांविजान भूमि से प्राप्त समझौता पर बातचीत की गई जो प्राप्त समझौते से अधिपति होने वाली भूमि का एवजाना लेने के लिए राजसमन्द है ।

उपरोक्त प्रकरण में निम्नलिखित आसामियान की भूमि अधिपति हो रही है । इस भूमि की सर्वे की गई, जिसका विवरण निम्नलिखित है :-

नाम गांव	गाम सहसील	ससरा न.	रकबा		किस्म भूमि	लगान	विवरण
			बीघा	चिहवा			
1	2	3	4	5	6	7	8
मटून	जिर्वा	1477	8-	00	मटून	1-00	

माली धामजात से इस भूमि के मालिक धोर कांविजान की जांच कराई गई तो पता गया कि अधिपति होने वाली भूमि जिसका विवरण ऊपर दिया गया है श्री गाम पन्नामन मटून पिता श्री जाति निवासी सहसील जिर्वा के गाम पर इन्दाज है जिसकी तस्दीक सहसीलदार सा. गिरवा/समुच्चय/राजसमन्द ने की है और उन्होंने यह भी प्रमाणित किया है कि अधिपति श्री गाम पन्नामन मटून के नाम जारी किया जावे ।

चूंकि आसामियान प्राप्त समझौते पर एवजाना के लिए तैयार है । ऐसी सूरत में भूमि अधिपति अधिनियम, 1953 की धारा 4 (3) व 4 (1) के अनुसार नोटिस जारी करने की कोई आवश्यकता नहीं है ।

सहसीलदार सा. गिरवा/समुच्चय/राजसमन्द ने माफेट वेल्थ प्राप्त राजसमन्द के आधार पर एवजाना देने के लिये स्वीकृति ज्ञाही जो फाईल संलग्न है ।

संक्षेपानि नियमावली प्रपत्र 10 (भूमि अधिस्ति नियमावली अनुच्छेद 96)

राजी नामा विश्वनाथ

मि/मम अपुन तन्मागत्र म 201 रा.प.न. राजी (राजीनाम पर हस्ताक्षर करने वाले पक्ष विशिष्ट) एतद् द्वारा भिन्न-भिन्न-विभिन्न भूमि की प्रदायगी और मुआवजे की रकम के लिए अपनी सहमति घोषित करते हैं और किसी तरह का हंगारे, झंझा उठाया हुआ यावा या हमारी कोई अधिक मांग (क्लेम) किसी कंपनी पर दायर की गई, सुरक्षा रद्द होगी जावे ।

जिला	तहसील	गांव	जायदाद/ हफ का विवरण	मुआवजे का विवरण	
				वार्षिक प्रदायगी लगान जो छूट होगा	नकद मुआवजा
उदयपुर	जिला	मदन	(157) 8-00 अमली	1-00	
				हफ 8-00	97/- 7200-00
				4-1	11750-50
				3-3	3850-00
				अमली	15405-80
				मि. <u>अपुन</u> <u>म 201</u> PROJECT MANAGER हिन्दुस्तान जिंक लिमिटेड (भारत सरकार का उपक्रम) महाराष्ट्र राज्य सरकार पोस्ट-बक्स, जिला उदयपुर पिन-323028	
				जिला मजिस्ट्रेट उदयपुर 4-1/2017 मि. <u>अपुन</u> <u>म 201</u> मि. <u>अपुन</u> <u>म 201</u>	

मि. अपुन म 201

उदयपुर

मि. अपुन म 201

उदयपुर

मि. अपुन म 201 में या अंतर्गत प्रस्तावित किये जाते हैं या जब वृत्त बिना मुआवजा

राजस्थान सरकार
राजस्थान, 11-6-66

प्रोपेत:- भूमि विभाग
राजस्थान

क्रमांक:- 4-23/राज-6/86/1

दिनांक:- 15-2-97

विषय:- भूमि अधिनियम, 1946 के अन्तर्गत भूमि के सेट आर्गु करने या न करने के लिए

3681
27.8.97
26/2/97

महोदय,

केन्द्रीय भूमि अधिनियम, 1946 के अन्तर्गत समस्त-सर्व पर विभिन्न सरकारी कार्यों के प्रयोजनार्थ भूमि अधिनियम लागू की है। संबंधित विभाग द्वारा अधिनियम के प्रावधानों के अन्तर्गत भूमि का अधार्ड जारी कर विस्तृत दस्तावेजों को भूमि का अधिनियम अदा करने के परचाव भूमि का कब्जा संबंधित विभाग द्वारा ले लिया जाता है।

पु. 111/10/15
3/3

अब प्रश्न यह उत्पन्न है कि क्या यह भूमि को राजस्थान भू-राजस्व अधिनियम, 1946 के अन्तर्गत सेट आर्गु करने के लिये प्राधिकृत करने की आवश्यकता है, या नहीं।

उक्त संबंध में यह स्पष्ट करना आवश्यक है कि भूमि अधिनियम, 1946 के अन्तर्गत अधिनियम की जाती है जो ऐसी भूमि को जहाँ सेट आर्गु कर भूमि अधिनियम के अन्तर्गत प्राधिकृत की आवश्यकता नहीं होती है। अतः यह भूमि अधिनियम को अधिनियम के अन्तर्गत माना जाता है।

राजस्थान सरकार
राजस्थान, 11-6-66

प्रमाणित:- निम्न लिखित की उपस्थिति एवं आवश्यक कार्रवाई के प्रमाण:-
निबन्धक, राजस्थान सरकार, राजस्थान, राजस्थान

123
28.2.97

राजस्थान सरकार

ATTN 8x3



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

Ref: HZL/Maton/CGWA/MiningNew/2014-15/ 42

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 Rock phosphate 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

Regd. Office: Yashad Bhiawan, Udaipur (Rajasthan) - 313004

Corporate Identity No. (CIN): L27204RJ1966PLC001208. Website: www.hzindia.com

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.

Amf
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

ASG
Manager (Mines)
Hindustan Zinc Ltd.
Mines Manager **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 mines Chirawa Dist. Udaipur
Letter Reference No. and Date	H-26/Maton/CGWB/mining No. 2014-7542 14/7/2014
Subject	Appl for grant of NOC to abstract 1.31 m ³ /day Village: Maton Tehsil, Chirawa Dist. Udaipur
Dated signatures of diaris/dispatcher (CGWB, WR, 6-A, Jhalana Doongri, Jaipur 302 004)	<i>[Signature]</i> R.D.E.
Remarks if any	<i>[Signature]</i> 16/7/14

AMINOX-4

ANNEXURE 2

HINDUSTAN ZINC LIMITED
Maiton 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.
MoEF [Ref F No J-11615/169/2009-1A.II (M) Dated 17.03.2010]

Sir,

In order to comply with the Specific condition no. xii of the above reference (copy encl.), we have conducted study of "Rain water harvesting program for augmentation of ground water storage of buffer zone of Maiton Mines" from Hydru Geosurvey Consultancy, Jodhpur. Wherein they have proposed to construct 5 Anicuts in the buffer zone (location maps are encl) i.e.

Anicut No.1 near village Kalurwas
Anicut No.2 near village Parula
Anicut No.3 near village Bichhri
Anicut No.4 near village Kappur
Anicut No.5 near village Dunda

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

Thanking you

Yours truly,

(Signature)
(Hemant Sharma)

Mine Manager



ATTACH-5



Ret. H/1 Maton RSPCTD.2015-16/ 65

Date 18/09/2015

To,

The S-E Mines,
Rajasthan State Pollution Control Board,
4, Institutional Area,
Jhalana Doongri, 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, dtd. 08.09.2015.

Sir,

With reference to point no. 10 of above referred CTO dtd. 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.

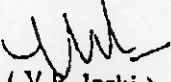
Further, HZL has entered into a tripartite agreement with Municipal Council Udaipur and Urban Improvement Trust Udaipur for laying of Sewage Trunk Line from Udaipur city to STP to divert sewage of city from entering into Ahar River and thereby avoiding pollution from entering into it. This 20 MLD STP 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 - Yashad 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.

Encl: As above. **Major Rock Phosphate Mines.**
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 UCCEI
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.

Regd. Office: Yashad Bhawan, Udaipur (Rajasthan) - 313004
 Corporate Identity No. (CIN): L27204RJ1966PLC001208, Website: www.hzllimited.com

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

(Signature)
Manager (Mines)
Hindustan Zinc Ltd.
Mines Manager 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 Ltd. Maton Rock Phosphate mine Guzar Dist. Udaipur
Letter Reference No. and Date	HZL/matn/CGWB/matn/2014-15-43 14/7/14
Subject	Application for grant of NOC, to abstract 20 m ³ /day village Maton Tehsil Guzara Dist. Udaipur
Dated signatures of diarist/dispather (CGWB, WR, 6-A, Jhalana Doongri, Jaipur 302 004)	<i>(Signature)</i>
Remarks if any	<i>(Signature)</i> 16/7/14

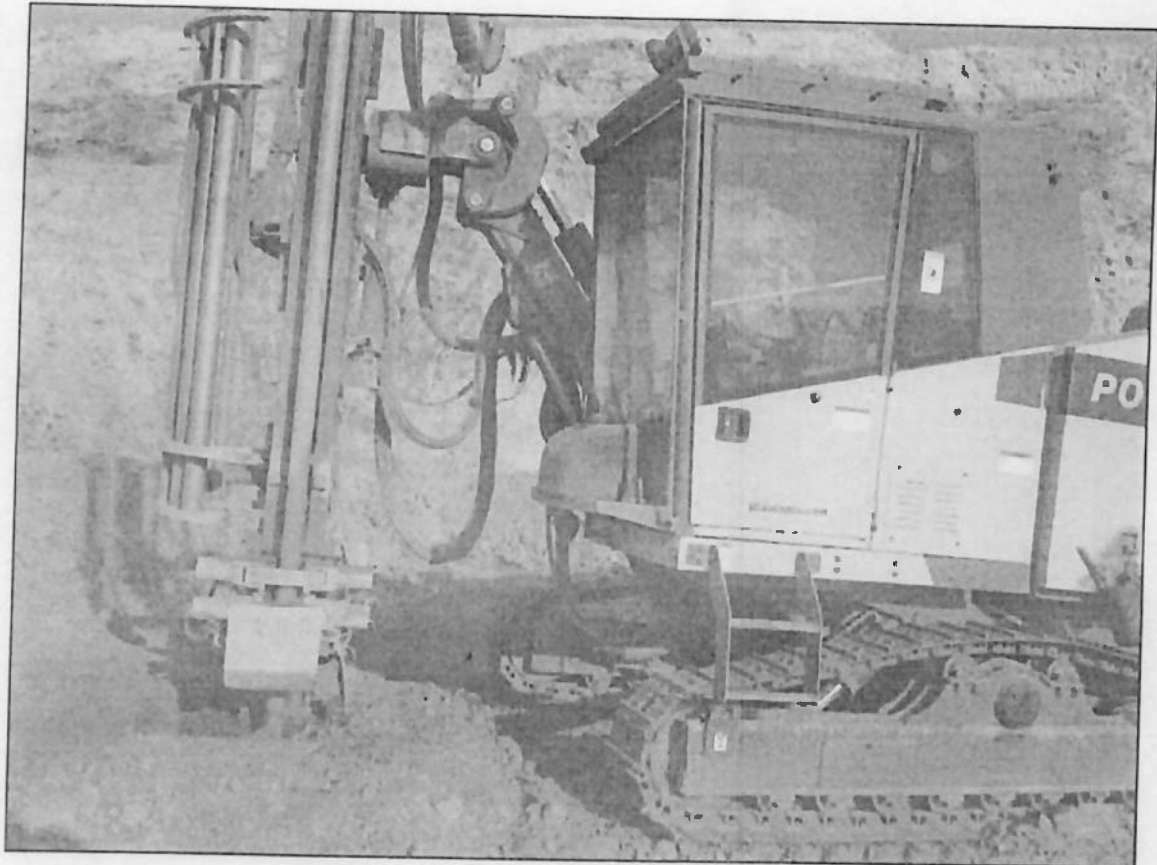


Fig : Wet Drilling

कार्यालय उप वन संरक्षक, उदयपुर (उत्तर)

क्रमांक - प () सर्वे / उत्तर / ८८१५ दिनांक १५-१२-८८

माईन्स मेनेजर
हिन्दूस्तान जिन्स लिमिटेड
मदून माईन्स
उदयपुर

विषय - 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 Maton Mines (ML No. 6/89) Near village Maton, Tehsil Girwa, Distt. Udaipur (Raj.)

पराम - आपका प्रार्थना पत्र क्रमांक मिले HZL/Matun/env/09/ दिनांक 15.11.2000

महोदय,

उपरोक्त विषयान्तर्गत प्रासांगिक प्रार्थना पत्र के क्रम में लिखा जाता है कि आपके क्षेत्र में एमएल 06/1989 के कोर एवं वफर क्षेत्रों के 10 किमी सीमा में नेशनल पार्क, संरक्षित वन्यजीव, रिजर्व, लाइफ लाइन्स कॉरिडोर आइगर, एलिफेंट रिजर्व शामिल नहीं है।

भवदीय

उप वन संरक्षक
उदयपुर (उत्तर)

कार्यालय उप वन संरक्षक, उदयपुर (उत्तर)

क्रमांक-प. () सर्वे/उवस/उत्तर/

6095

दिनांक : 14-12-09

माईन्स मैनेजर
हिन्दूस्तान जिंक लिमिटेड
मटून माईन्स
उदयपुर

विषय :- Authentcation 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 निल HZL/Matun/env/09/ दिनांक 18.11.2009

महोदय,

उपरोक्त विषयान्तर्गत प्रासांगिक प्रार्थना पत्र के क्रम में लिखा जाता है कि आपके लिज नं. एम.एल. 06/1989 के कोर एवं बफर क्षेत्र में पाये जाने वाले फलोरा एवं फोना की सुचीयां आवश्यक कार्यवाही हेतु संलग्न प्रस्तुत है।

संलग्न:- उपरोक्तानुसार।

भवदीय

उप वन संरक्षक
उदयपुर (उत्तर)

FLORA WITHIN THE STUDY AREA OF MATON MINES OF M/s HINDUSTAN ZINC LIMITED

S.No	Local Name	Buffer Zone 10.KM
1	TREES	
2	KONJIP	ACACIA LEUCOPHYLOA
3	DABUL	ALACIA SENEGAL
4	ARDUSA	ALANTHUS EXCELSA BOXB
5	DHOKADA	ANDGEISSUS PENDULA EDG
6	NEEN	AZADIRACHTA INDICA
7	KHAKHRA	BUTEA MONOSPERMA
8	BORDI	ZIPHUS MAUNTIANA
9	VILAYATI BABUL	PROSOPIS JULIFLORA
10	PEEPAL	FICUS RELIGIOSA
11	BARGAD	FICUS BENGALENSIS
12	BEL	AEGIE MARMELLOS
13	GONDA	CORDIA MIRA
14	KABITA	DISPYROS MONTANA
15	KACHNAR	BAUHINIA RACEMOSA
16	AMLI	TAMARANDUS INDICA
17	KIKAR	PITHOCOLUBRIA BUIK I
18	AAM	MANGIFERA INDICA
19	DESI BAQUI	ACACIA NILOTICI
20	BANSE	DENDROCALAMUS STRICTUS
21	SISAM	DAIBERGIA SISSO
22	CHAMPA	FLUMARIA RUBRA
23	KHAJUR	PHOENIX ACULIS
1	SHRUBS	
2	AKOD	CANTHROPIS PROCERA
3	ANDHIIHARA	ACHYRANTHES ASPERA
4	AWAL	CASSIA AURICULATA
5	DHATURA	DHATURA METAL
6	CHANIDOR	ZEYPHUS NUMMULARIA
7	THOR	EUPHORBIA NIVULIS
1	GRASSES	
2	BHARUT	CENCHRUS CATANTICUS
3	MUNJ	SACERARUM MUNJA
4	BUHARI	EREMOPOGO FORESTATUS
5	LAMPLA	ARISTIDA SP.
6	LATNA	LATNA CAMARA
7	DHATURA	DHATURA METAL
8	DHAD BERA	ZIPHUS NUMMULARIS


 Dr. B. S. Singh
 Director (ZMR)

Survey report on Tree

FLORA WITH IN THE STUDY AREA OF SATON MINES OF M/S
HINDUSTAN ZINC LIMITED

S.No	Local Name	Buffer Zone 10 KM
1	TREES	
2	ROUNH	ACACIA LEUCOPHLOEA
3	BABUL	ACACIA SENEGAL
4	ARDUSA	AILANTHUS EXCELSA ROXB
5	DHOKADA	ANDRGEISSUS PENDULA EDG
6	NEEM	AZADIRACHTA INDICA
7	KHAKHRA	BUTEA MONOSPERMA
8	BORDI	ZIPHIUS MAUNTIANA
9	VEAYAN BABUL	PROSOPIS JULIFLORA
10	PEEPAL	FICUS RELIGIOSA
11	BARGAD	FICUS BENGALENSIS
12	BEL	AGIE MARMELIOS
13	GONDA	CORDIA MIXA
14	KABITA	DISPYROS MONTANA
15	KACHINAR	BAUHINIA BACEMOSA
16	IMLI	TAMARANDUS INDICA
17	HIKAR	PITHOCLOBIUM DULCI
18	AAM	MANGIFERA INDICA
19	DESI BABUL	ACACIA NILOTICI
20	RANSE	DENDROCALAMUS STRICTUS
21	SISAM	DAIBERGIA SISSO
22	CHAMPA	PLUMARIA RUBRA
23	KHAJUR	PHOENIX ACULIS
1	SHRUBS	
2	ARDO	CALOTRIOPIS PROCERA
3	ANDHUNARA	ACHYRANTHES ASPERA
4	AWAL	CASSIA AURICULATA
5	DHATURA	DHATURA METAL
6	CHANINDOR	ZEYPHUS NUMMULARIA
7	THOR	EUPHORBIA NUCULIS
1	GRASSES	
2	BHARUT	LENCHRUS CATHARTICUS
3	MUNI	SACEDARUM MUNIA
4	BLUHARI	EREMOPOGO FORESTATUS
5	LAMPLA	ARISTIDA SP
6	LATNA	LATNA CAMARA
7	DHATURA	DHATURA METAL
8	PHAD BERA	ZIPHIUS NUMMULARIS


 Dr. K. S. Singh
 Director (Forest)

S.No	English Name	Scientific Name	Schedule as per wildlife protection Act, 1972
8	Cattle egret	Bulbulcas ibias	IV
9	Little egret	Egratta garzetta	IV
10	Indian Horn owl	Bubo bubo	IV
11	Black Drongo	Dicrurus macrocerus	IV
12	Crow pheasant	Centropus sinensis	IV
13	Indian Roller	Coracis benghalensis	IV
14	Brahmny kite	Haliastur Indus	IV
REPTILES :			
1	Common garden lezird	Calotes verisicolor	IV
2	Indian chamaleon	Chamaleon zeylanicos	IV
3	Indian cobra	Naja naja	II
4	Russel viper	Vipera spp.	II
5	Krate	Bandarus Spp.	III
6	Cat snake	Boiga spp.	III

उपवन संरक्षक
उपवन (उपवन)



Report No. 20240612002/A

Report Issue Date: - 25.06.2024

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 | : | 11.06.2024/11:45AM |
| 4. Sample Identification | : | Air Sample |
| 5. Condition of Sample | : | Sealed/Ok |
| 6. Sample received on | : | 12.06.2024 |
| 7. Period of Analysis | : | 12.06.2024 to 24.06.2024 |
| 8. Name of Location | : | Kharwaria Village |
| 9. Coordinates | : | N 24° 33' 9" - E 73° 47' 3" |
| 10. Method of Sampling | : | IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual |

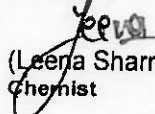
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1438.5	Minutes
2.	Average Flow rate for PM10	1.13	M ³ / Min
3.	Ambient Temperature	31.8	°C
4.	Relative Humidity	14	%

Results Ambient Air Quality

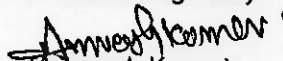
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	53.29	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	26.62	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	7.73	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	9.07	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL - Below Detection Limit

Tested by


 (Leena Sharma)
 Chemist

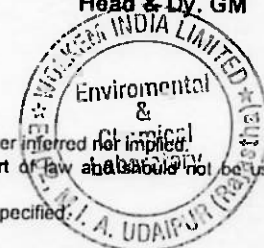
Authorized Signatory


 (Amresh Kumar)
 Head & Dy. GM
Note

1. Complaint Register is available in lab / Email ID : amresh.malik@wolkem.com
2. The results listed refer only to the tested sample (s) and parameter (s) Endorsement of product is neither inferred nor implied.
3. 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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Page 1 of 1

End of Report



Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India

Phone : +91 294 2494800 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20240612002/B

Report Issue Date: - 25.06.2024

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 | : | 11.06.2024/11:45AM |
| 4. Sample Identification | : | Air Sample |
| 5. Condition of Sample | : | Sealed/Ok |
| 6. Sample received on | : | 12.06.2024 |
| 7. Period of Analysis | : | 12.06.2024 to 24.06.2024 |
| 8. Name of Location | : | Kharwaria Village |
| 9. Coordinates | : | N 24° 33' 9" - E 73° 47' 3" |
| 10. Method of Sampling | : | Instrument Manual |

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	31.8	°C
2.	Relative Humidity	14	%

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	0.37	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.11	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.185	-

Tested by

(Leena Sharma)
Chemist

Authorized Signatory

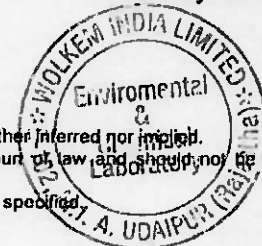
(Amresh Kumar)
Head & Dy. GM

Note

1. Complaint Register is available in lab / Email ID anusha.malik@wolkem.com
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Page 1 of 1

End of Report



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Phone : +91 294 2494800 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



OH8A8
Certificate No.
01130126322

Our Commitment.. Your Trust



Report No. 20240613002/A

Report Issue Date: - 25.06.2024

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 : 12.06.2024/11:25AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample received on : 13.06.2024
7. Period of Analysis : 13.06.2024 to 24.06.2024
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	1440.8	Minutes
2.	Average Flow rate for PM10	1.16	M ³ / Min
3.	Ambient Temperature	31.6	°C
4.	Relative Humidity	15	%

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)	53.05	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	30.37	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	7.59	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	10.07	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

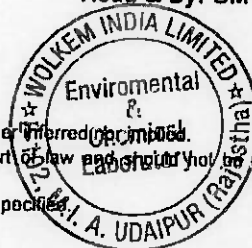
Amresh Kumar
(Amresh Kumar)
Head & Dy. GM

Note

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Page 1 of 1

End of Report



Registered & Corporate Office :

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Phone : +91 294 2494800 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20240613002/B

Report Issue Date: - 25.06.2024

TEST REPORT

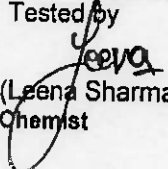
- | | | |
|------------------------------|---|---|
| 1. Name of Customer | : | HINDUSTAN ZINC LIMITED
Rockphosphate Maton Mine
P.O. Maton, Distt. Udaipur (Rajasthan), INDIA |
| 2. Purchase order Number | : | PO No. 2016.1201/ 5100019025 Date 13.01.2016
Amendment Dated: - 27.02.2023 |
| 3. Date & Time of Monitoring | : | 12.06.2024/11:25AM |
| 4. Sample Identification | : | Air Sample |
| 5. Condition of Sample | : | Sealed/Ok |
| 6. Sample received on | : | 13.06.2024 |
| 7. Period of Analysis | : | 13.06.2024 to 24.06.2024 |
| 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	31.6	°C
2.	Relative Humidity	15	%

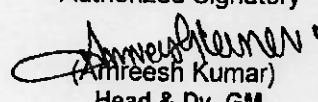
Results Ambient Air Quality

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	0.28	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.52	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.226	-

Tested by


(Leena Sharma)
Chemist

Authorized Signatory


(Animesh Kumar)
Head & Dy. GM

Note

1. Complaint Register is available in lab / Email ID info@wolkem.com
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Page 1 of 1

End of Report

Registered & Corporate Office :

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

CIN- U29299RJ1971PLC001379



Certificate No.
01150126322

Our Commitment.. Your Trust



Report No. 20240614002/A

Report Issue Date: - 25.06.2024

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 : 13.06.2024/12:10PM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample received on : 14.06.2024
7. Period of Analysis : 14.06.2024 to 24.06.2024
8. Name of Location : Lakadwas Village
9. Coordinates : N 24° 33' 3" - E 73° 48' 28"
10. Method of Sampling : IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1443.6	Minutes
2.	Average Flow rate for PM10	1.175	M ³ / Min
3.	Ambient Temperature	32.2	°C
4.	Relative Humidity	12	%

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)	61.56	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	33.26	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	9.19	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	11.94	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

Note

1. Complaint Register is available in lab / Email ID amreesh.mahak@wolkem.com
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Page 1 of 1
End of Report

Registered & Corporate Office :

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Phone : +91 294 2494800 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust



Report No. 20240614002/B

Report Issue Date: - 25.06.2024

TEST REPORT

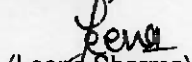
1. Name of Customer : HINDUSTAN ZINC LIMITED
Rockphosphate Maton Mine
P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number : PO No. 2016.1201/ 5100019025 Date 13.01.2016
Amendment Dated: - 27.02.2023
3. Date & Time of Monitoring : 13.06.2024/12:10PM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample received on : 14.06.2024
7. Period of Analysis : 14.06.2024 to 24.06.2024
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	32.2	°C
2.	Relative Humidity	12	%

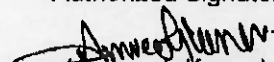
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 16 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.43	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	0.349	-

Tested by


(Leena Sharma)
Chemist

Authorized Signatory


(Amresh Kumar)
Head & Dy. GM

Note

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Page 1 of 1

End of Report



Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India

Phone : +91 294 2494800 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



OHSA
Certificate No.
91130129322

Our Commitment.. Your Trust



Report No. 20240615002/A

Report Issue Date: - 25.06.2024

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 : 14.06.2024/11:50AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample received on : 15.06.2024
7. Period of Analysis : 15.06.2024 to 24.06.2024
8. Name of Location : Umarda Village
9. Coordinates : N 24° 31' 26" - E 73° 46' 48"
10. Method of Sampling : IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

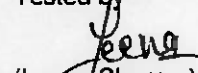
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1435.8	Minutes
2.	Average Flow rate for PM10	1.16	M ³ / Min
3.	Ambient Temperature	32.0	°C
4.	Relative Humidity	13	%

Results Ambient Air Quality

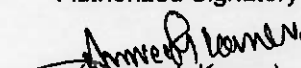
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 16 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	63.84	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	28.36	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	10.53	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	11.02	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

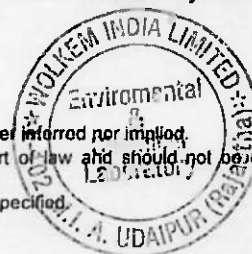

Amresh Kumar
Head & Dy. GM

Note

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CIN- U20200RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20240615002/B

Report Issue Date: - 25.06.2024

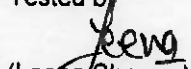
TEST REPORT

- | | | |
|------------------------------|---|---|
| 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 | : | 14.06.2024/11:50AM |
| 4. Sample Identification | : | Air Sample |
| 5. Condition of Sample | : | Sealed/Ok |
| 6. Sample received on | : | 15.06.2024 |
| 7. Period of Analysis | : | 15.06.2024 to 24.06.2024 |
| 8. Name of Location | : | Umarda Village |
| 9. Coordinates | : | N 24° 31' 26" - E 73° 46' 48" |
| 10. Method of Sampling | : | Instrument Manual |

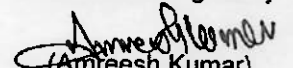
S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32.0	°C
2.	Relative Humidity	13	%

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	0.48	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.59	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.376	-

Tested by

(Leena Sharma)
Chemist

Authorized Signatory

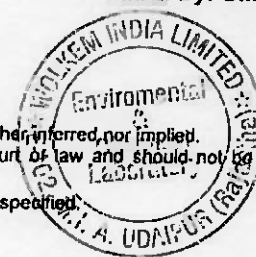

(Anreesh Kumar)
Head & Dy. GM

Note

- Complaint Register is available in lab / Email ID amrish.malik@wolkem.com
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Page 1 of 1

End of Report





Report No. 20240618002/A

Report Issue Date: - 25.06.2024

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 : 17.06.2024/12:15PM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample received on : 18.06.2024
7. Period of Analysis : 18.06.2024 to 24.06.2024
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, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1435.9	Minutes
2.	Average Flow rate for PM10	1.125	M ³ / Min
3.	Ambient Temperature	32.4	°C
4.	Relative Humidity	12	%

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)	52.46	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	25.40	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	7.02	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	9.21	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

Leena Sharma
(Leena Sharma)
Chemist

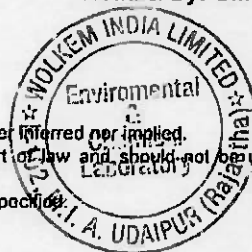
Authorized Signatory

Amresh Kumar
(Amresh Kumar)
Head & Dy. GM

Note

1. Complaint Register is available in lab / Email ID marishan@wolkem.com
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Page 1 of 1
End of Report



Report No. 20240618002/B

Report Issue Date: - 25.06.2024

TEST REPORT

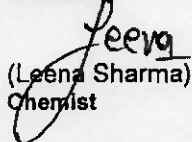
- | | | |
|------------------------------|---|---|
| 1. Name of Customer | : | HINDUSTAN ZINC LIMITED
Rockphosphate Maton Mine
P.O. Maton, Distt. Udaipur (Rajasthan), INDIA |
| 2. Purchase order Number | : | PO No. 2016.1201/ 5100019025 Date 13.01.2016
Amendment Dated: - 27.02.2023 |
| 3. Date & Time of Monitoring | : | 17.06.2024/12:15PM |
| 4. Sample Identification | : | Air Sample |
| 5. Condition of Sample | : | Sealed/Ok |
| 6. Sample received on | : | 18.06.2024 |
| 7. Period of Analysis | : | 18.06.2024 to 24.06.2024 |
| 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	32.4	°C
2.	Relative Humidity	12	%

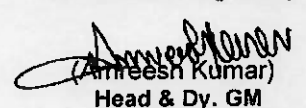
Results Ambient Air Quality

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	0.25	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.32	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.181	-

Tested by


(Leena Sharma)
Chemist

Authorized Signatory


(Animesh Kumar)
Head & Dy. GM

Note

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Page 1 of 1

End of Report





Report No. 20240903002/A

Report Issue Date: - 13.09.2024

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 : 02.09.2024/10:40AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample received on : 03.09.2024
7. Period of Analysis : 03.09.2024 to 13.09.2024
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, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1442.8	Minutes
2.	Average Flow rate for PM10	1.16	M ³ / Min
3.	Ambient Temperature	30.4	°C
4.	Relative Humidity	47	%

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)	48.65	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	24.01	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	6.87	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	8.38	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

(Amresh Kumar)
Dy. GM [Technical]

Note

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End of Report



TC - 5941



Report No. 20240903002/B

Report Issue Date: - 13.09.2024

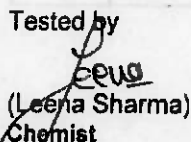
TEST REPORT

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 : 02.09.2024/10:40AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample received on : 03.09.2024
7. Period of Analysis : 03.09.2024 to 13.09.2024
8. Name of Location : Mine Lease Area
9. Coordinates : N 24° 32' 33" - E 73° 47' 47"
10. Method of Sampling : Instrument Manual

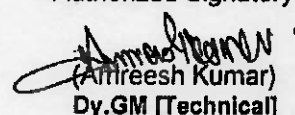
S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30.4	°C
2.	Relative Humidity	47	%

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	0.23	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.11	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.179	-

Tested by

(Leena Sharma)
Chemist

Authorized Signatory


(Anil Kumar)
Dy.GM [Technical]

Note

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Page 1 of 1
End of Report

Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India
Phone : +91 294 2494800 - 02 E-mail : info@wolkem.com
CIN- U29298RJ1971PLC001379



Our Commitment.. Your Trust

Report No. 20240904002/A

Report Issue Date: - 13.09.2024

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	:	03.09.2024/11:05AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	04.09.2024
7. Period of Analysis	:	04.09.2024 to 13.09.2024
8. Name of Location	:	Umarda Village
9. Coordinates	:	N 24° 31' 26" - E 73° 46' 48"
10. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

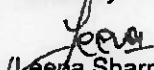
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1444.1	Minutes
2.	Average Flow rate for PM10	1.13	M ³ / Min
3.	Ambient Temperature	30.7	°C
4.	Relative Humidity	49	%

Results Ambient Air Quality

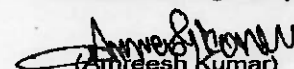
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) Now Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	62.05	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	32.41	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	11.16	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	13.10	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


(Animesh Kumar)
Dy.GM [Technical]

Note

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Page 1 of 1

End of Report



TC - 5941





Report No. 20240904002/B

Report Issue Date: - 13.09.2024

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	:	03.09.2024/11:05AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	04.09.2024
7. Period of Analysis	:	04.09.2024 to 13.09.2024
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	30.7	°C
2.	Relative Humidity	49	%

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	0.47	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.52	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.231	-

Tested by

Leena
(Leena Sharma)
Chemist

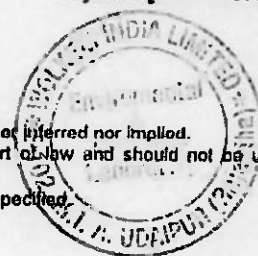
Authorized Signatory

Anreesh Kumar
(Anreesh Kumar)
Dy. GM [Technical]

Note

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Page 1 of 1
End of Report



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

CIN- U29299RJ1971PLC001379



Certificate No.
01130126322

Our Commitment.. Your Trust



Report No. 20240905002/A

Report Issue Date: - 13.09.2024

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 : 04.09.2024/11:25AM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample received on : 05.09.2024
7. Period of Analysis : 05.09.2024 to 13.09.2024
8. Name of Location : Lakadwas Village
9. Coordinates : N 24° 33' 3" - E 73° 48' 28"
10. Method of Sampling : IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

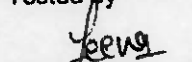
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1442.6	Minutes
2.	Average Flow rate for PM10	1.17	M ³ / Min
3.	Ambient Temperature	31.0	°C
4.	Relative Humidity	52	%

Results Ambient Air Quality

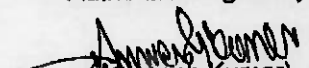
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	59.75	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	31.60	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	10.12	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	11.27	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


(Anil Kumar)
Dy.GM [Technical]

Note

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Page 1 of 1
End of Report



TC - 5941



Report No. 20240905002/B

Report Issue Date: - 13.09.2024

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 | : | 04.09.2024/11:25AM |
| 4. Sample Identification | : | Air Sample |
| 5. Condition of Sample | : | Sealed/Ok |
| 6. Sample received on | : | 05.09.2024 |
| 7. Period of Analysis | : | 05.09.2024 to 13.09.2024 |
| 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	31.0	°C
2.	Relative Humidity	52	%

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	0.45	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	0.352	-

Tested by

Leena Sharma
(Leena Sharma)
Chemist

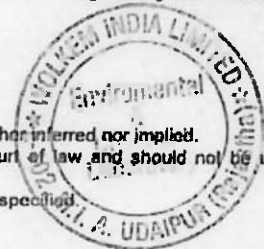
Authorized Signatory

Amresh Kumar
(Amresh Kumar)
Dy.GM [Technical]

Note

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Page 1 of 1
End of Report





Report No. 20240906002/A

Report Issue Date: - 13.09.2024

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 : 05.09.2024/12:10PM
4. Sample Identification : Air Sample
5. Condition of Sample : Sealed/Ok
6. Sample received on : 06.09.2024
7. Period of Analysis : 06.09.2024 to 13.09.2024
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	1437.6	Minutes
2.	Average Flow rate for PM10	1.14	M ³ / Min
3.	Ambient Temperature	31.6	°C
4.	Relative Humidity	56	%

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)	49.01	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	25.37	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	7.07	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	8.08	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

Leena Sharma
(Leena Sharma)
Chemist

Authorized Signatory

Amresh Kumar
(Amresh Kumar)
Dy.GM [Technical]

Note

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End of Report



TC - 5941



Report No. 20240906002/B

Report Issue Date: - 13.09.2024

TEST REPORT

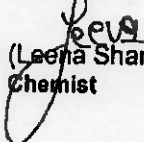
- | | | |
|------------------------------|---|---|
| 1. Name of Customer | : | HINDUSTAN ZINC LIMITED
Rockphosphate Maton Mine
P.O. Maton, Distt. Udaipur (Rajasthan), INDIA |
| 2. Purchase order Number | : | PO No. 2016.1201/ 5100019025 Date 13.01.2016
Amendment Dated: - 27.02.2023 |
| 3. Date & Time of Monitoring | : | 05.09.2024/12:10PM |
| 4. Sample Identification | : | Air Sample |
| 5. Condition of Sample | : | Sealed/Ok |
| 6. Sample received on | : | 06.09.2024 |
| 7. Period of Analysis | : | 06.09.2024 to 13.09.2024 |
| 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	31.6	°C
2.	Relative Humidity	56	%

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	0.24	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.59	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.382	-

Tested by


(Leena Sharma)
Chemist

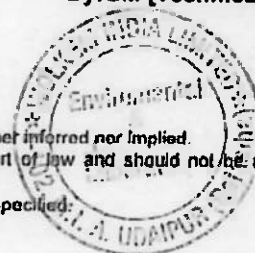
Authorized Signatory


(Amresh Kumar)
Dy.GM [Technical]

Note

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Page 1 of 1
End of Report





Report No. 20240909002/A

Report Issue Date: - 13.09.2024

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 | : | 06.09.2024/11:45AM |
| 4. Sample Identification | : | Air Sample |
| 5. Condition of Sample | : | Sealed/Ok |
| 6. Sample received on | : | 09.09.2024 |
| 7. Period of Analysis | : | 09.09.2024 to 13.09.2024 |
| 8. Name of Location | : | Kharwaria Village |
| 9. Coordinates | : | N 24° 33' 9" - E 73° 47' 3" |
| 10. Method of Sampling | : | IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual |

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1441.5	Minutes
2.	Average Flow rate for PM10	1.17	M ³ / Min
3.	Ambient Temperature	31.4	°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/m ³	IS:5182 (Part-23)	48.32	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	24.46	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	7.35	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	8.89	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


(Amresh Kumar)
Dy.GM [Technical]

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Page 1 of 1
End of Report



TC - 5941



Report No. 20240909002/B

Report Issue Date: - 13.09.2024

TEST REPORT

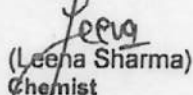
- | | | |
|------------------------------|---|---|
| 1. Name of Customer | : | HINDUSTAN ZINC LIMITED |
| | : | Rockphosphate Maton Mine |
| 2. Purchase order Number | : | P.O. Maton, Distt. Udaipur (Rajasthan), INDIA |
| | : | PO No. 2016.1201/ 5100019025 Date 13.01.2016 |
| 3. Date & Time of Monitoring | : | Amendment Dated: - 27.02.2023 |
| 4. Sample Identification | : | 06.09.2024/11:45AM |
| 5. Condition of Sample | : | Air Sample |
| 6. Sample received on | : | Sealed/Ok |
| 7. Period of Analysis | : | 09.09.2024 |
| 8. Name of Location | : | 09.09.2024 to 13.09.2024 |
| 9. Coordinates | : | Kharwaria Village |
| 10. Method of Sampling | : | N 24° 33' 9" - E 73° 47' 3" |
| | : | Instrument Manual |

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	31.4	°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	0.31	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.32	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.174	-

Tested by


(Leena Sharma)
Chemist

Authorized Signatory


(Amresh Kumar)
Dy.GM [Technical]

Note

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Page 1 of 1
End of Report



Report No. 20240618129

Report Issue Date: 25.06.2024

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 of Monitoring

: 17.06.2024

4. Sample Identification

: NA

5. Condition of Sample

: NA

6. Sample Received On

: 18.06.2024

7. Period of Analysis

: NA

8. Test Methods Reference

: IS: 9989- 1981 (Reaffirmed 2008)

9. Name of location

: Mine Lease Area

S.No.		Time hours	Sound Pressure Level dB(A)			Leq
			Day Time			
			L ₁₀	L ₅₀	L ₉₀	
1.	6-7	AM	41.4	42.0	40.6	42.1
2.	7-8	AM	42.3	42.5	41.3	42.6
3.	8-9	AM	43.9	45.2	41.8	45.3
4.	9-10	AM	43.9	44.6	43.1	44.6
5.	10-11	AM	50.6	51.5	49.9	51.5
6.	11-12	AM	53.1	54.7	50.5	54.8
7.	12-13	PM	53.8	57.4	49.8	57.6
8.	13-14	PM	49.1	49.9	48.1	49.9
9.	14-15	PM	49.7	50.5	48.9	50.5
10.	15-16	PM	52.1	53.6	49.5	53.7
11.	16-17	PM	54.2	55.1	52.7	55.2
12.	17-18	PM	43.6	46.5	40.8	46.6
13.	18-19	PM	55.4	40.7	39.3	45.1
14.	19-20	PM	40.6	41.2	40.0	41.2
15.	20-21	PM	39.3	39.9	38.5	40.0
16.	21-22	PM	39.8	40.4	39.2	40.4
Leq Day (L _{eq} = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])						47.6

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Page 1 of 2

Continue

Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India
 Phone : +91 294 2494800 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20240618129

Report Issue Date: 25.06.2024

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 of Monitoring : 17.06.2024
4. Sample Identification : NA
5. Condition of Sample : NA
6. Sample Received On : 18.06.2024
10. Period of Analysis : NA
11. Test Methods Reference : IS: 9989- 1981 (Reaffirmed 2008)
12. Name of location : Mine Lease Area

Wine Lease Area					
S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		Night Time			
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	32.3	33.2	31.1	33.3
2.	23-24PM	33.0	33.9	31.7	33.9
3.	0-1 AM	30.8	31.8	30.2	31.8
4.	1-2 AM	33.9	35.0	33.2	35.0
5.	2-3 AM	33.3	34.3	32.5	34.3
6.	3-4 AM	31.7	32.6	30.5	32.6
7.	4-5 AM	36.2	37.7	31.6	38.1
8.	5-6 AM	34.9	35.9	33.6	36.0
Leq Night (Leq = L50 + [(L10 – L90)²/60]))					34.4
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					46.7

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

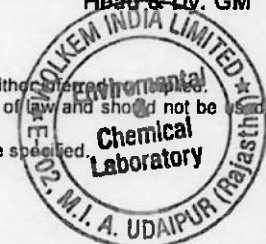
Amresh Kumar
(Amresh Kumar)
Head & Dy. GM

Note

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Page 2 of 2

End of Report



Registered & Corporate Office :

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

CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment. Your Trust

Report No. 20240618130

Report Issue Date: 25.06.2024

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 of Monitoring | : | 14.06.2024 |
| 4. Sample Identification | : | NA |
| 5. Condition of Sample | : | NA |
| 6. Sample Received On | : | 18.06.2024 |
| 7. Period of Analysis | : | NA |
| 8. Test Methods Reference | : | IS: 9989- 1981 (Reaffirmed 2008) |
| 9. Name of location | : | Umarda Village |

S.No.		Time hours			Sound Pressure Level dB(A)			Leq
		Day Time						
		L ₁₀	L ₅₀	L ₉₀				
1.	6-7 AM	40.2	41.0	39.3	41.0			
2.	7-8 AM	41.0	41.8	40.2	41.9			
3.	8-9 AM	42.6	43.7	41.7	43.7			
4.	9-10 AM	47.8	48.8	46.9	48.8			
5.	10-11 AM	49.2	50.3	47.8	50.4			
6.	11-12 AM	61.5	63.2	59.4	63.3			
7.	12-13 PM	63.2	68.4	58.4	68.8			
8.	13-14 PM	63.7	66.4	59.7	66.7			
9.	14-15 PM	65.0	69.5	62.6	69.6			
10.	15-16 PM	66.6	68.1	64.7	68.2			
11.	16-17 PM	64.1	67.1	62.6	67.1			
12.	17-18 PM	62.2	68.5	57.4	68.9			
13.	18-19 PM	56.7	60.5	54.7	60.6			
14.	19-20 PM	48.4	53.6	42.7	54.2			
15.	20-21 PM	40.7	41.5	39.8	41.5			
16.	21-22 PM	38.5	39.9	37.6	39.9			
Leq Day (Leq = L50 + [(L10 - L90)/60])					55.9			

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Page 1 of 2

Continue





Report No. 20240618130

Report Issue Date: 25.06.2024

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 of Monitoring : 14.06.2024
4. Sample Identification : NA
5. Condition of Sample : NA
6. Sample Received On : 18.06.2024
7. Period of Analysis : NA
8. Test Methods Reference : IS: 9989- 1981 (Reaffirmed 2008)
9. Name of location : Umarda Village

S. No.		Time hours	Sound Pressure Level dB(A)			Leq
			Night Time			
			L ₁₀	L ₅₀	L ₉₀	
1.		22-23PM	46.4	49.2	43.2	49.4
2.		23-24PM	47.4	51.6	44.7	51.7
3.		0-1 AM	44.9	47.3	41.7	47.5
4.		1-2 AM	36.0	47.8	32.0	48.1
5.		2-3 AM	36.6	48.3	30.7	48.9
6.		3-4 AM	36.6	45.2	34.1	45.3
7.		4-5 AM	34.1	34.9	33.3	34.9
8.		5-6 AM	33.6	34.9	31.9	35.0
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])						45.1
Day-Night Sound Level (L _{dn}) = 10 log {1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)]}						
L _{dn}						55.6

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

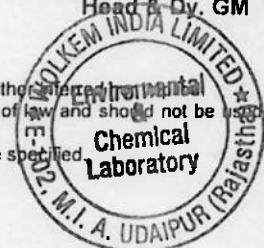
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Head & Dy. GM

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TC-5941

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Report No. 20240618131

Report Issue Date: 25.06.2024

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 of Monitoring : 13.06.2024
4. Sample Identification : NA
5. Condition of Sample : NA
6. Sample Received On : 18.06.2024
7. Period of Analysis : NA
8. Test Methods Reference : IS: 9989- 1981 (Reaffirmed 2008)
9. Name of location : Lakadwas Village

S. Name of location		Lakadwas Village			
S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		Day Time			
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	39.9	40.5	39.1	40.5
2.	7-8 AM	40.4	41.0	39.8	41.0
3.	8-9 AM	42.3	43.6	40.3	43.6
4.	9-10 AM	44.1	44.8	42.8	44.8
5.	10-11 AM	57.3	61.4	53.0	61.7
6.	11-12 AM	61.9	65.4	57.6	65.7
7.	12-13 PM	62.2	66.3	57.6	66.6
8.	13-14 PM	60.0	62.3	57.6	62.4
9.	14-15 PM	53.3	57.1	47.4	57.7
10.	15-16 PM	60.3	63.6	56.4	63.8
11.	16-17 PM	54.9	63.2	48.6	63.9
12.	17-18 PM	48.9	52.1	45.7	52.2
13.	18-19 PM	36.9	37.5	36.2	37.5
14.	19-20 PM	37.4	38.0	36.8	38.0
15.	20-21 PM	39.2	40.3	37.3	40.4
16.	21-22 PM	40.8	41.5	39.6	41.5
Leq Day (Leq = L50 + [(L10 - L90) ² /60])					51.3

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TC-5941

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Report No. 20240618131

Report Issue Date: 25.06.2024

TEST REPORT

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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 of Monitoring : 13.06.2024
4. Sample Identification : NA
5. Condition of Sample : NA
6. Sample Received On : 18.06.2024
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
			Night Time			
			L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	45.5	48.1	42.6	48.2	
2.	23-24PM	45.0	46.9	38.6	47.6	
3.	0-1 AM	45.0	48.9	42.0	49.0	
4.	1-2 AM	36.0	40.5	32.9	40.7	
5.	2-3 AM	35.3	43.3	32.6	43.4	
6.	3-4 AM	31.8	32.7	31.1	32.7	
7.	4-5 AM	31.3	31.8	30.8	31.8	
8.	5-6 AM	32.5	33.1	32.0	33.1	
Leq Night (Leq - L50 + [(L10 - L90)²/60]))						40.8
Day-Night Sound Level (Ldn) = 10 log { 1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}						
Ldn						51.4

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

Note

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Authorized Signatory

Amresh Kumar
(Amresh Kumar)
Head & Dy. GM

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End of Report

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TC-5941
Our Commitment.. Your Trust

Report No. 20240618132

Report Issue Date: 25.06.20224

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. Date of Monitoring | : | Amendment Dated: - 27.02.2023 |
| 4. Sample Identification | : | 12.06.2024 |
| 5. Condition of Sample | : | NA |
| 6. Sample Received On | : | NA |
| 7. Period of Analysis | : | 18.06.2024 |
| 8. Test Methods Reference | : | NA |
| 9. Name of location | : | IS: 9989- 1981 (Reaffirmed 2008) |
| | : | Maton Village |

c. Name of location		: Maton Village			Leq
S.No.	Time hours	Sound Pressure Level dB(A)			
		Day Time			
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	38.7	39.3	37.9	39.3
2.	7-8 AM	39.1	39.8	38.6	39.8
3.	8-9 AM	41.0	42.2	39.0	42.3
4.	9-10 AM	42.7	43.4	41.5	43.5
5.	10-11 AM	45.9	47.6	43.3	47.7
6.	11-12 AM	51.4	55.7	47.1	56.0
7.	12-13 PM	53.2	56.7	49.3	57.0
8.	13-14 PM	52.6	55.3	49.1	55.5
9.	14-15 PM	51.3	56.9	48.3	57.0
10.	15-16 PM	54.1	57.2	50.0	57.5
11.	16-17 PM	54.7	58.9	49.5	59.4
12.	17-18 PM	35.1	37.4	32.8	37.5
13.	18-19 PM	35.5	38.5	33.0	38.6
14.	19-20 PM	39.0	40.7	30.5	41.9
15.	20-21 PM	37.3	39.0	31.2	39.6
16.	21-22 PM	35.1	36.3	31.8	36.4
Leq Day (Leq = L50 + [(L10 - L90) ² /60]))					46.8

Note

1. Complaint Register is available in lab / Email ID lab.office@wolkem.com
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Page 1 of 2

Continue

Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India
Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20240618132

Report Issue Date: 25.06.20224

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 of Monitoring : 12.06.2024
4. Sample Identification : NA
5. Condition of Sample : NA
6. Sample Received On : 18.06.2024
7. Period of Analysis : NA
8. Test Methods Reference : IS: 9989- 1981 (Reaffirmed 2008)
9. Name of location : Maton Village

S. No.		Sound Pressure Level dB(A)			Leq
Time hours		Night Time			
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	32.9	33.9	32.2	33.9
2.	23-24PM	31.6	32.6	30.9	32.6
3.	0-1 AM	31.1	31.7	30.7	31.7
4.	1-2 AM	31.7	32.6	31.0	32.6
5.	2-3 AM	31.2	31.7	30.7	31.7
6.	3-4 AM	31.8	32.8	31.1	32.8
7.	4-5 AM	34.6	35.7	33.9	35.7
8.	5-6 AM	34.1	34.7	33.6	34.7
Leq Night (Leq = 1.50 + [(L ₁₀ - L ₉₀) ² /60])					33.2
Day-Night Sound Level (L _{dn}) = 10 log { 1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)]}					
L _{dn}					45.9

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
(Leena Sharma)
Chemist

Authorized Signatory

Amresh Kumar
Amresh Kumar
Head & Dy. GM

Note

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Page 2 of 2
End of Report

Registered & Corporate Office :

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Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com
CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust

Report No. 20240618133

Report Issue Date: 25.06.2024

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 of Monitoring : 11.06.2024
4. Sample Identification : NA
5. Condition of Sample : NA
6. Sample Received On : 18.06.2024
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	Day Time	L ₉₀	
1.	6-7 AM	43.6	44.5	42.8	44.5
2.	7-8 AM	41.0	41.9	40.2	41.9
3.	8-9 AM	38.9	40.2	38.0	40.3
4.	9-10 AM	41.5	42.4	40.7	42.4
5.	10-11 AM	39.1	39.9	38.2	39.9
6.	11-12 AM	58.6	59.5	57.3	59.5
7.	12-13 PM	58.3	59.1	57.3	59.1
8.	13-14 PM	59.6	60.3	58.9	60.4
9.	14-15 PM	59.1	60.1	58.3	60.1
10.	15-16 PM	60.2	61.4	59.4	61.4
11.	16-17 PM	57.5	58.4	56.5	58.4
12.	17-18 PM	44.5	45.4	43.6	45.4
13.	18-19 PM	41.9	42.7	41.0	42.7
14.	19-20 PM	39.7	41.0	38.7	41.1
15.	20-21 PM	42.3	43.2	41.6	43.2
16.	21-22 PM	39.9	40.7	39.0	40.7
Leq Day (Leq = L50 + [(L10 - L90)/60])					48.8

Note

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TC-5941
Our Commitment.. Your Trust

Report No. 20240618133

Report Issue Date: 25.06.2024

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 of Monitoring : 11.06.2024
4. Sample Identification : NA
5. Condition of Sample : NA
6. Sample Received On : 18.06.2024
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
			Night Time			
			L ₁₀	L ₅₀	L ₉₀	
1.		22-23PM	33.5	34.3	32.2	34.4
2.		23-24PM	32.6	33.2	32.1	33.2
3.		0-1 AM	33.3	33.8	32.7	33.8
4.		1-2 AM	34.1	35.2	33.3	35.3
5.		2-3 AM	32.0	32.5	31.5	32.5
6.		3-4 AM	34.7	36.0	33.9	36.0
7.		4-5 AM	35.4	36.7	34.6	36.7
8.		5-6 AM	34.1	35.2	33.3	35.3
Leq Night (Leq = L50 + [(L10 - L90) ² /60])						34.6
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}						
Ldn						47.8

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
(Leena Sharma)
Chemist

Authorized Signatory

Anneesh Kumar
(Anneesh Kumar)
Head & Dy. GM

Note

1. Complaint Register is available in lab / Email ID anuraj.malik@wolkem.com
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End of Report



Report No. 20240618134

Report Issue Date: 25.06.2024

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 of Monitoring : 15.06.2024
4. Sample Identification : NA
5. Condition of Sample : NA
6. Sample Received On : 18.06.2024
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
			Day Time			
			L ₁₀	L ₅₀	L ₉₀	
1.	6-7	AM	39.6	40.3	38.5	40.4
2.	7-8	AM	41.2	42.0	40.3	42.1
3.	8-9	AM	43.0	43.8	42.0	43.8
4.	9-10	AM	43.8	45.3	43.0	45.3
5.	10-11	AM	44.5	45.7	42.9	45.7
6.	11-12	AM	55.6	56.6	54.7	56.6
7.	12-13	PM	52.6	54.1	51.5	54.1
8.	13-14	PM	54.3	55.7	52.9	55.7
9.	14-15	PM	56.7	58.3	54.8	58.4
10.	15-16	PM	55.7	56.7	53.7	56.7
11.	16-17	PM	54.0	54.7	53.3	54.7
12.	17-18	PM	52.0	52.9	50.8	52.9
13.	18-19	PM	46.0	46.6	45.4	46.6
14.	19-20	PM	44.7	45.5	43.5	45.5
15.	20-21	PM	42.4	43.9	41.1	43.9
16.	21-22	PM	41.4	43.1	39.6	43.2
Leq Day (Leq = L50 + [(L10 - L90) ² /60])						49.1

Note

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Page 1 of 2

Continue



Report No. 20240618134

Report Issue Date: 25.06.2024

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 of Monitoring : 15.06.2024
4. Sample Identification : NA
5. Condition of Sample : NA
6. Sample Received On : 18.06.2024
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
			Night Time			
			L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	38.7	39.7	37.7	39.7	
2.	23-24PM	37.3	38.1	36.4	38.1	
3.	0-1 AM	33.8	34.6	32.9	34.6	
4.	1-2 AM	33.0	33.5	32.5	33.5	
5.	2-3 AM	31.8	32.5	31.0	32.5	
6.	3-4 AM	32.4	33.4	31.1	33.4	
7.	4-5 AM	33.7	35.0	32.5	35.1	
8.	5-6 AM	34.8	36.1	34.1	36.2	
Leq Night (Leq = 1.50 + [(L10 – L90)²/60])						35.4
Day-Night Sound Level (Ldn) = 10 log { 1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)] }						
Ldn						48.2

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
(Leena Sharma)
Chemist

Authorized Signatory
Amresh Kumar
(Amresh Kumar)
Head & Dy. GM

Note

1. Complaint Register is available in lab / Email ID anurish.malik@wolkem.com
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End of Report



Report No. 20240909003

Report Issue Date: 11.09.2024

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 of Monitoring : 02.09.2024
4. Sample Identification : Noise Monitoring
5. Condition of Sample : NA
6. Sample Received On : 09.09.2024
7. Period of Analysis : NA
8. Test Methods Reference : IS: 9989- 1981 (Reaffirmed 2008)
9. Name of location : Mine Lease Area

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		Day Time			
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	36.3	39.8	33.7	39.9
2.	7-8 AM	42.3	49.4	37.0	49.8
3.	8-9 AM	40.6	45.1	36.9	45.3
4.	9-10 AM	45.3	49.4	39.5	50.0
5.	10-11 AM	50.2	52.7	46.9	52.8
6.	11-12 AM	53.8	57.7	51.5	57.8
7.	12-13 PM	50.3	54.0	43.2	54.8
8.	13-14 PM	51.8	54.1	48.8	54.2
9.	14-15 PM	48.0	54.1	43.0	54.5
10.	15-16 PM	37.5	44.6	31.9	45.1
11.	16-17 PM	46.6	52.2	42.1	52.5
12.	17-18 PM	41.5	50.4	34.9	51.2
13.	18-19 PM	55.4	44.3	31.0	54.2
14.	19-20 PM	36.7	42.1	30.5	42.8
15.	20-21 PM	33.9	39.0	28.6	39.5
16.	21-22 PM	32.6	38.3	29.0	38.5
L _{eq} Day (L _{eq} = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					48.9

Note

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Page 1 of 2



TC - 5941





Report No. 20240909003

Report Issue Date: 11.09.2024

TEST REPORT

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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 of Monitoring : 02.09.2024
4. Sample Identification : Noise Monitoring
5. Condition of Sample : NA
6. Sample Received On : 09.09.2024
7. Period of Analysis : NA
8. Test Methods Reference : IS: 9989- 1981 (Reaffirmed 2008)
9. Name of location : Mine Lease Area

S. No.		Sound Pressure Level dB(A)			Leq
Time hours		Night Time			
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	32.2	36.5	27.1	37.0
2.	23-24PM	28.9	34.0	24.3	34.3
3.	0-1 AM	26.9	29.5	22.3	29.9
4.	1-2 AM	24.8	29.6	20.0	30.0
5.	2-3 AM	26.8	29.4	24.1	29.6
6.	3-4 AM	26.9	31.6	22.5	31.9
7.	4-5 AM	26.4	33.7	22.3	34.0
8.	5-6 AM	30.2	35.0	26.0	35.3
Leq Night (Leq = 1.50 + [(L10 - L90)²/60])					32.7
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					47.7

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

(Animesh Kumar)
Dy.GM [Technical]

Note

1. Complaint Register is available in lab / Email ID animesh.mahapatra@wolkem.com
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End of Report



TC - 5941

Report No. 20240909004

Report Issue Date: 11.09.2024

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 of Monitoring | : | 03.09.2024 |
| 4. Sample Identification | : | Noise Monitoring |
| 5. Condition of Sample | : | NA |
| 6. Sample Received On | : | 09.09.2024 |
| 7. Period of Analysis | : | NA |
| 8. Test Methods Reference | : | IS: 9989- 1981 (Reaffirmed 2008) |
| 9. Name of location | : | Umarda Village |

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	37.4	39.4	34.5	39.6
2.	7-8 AM	42.3	45.4	36.4	46.0
3.	8-9 AM	51.0	55.5	48.4	55.6
4.	9-10 AM	45.7	47.4	43.3	47.5
5.	10-11 AM	50.9	55.1	46.0	55.5
6.	11-12 AM	54.8	59.9	50.6	60.2
7.	12-13 PM	55.0	57.1	53.8	57.1
8.	13-14 PM	55.4	61.4	44.7	63.4
9.	14-15 PM	50.9	61.5	43.8	62.4
10.	15-16 PM	54.9	59.8	51.7	60.0
11.	16-17 PM	50.3	57.8	42.9	58.7
12.	17-18 PM	48.7	53.3	45.1	53.5
13.	18-19 PM	43.4	49.1	32.2	51.2
14.	19-20 PM	40.5	45.6	38.4	45.7
15.	20-21 PM	35.1	39.7	27.3	40.8
16.	21-22 PM	29.3	32.0	26.9	32.1
Leq Day (Leq = 1.50 + [(L ₁₀ - L ₉₀) ² /60])					51.8

Note

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Report No. 20240909004

Report Issue Date: 11.09.2024

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 of Monitoring | : | 03.09.2024 |
| 4. Sample Identification | : | Noise Monitoring |
| 5. Condition of Sample | : | NA |
| 6. Sample Received On | : | 09.09.2024 |
| 7. Period of Analysis | : | NA |
| 8. Test Methods Reference | : | IS: 9989- 1981 (Reaffirmed 2008) |
| 9. Name of location | : | Umarda Village |

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	38.6	48.3	32.7	48.9
2.	23-24PM	41.5	48.7	32.0	50.2
3.	0-1 AM	28.1	32.5	24.9	32.7
4.	1-2 AM	27.5	35.4	22.4	35.8
5.	2-3 AM	33.4	39.5	26.5	40.3
6.	3-4 AM	27.3	34.0	22.2	34.4
7.	4-5 AM	28.2	36.0	23.6	36.4
8.	5-6 AM	27.6	34.6	24.1	34.8
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀)/60])					39.2
Day-Night Sound Level (L _{dn}) = 10 log {1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)]}					
L _{dn}					51.1

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

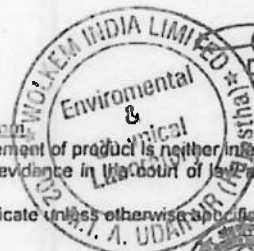
Authorized Signatory
Amresh Kumar
(Amresh Kumar)
Dy.GM [Technical]

Note

- Complaint Register is available in lab / Email ID anurish.malik@wolkem.com
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End of Report



TC - 5941

Report No. 20240909005

Report Issue Date: 11.09.2024

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 of Monitoring | : | 04.09.2024 |
| 4. Sample Identification | : | Noise Monitoring |
| 5. Condition of Sample | : | NA |
| 6. Sample Received On | : | 09.09.2024 |
| 7. Period of Analysis | : | NA |
| 8. Test Methods Reference | : | IS: 9989- 1981 (Reaffirmed 2008) |
| 9. Name of location | : | Lakadwas Village |

Lakauwas Village					
S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		Day Time			
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	38.6	40.6	35.5	40.8
2.	7-8 AM	43.6	46.8	37.5	47.4
3.	8-9 AM	49.0	53.5	46.5	53.6
4.	9-10 AM	45.2	46.9	42.8	47.0
5.	10-11 AM	50.0	54.2	45.2	54.5
6.	11-12 AM	57.6	63.0	53.2	63.4
7.	12-13 PM	62.1	64.4	60.8	64.4
8.	13-14 PM	59.8	65.2	47.4	67.7
9.	14-15 PM	54.6	64.3	49.4	64.8
10.	15-16 PM	57.3	62.2	53.7	62.4
11.	16-17 PM	52.3	60.1	44.6	61.1
12.	17-18 PM	53.5	58.7	49.6	59.0
13.	18-19 PM	47.7	53.9	35.4	56.4
14.	19-20 PM	44.5	50.1	42.2	50.2
15.	20-21 PM	36.9	42.8	28.4	44.0
16.	21-22 PM	30.1	31.8	28.0	31.9
Leq Day (Leq = 1.50 + [(L ₁₀ - L ₉₀)/60])					54.3

Note

1. Complaint Register is available in lab / Email ID anurish.mahla@wolkem.com
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Page 1 of 2





Report No. 20240909005

Report Issue Date: 11.09.2024

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 of Monitoring : 04.09.2024
4. Sample Identification : Noise Monitoring
5. Condition of Sample : NA
6. Sample Received On : 09.09.2024
7. Period of Analysis : NA
8. Test Methods Reference : IS: 9989- 1981 (Reaffirmed 2008)
9. Name of location : Lakadwas Village

		Lakadwas Village			
S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		Night Time			
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	35.8	44.9	30.4	45.4
2.	23-24PM	38.9	45.7	30.0	47.0
3.	0-1 AM	26.4	30.5	23.4	30.6
4.	1-2 AM	25.6	33.0	20.9	33.3
5.	2-3 AM	31.1	36.8	24.7	37.5
6.	3-4 AM	25.6	31.8	20.9	32.2
7.	4-5 AM	26.3	33.5	22.0	33.8
8.	5-6 AM	25.7	32.2	22.4	32.4
Leq Night (Leq = 1.50 + [(L ₁₀ - L ₉₀) ² /60]))					36.5
Day-Night Sound Level (L _{dn}) = 10 log {1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)]}					
L _{dn}					52.9

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

Amresh Kumar
Dy.GM [Technical]

Note

1. Complaint Register is available in lab / Email ID amresh.matik@wolkem.com
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End of Report



TC - 5941

Report No. 20240909006

Report Issue Date: 11.09.2024

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 of Monitoring : 05.09.2024
4. Sample Identification : Noise Monitoring
5. Condition of Sample : NA
6. Sample Received On : 09.09.2024
7. Period of Analysis : NA
8. Test Methods Reference : IS: 9989- 1981 (Reaffirmed 2008)
9. Name of location : Maton Village

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	Day Time L ₅₀	L ₉₀	
1.	6-7 AM	37.1	40.8	34.5	40.9
2.	7-8 AM	42.0	50.6	37.9	50.9
3.	8-9 AM	41.5	46.2	37.8	46.4
4.	9-10 AM	45.3	49.4	39.5	49.9
5.	10-11 AM	50.2	52.6	46.9	52.8
6.	11-12 AM	53.8	57.7	51.4	57.8
7.	12-13 PM	50.2	53.9	43.2	54.7
8.	13-14 PM	51.4	53.6	48.4	53.7
9.	14-15 PM	47.7	53.6	42.6	54.0
10.	15-16 PM	37.2	44.2	31.6	44.7
11.	16-17 PM	46.2	51.7	41.7	52.0
12.	17-18 PM	42.2	51.4	34.9	52.3
13.	18-19 PM	41.2	49.5	34.7	50.2
14.	19-20 PM	40.4	47.1	33.5	47.9
15.	20-21 PM	37.2	43.6	32.0	44.1
16.	21-22 PM	35.9	42.8	29.0	43.6
Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀)/60])					49.7

Note

1. Complaint Register is available in lab / Email ID anurish.mallik@wolkem.com
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Page 1 of 2



Report No. 20240909006

Report Issue Date: 11.09.2024

TEST REPORT

- | | | |
|---------------------------|---|---|
| 1. Name of Customer | : | HINDUSTAN ZINC LIMITED |
| 2. Purchase order Number | : | Rockphosphate Maton Mine |
| 3. Date of Monitoring | : | P.O. Maton, Distt. Udaipur (Rajasthan), INDIA |
| 4. Sample Identification | : | PO No. 2016.1201/ 5100019025 Date 13.01.2016 |
| 5. Condition of Sample | : | Amendment Dated: - 27.02.2023 |
| 6. Sample Received On | : | 05.09.2024 |
| 7. Period of Analysis | : | Noise Monitoring |
| 8. Test Methods Reference | : | NA |
| 9. Name of location | : | 09.09.2024 |
| | : | NA |
| | : | IS: 9989- 1981 (Reaffirmed 2008) |
| | : | Maton Village |

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	Night Time L ₅₀	L ₉₀	
1.	22-23PM	35.5	40.2	29.8	40.7
2.	23-24PM	31.8	37.4	26.7	37.8
3.	0-1 AM	29.6	32.5	24.5	32.9
4.	1-2 AM	27.3	32.6	22.0	33.1
5.	2-3 AM	29.5	32.4	26.5	32.6
6.	3-4 AM	29.6	34.8	24.8	35.2
7.	4-5 AM	29.0	37.1	24.6	37.5
8.	5-6 AM	33.3	38.5	28.6	38.9
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					36.1
Day-Night Sound Level (L _{dn}) = 10 log { 1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)] }					
L _{dn}					48.8

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

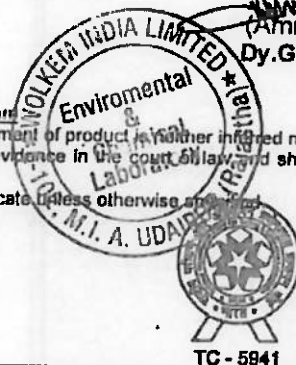
Authorized Signatory

(Amresh Kumar)
Dy.GM [Technical]

Note

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Page 2 of 2
End of Report



TC - 5941

Report No. 20240909007

Report Issue Date: 11.09.2024

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 of Monitoring | : | 06.09.2024 |
| 4. Sample Identification | : | Noise Monitoring |
| 5. Condition of Sample | : | NA |
| 6. Sample Received On | : | 09.09.2024 |
| 7. Period of Analysis | : | NA |
| 8. Test Methods Reference | : | IS: 9989- 1981 (Reaffirmed 2008) |
| 9. Name of location | : | Kharwaria Village |

Kharwaria Village					
S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		Day Time			
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	38.6	40.6	35.5	40.8
2.	7-8 AM	43.6	46.8	37.5	47.4
3.	8-9 AM	49.0	53.5	46.5	53.6
4.	9-10 AM	45.2	46.9	42.8	47.0
5.	10-11 AM	50.0	54.2	45.2	54.5
6.	11-12 AM	57.6	63.0	53.2	63.4
7.	12-13 PM	62.1	64.4	60.8	64.4
8.	13-14 PM	59.8	65.2	47.4	67.7
9.	14-15 PM	54.6	64.3	49.4	64.8
10.	15-16 PM	57.3	62.2	53.7	62.4
11.	16-17 PM	52.3	60.1	44.6	61.1
12.	17-18 PM	53.5	58.7	49.6	59.0
13.	18-19 PM	47.7	53.9	35.4	56.4
14.	19-20 PM	44.5	50.1	42.2	50.2
15.	20-21 PM	36.9	42.8	28.4	44.0
16.	21-22 PM	30.1	31.8	28.0	31.9
Leq Day ($L_{eq} = 1.50 + [(L_{10} - L_{90})^2/60]$)					54.3

Note

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Page 1 of 2



TC - 5941





Report No. 20240909007

Report Issue Date: 11.09.2024

TEST REPORT

- | | | |
|---------------------------|---|---|
| 1. Name of Customer | : | HINDUSTAN ZINC LIMITED |
| 2. Purchase order Number | : | Rockphosphate Maton Mine |
| 3. Date of Monitoring | : | P.O. Maton, Distt. Udaipur (Rajasthan), INDIA |
| 4. Sample Identification | : | PO No. 2016.1201/ 5100019025 Date 13.01.2016 |
| 5. Condition of Sample | : | Amendment Dated: - 27.02.2023 |
| 6. Sample Received On | : | 06.09.2024 |
| 7. Period of Analysis | : | Noise Monitoring |
| 8. Test Methods Reference | : | NA |
| 9. Name of location | : | 09.09.2024 |
| | : | NA |
| | : | IS: 9989- 1981 (Reaffirmed 2008) |
| | : | Kharwaria Village |

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	Night Time L ₅₀	L ₉₀	
1.	22-23PM	35.8	44.9	30.4	45.4
2.	23-24PM	38.9	45.7	30.0	47.0
3.	0-1 AM	26.4	30.5	23.4	30.6
4.	1-2 AM	25.6	33.0	20.9	33.3
5.	2-3 AM	31.1	36.8	24.7	37.5
6.	3-4 AM	25.6	31.8	20.9	32.2
7.	4-5 AM	26.3	33.5	22.0	33.8
8.	5-6 AM	25.7	32.2	22.4	32.4
Leq Night (Leq = 1.50 + [(L10 - L90)²/60])					36.5
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					52.9

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

Amresh Kumar
(Amresh Kumar)
Dy.GM [Technical]

Note

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Page 2 of 2
End of Report



TC - 5941



Report No. 20240909008

Report Issue Date: 11.09.2024

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 of Monitoring | : | 07.09.2024 |
| 4. Sample Identification | : | Noise Monitoring |
| 5. Condition of Sample | : | NA |
| 6. Sample Received On | : | 09.09.2024 |
| 7. Period of Analysis | : | NA |
| 8. Test Methods Reference | : | IS: 9989- 1981 (Reaffirmed 2008) |
| 9. Name of location | : | Nr. Udajsagar |

S. Name of location		: Nr. Udaisagar			
S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		Day Time			
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	36.7	40.2	34.0	40.3
2.	7-8 AM	41.5	49.9	37.3	50.1
3.	8-9 AM	41.0	45.5	37.2	45.8
4.	9-10 AM	44.6	48.7	38.9	49.2
5.	10-11 AM	49.9	52.3	46.7	52.5
6.	11-12 AM	53.0	56.8	50.7	56.9
7.	12-13 PM	49.5	53.2	42.6	54.0
8.	13-14 PM	50.6	52.9	47.7	53.0
9.	14-15 PM	46.9	52.9	42.0	53.3
10.	15-16 PM	36.5	43.4	31.0	43.9
11.	16-17 PM	45.4	50.8	41.0	51.1
12.	17-18 PM	41.6	50.5	35.0	51.2
13.	18-19 PM	41.1	48.6	34.1	49.5
14.	19-20 PM	40.3	46.3	33.5	47.0
15.	20-21 PM	37.3	43.0	31.5	43.5
16.	21-22 PM	35.9	42.2	31.9	42.4
Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀)/60])					49.0

Note

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Page 1 of 2



TC - 5941



Report No. 20240909008

Report Issue Date: 11.09.2024

TEST REPORT

- | | | |
|---------------------------|---|---|
| 1. Name of Customer | : | HINDUSTAN ZINC LIMITED |
| 2. Purchase order Number | : | Rockphosphate Maton Mine |
| 3. Date of Monitoring | : | P.O. Maton, Distt. Udaipur (Rajasthan), INDIA |
| 4. Sample Identification | : | PO No. 2016.1201/ 5100019025 Date 13.01.2016 |
| 5. Condition of Sample | : | Amendment Dated: - 27.02.2023 |
| 6. Sample Received On | : | 07.09.2024 |
| 7. Period of Analysis | : | Noise Monitoring |
| 8. Test Methods Reference | : | NA |
| 9. Name of location | : | 09.09.2024 |
| | : | NA |
| | : | IS: 9989- 1981 (Reaffirmed 2008) |
| | : | Nr. Udaisagar |

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	Night Time L ₅₀	L ₉₀	
1.	22-23PM	35.1	39.8	29.5	40.3
2.	23-24PM	31.5	37.0	26.4	37.4
3.	0-1 AM	29.3	32.1	24.2	32.6
4.	1-2 AM	27.0	32.2	21.8	32.7
5.	2-3 AM	29.0	31.9	26.1	32.0
6.	3-4 AM	29.1	34.3	24.4	34.6
7.	4-5 AM	28.6	36.5	24.2	36.9
8.	5-6 AM	32.8	37.9	28.1	38.2
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					35.6
Day-Night Sound Level (L _{dn}) = 10 log {1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)]}					
L _{dn}					48.1

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
(Leena Sharma)
Chemist

Authorized Signatory

Amresh Kumar
(Amresh Kumar)
By GM [Technical]



- Note
- Complaint Register is available in lab / Email ID amresh.malik@wolkem.com
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End of Report

TC- 5941



Report No. 20240618003

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 18.06.2024/12:05PM
6. Sample received on : 18.06.2024
7. Period of Analysis : 18.06.2024 to 28.06.2024
8. Name of sample & Location : Kharwaria village (Ground water)
9. Method of Sampling : IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	28.6
2.	Relative Humidity	%	38

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)	-	6.48	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.284	-	-
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	1484	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	22	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	572	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	140.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	52.30	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	450	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	396	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	9.6	-	-
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)	-	-

Note

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Page 1 of 2

Continue



Report No. 20240618003

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/12:05PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Kharwaria village (Ground water)

9. 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	0.72	1.0	1.5
19.	Phosphate		IS:3025(Part-31)	mg/L	0.10	-	-
20.	Sulphate as SO ₄ ⁻		APHA 23 rd Ed., 4500 SO4 E	mg/L	168.4	200	400
21.	Nitrate as NO ₃		APHA 23 rd Ed., 4500 NO ₃ B	mg/L	19.0	45	No Relaxation
22.	Potassium as K		APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	9.8	-	-
23.	Sodium as Na		APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	79.6	-	-
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	0.24	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

BDL-Below Detection Limit

Tested By

(Manali Vyas)
(Manali Vyas)
Chemist

Authorized Signatory

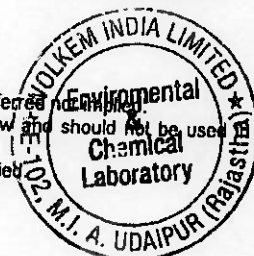
(Puran Singh)
(Puran Singh)
Asst. Officer

Note

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

Page 2 of 2

End of Report



Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India
Phone : +91 294 2494800 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20240618004

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/12:35PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Maton village (Ground water)

9. Method of Sampling : IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	29.6
2.	Relative Humidity	%	39

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)	-	7.46	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.044	-	-
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	1330	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	20	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	532	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	110.2	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	60.92	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	380	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	304	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	6.4	-	-
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)	-	-

Note

1. Complaint Register is available in lab / Email ID amrisha.nalika@wolkem.com
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Continue



Report No. 20240618004

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/12:35PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Maton village (Ground water)

9. 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	0.82	1.0	1.5
19.	Phosphate		IS:3025(Part-31)	mg/L	0.20	-	-
20.	Sulphate as SO ₄ ⁻		APHA 23 rd Ed., 4500 SO ₄ E	mg/L	239.0	200	400
21.	Nitrate as NO ₃		APHA 23 rd Ed., 4500 NO ₃ B	mg/L	14.4	45	No Relaxation
22.	Potassium as K		APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	6.6	-	-
23.	Sodium as Na		APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	74.4	-	-
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	0.36	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	0.10	0.3	No Relaxation

BDL-Below Detection Limit

BDL-Below Detection Limit

Tested By

(Manali Vyas)
Chemist

Authorized Signatory

(Purvi Singh)
Asst. Officer

Note

1. Complaint Register is available in lab / Email ID anurish.nalakh@wolkem.com
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Page 2 of 2

End of Report



Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India
Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941
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Report No. 20240618005

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/12:55PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Lakarwas village (Ground water)

9. Method of Sampling : IS: 3025 (Pt 1) 1987

S. No.	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	29.8
2.	Relative Humidity	%	39

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)	-	6.58	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.626	-	-
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	1782	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	576	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	175.0	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	32.62	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	412	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	604	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	7.2	-	-
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)	-	-

Note

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Continue



Report No. 20240618005

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/12:55PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

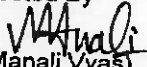
8. Name of sample & Location : Lakanwas village (Ground water)

9. Method of Sampling : IS: 3025 (Pt 1) 1987

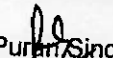
S. No.		Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
						Acceptable	Permissible
Chemical Testing – Water – Ground Water							
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-	
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.64	1.0	1.5	
19.	Phosphate	IS:3025(Part-31)	mg/L	0.96	-	-	
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO4 E	mg/L	234.9	200	400	
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	14.1	45	No Relaxation	
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	8.0	-	-	
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	66.0	-	-	
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	0.90	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							

BDL-Below Detection Limit

Tested By


(Manali Vyas)
Chemist

Authorized Signatory


(Purni Singh)
Asst. Officer

Note

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End of Report



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Report No. 20240618006

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/12:55PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Umrada village (Ground water)

9. Method of Sampling : IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	29.9
2.	Relative Humidity	%	39

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)	-	6.56	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.244	-	-
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	804	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	22	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	474	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	110.2	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	48.42	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	340	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	108	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	5.6	-	-
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)	-	-

Note

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





Report No. 20240618006

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/12:55PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Umrada village (Ground water)

9. Method of Sampling : IS: 3025 (Pt 1) 1987

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	0.66	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.10	-	-
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO4 E	mg/L	69.4	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	13.0	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	7.4	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	22.2	-	-
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	0.20	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	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

BDL-Below Detection Limit

Tested By

(Manali Vyas)
Chemist

Authorized Signatory

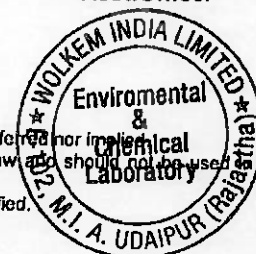
(Puran Singh)
Asst. Officer

Note

1. Complaint Register is available in lab / Email ID : s.ashish.mahapatra@wolkem.com
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Page 2 of 2

End of Report



Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India
Phone : +91 294 2494600 - 02 E-mail : Info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust



Report No. 20240618007

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/01:15PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Kanpur village (Ground water)

9. Method of Sampling : IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	30.2
2.	Relative Humidity	%	40

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)	-	7.66	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.710	-	-
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	1170	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	394	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	110.2	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	27.80	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	350	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	362	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	7.0	-	-
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)	-	-

Note

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Page 1 of 2

Continue

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Phone : +91 294 2494800 - 02 E-mail : info@wolkem.com
CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust

Report No. 20240618007

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/01:15PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Kanpur village (Ground water)

9. Method of Sampling : IS: 3025 (Pt 1) 1987

: 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 ⁻	APHA 23 rd Ed., 4500 SO4 E	mg/L	216.6	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	24.0	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	6.0	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	36.2	-	-
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	0.84	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

BDL-Below Detection Limit

Tested By

(Manali Vyas)
Chemist

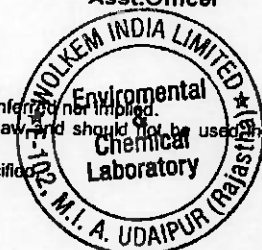
Authorized Signatory

(Puran Singh)
Asst. Officer

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Page 2 of 2
End of Report



Report No. 20240618008

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/01:35PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Nakoli village (Ground water)

9. Method of Sampling : IS: 3025 (Pt 1) 1987

3. Method of Sampling : IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	30.4
2.	Relative Humidity	%	40

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)	-	6.66	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.224	-	-
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	742	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	354	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	97.4	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	27.32	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	292	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	226	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	6.2	-	-
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)	-	-

Note

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Registered & Corporate Office :

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CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust

Report No. 20240618008

Report Issue Date: - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/01:35PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Nakoli village (Ground water)

9. Method of Sampling : IS: 3025 (Pt 1) 1987

Method of Sampling

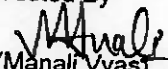
IS: 3025 (Pt 1) 1987

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	0.84	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.46	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO4 E	mg/L	80.4	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	8.8	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	5.4	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	45.4	-	-
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	0.10	0.3	No Relaxation

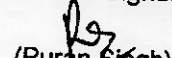
BDL-Below Detection Limit

BDL-Below Detection Limit

Tested By


(Manali Vyas)
Chemist

Authorized Signatory


(Puran Singh)
Asst. Officer

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Page 2 of 2
End of Report



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Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com
CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust

Report No. 20240618009

Report Issue Date: - 28.06.2024

- 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. Sample Identification : Ground Water
 4. Condition of Sample : Sealed/Ok
 5. Date & Time of Sampling : 18.06.2024/02:35PM
 6. Sample received on : 18.06.2024
 7. Period of Analysis : 18.06.2024 to 28.06.2024
 8. Name of sample & Location : Dhoonimata village (Ground water)
 9. Method of Sampling : IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	30.6
2.	Relative Humidity	%	40

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)	-	7.20	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.464	-	-
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	1004	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	404	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	86.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	46.04	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	294	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	324	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	6.4	-	-
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)	-	-

Note

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Page 1 of 2

Continue



TC-5941

Our Commitment.. Your Trust

Report No. 20240618009

Report Issue Date : - 28.06.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/02:35PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Dhoonimata village (Ground water)

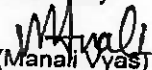
9. Method of Sampling : IS: 3025 (Pt 1) 1987

: 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	0.66	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.11	-	-
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO4 E	mg/L	58.2	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	14.2	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	8.4	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	75.0	-	-
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	0.24	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

BDL-Below Detection Limit

Tested By


(Manali Vyas)
Chemist

Authorized Signatory


(Puran Singh)
Asst. Officer

Note

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End of Report



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

CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust

Report No. 20240618010

Report Issue Date: - 28.06.2024

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. Sample Identification : Surface Water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 18.06.2024/01:55PM
6. Sample received on : 18.06.2024
7. Period of Analysis : 18.06.2024 to 28.06.2024
8. Name of sample & Location : Bagdara Talav (Surface water)
9. Method of Sampling : IS: 3025 (Pt 1) 198

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	30.5
2.	Relative Humidity	%	40

S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water- Surface Water				
1.	pH (at 25°C)	IS:3025(Part-11)	-	7.45
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.852
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	1242
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	22
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	442
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	97.4
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	47.02
10.	Alkalinity	IS:3025(Part-23)	mg/L	330
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	280
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<4)
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	7.6
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.0
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	4.0

Note

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Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com
CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust

Report No. 20240618010

Report Issue Date : - 28.06.2024

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. Sample Identification : Surface Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 18.06.2024/01:55PM

6. Sample received on : 18.06.2024

7. Period of Analysis : 18.06.2024 to 28.06.2024

8. Name of sample & Location : Bagdara Talav (Surface water)

9. Method of Sampling : IS: 3025 (Pt 1) 198

S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water – Surface Water				
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	16.02
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.42
19.	Phosphate	IS:3025(Part-31)	mg/L	3.4
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	269.2
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	18.0
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	9.2
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	86.0
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	2.2
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	0.15

BDL-Below Detection Limit

Tested By

Manali Vyas
(Manali Vyas)
Chemist

Authorized Signatory

Puran Singh
(Puran Singh)
Asst. Officer

Note

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Page 2 of 2
End of Report



Registered & Corporate Office :

"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India
Phone : +91 294 2494800 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust

Report No. 20240904003

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/11:05AM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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	Unit	Results
1.	Ambient Temperature	°C	30.1
2.	Relative Humidity	%	58

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)	-	6.65	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms/cm	2.059	-	-
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	1326	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	528	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	128	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	49.9	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	432	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	366	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	7.2	-	-
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)	-	-

Note

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Page 1 of 2



Report No. 20240904003

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/11:05AM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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	0.69	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.15	-	-
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	144.0	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	16.1	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	6.2	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	48.2	-	-
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	0.21	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	0.10	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

Manali Vyās
(Manali Vyās)
Chemist

Authorized Signatory

Puran Singh
Asst. Officer

Note

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Page 2 of 2
End of Report



TC - 5941



Report No. 20240904004

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/11:30AM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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	30.2
2.	Relative Humidity	%	59

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)	-	7.32	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms/cm	1.889	-	-
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	1248	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	14	-	-
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	115.2	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	49.9	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	372	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	280	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	6.2	-	-
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)	-	-

Note

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TC - 5941



Report No. 20240904004

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/11:30AM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.67	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.24	-	-
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	221	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	9.4	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	5.0	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	68.2	-	-
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	0.24	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

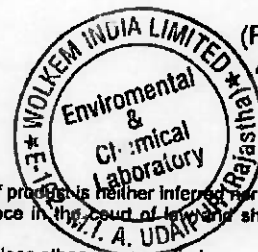
BDL-Below Detection Limit

Tested By

Manali Vyas
(Manali Vyas)
Chemist

Authorized Signatory

Puram Singh
(Puram Singh)
Asst. Officer



Note

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Page 2 of 2
End of Report



TC - 5941



Report No. 20240904005

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/11:50AM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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
1.	Ambient Temperature	°C	30.5
2.	Relative Humidity	%	61

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)	-	6.74	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms/cm	2.778	-	-
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	1736	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	536	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	166.4	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	28.8	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	392	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	560	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	6.4	-	-
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)	-	-

Note

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Page 1 of 2



TC - 5941





Report No. 20240904005

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/11:50AM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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-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	0.59	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	1.10	-	-
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	207.6	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	12.7	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	5.6	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	37.9	-	-
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	0.42	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	0.10	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

Manali Vyas
(Manali Vyas)
Chemist

Authorized Signatory

Puran Singh
(Puran Singh)
Asst. Officer

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Page 2 of 2

End of Report



TC - 5941



Report No. 20240904006

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/OK

5. Date & Time of Sampling : 04.09.2024/12:20PM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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
1.	Ambient Temperature	°C	31.0
2.	Relative Humidity	%	62

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)	-	6.65	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms/cm	1.169	-	-
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	738	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	14	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	444	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	43.2	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	336	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	93	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	5.9	-	-
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)	-	-

Note

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Page 1 of 2



TC - 5941



Registered & Corporate Office:
"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan - India
Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379

Our Commitment.. Your Trust

Report No. 20240904006

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/12:20PM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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	
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	0.61	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.17	-	-
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	51.8	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	8.8	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	5.9	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-89 to 3-100)	mg/L	24.6	-	-
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	0.21	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)
Chemist

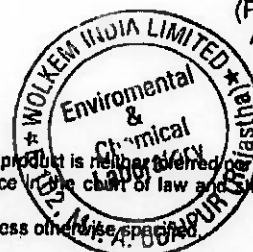
Authorized Signatory

(Purn Singh)
Ass. Officer

Note

1. Complaint Register is available in lab / Email ID amish.malik@wolkem.com
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End of Report



TC - 5941





Report No. 20240904007

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/12:40PM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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	Unit	Results
1.	Ambient Temperature	°C	31.2
2.	Relative Humidity	%	64

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)	-	7.51	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms/cm	1.703	-	-
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	1098	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	14	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	344	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	99.2	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	23.0	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	352	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	320	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	6.2	-	-
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)	-	-

Note

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Page 1 of 2



TC - 5941



Report No. 20240904007

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/12:40PM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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	
					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	0.71	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	160.4	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	20.9	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	4.9	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	26.1	-	-
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	0.91	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	0.10	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

Manali Vyas
(Manali Vyas)
Chemist

Authorized Signatory

Puran Singh
(Puran Singh)
Ass. Officer

Note

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Page 2 of 2

End of Report



TC - 5941





Report No. 20240904008

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 04.09.2024/01:10PM
6. Sample received on : 04.09.2024
7. Period of Analysis : 04.09.2024 to 16.09.2024
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	Unit	Results
1.	Ambient Temperature	°C	31.5
2.	Relative Humidity	%	65

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)	-	6.90	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms/cm	1.062	-	-
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	692	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	344	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	96.0	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	24.9	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	282	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	194	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	7.1	-	-
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)	-	-

Note

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Report No. 20240904008

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/01:10PM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.73	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.24	-	-
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	72.1	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	8.0	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-88 to 3-90)	mg/L	6.0	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	38.4	-	-
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	0.18	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)
Chemist

Authorized Signatory

(Puran Singh)
Asst. Officer

Note

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End of Report



TC - 5941



Report No. 20240904009

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/02:10PM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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	31.8
2.	Relative Humidity	%	64

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)	-	7.10	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms/cm	1,456	-	-
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	950	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	376	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	89.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	36.5	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	280	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	288	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	6.5	-	-
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)	-	-

Note

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Page 1 of 2



TC - 5941



Registered & Corporate Office:
"Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan- India
Phone : +91 294 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379

Our Commitment.. Your Trust



Report No. 20240904009

Report Issue Date: - 16.09.2024

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. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 04.09.2024/02:10PM

6. Sample received on : 04.09.2024

7. Period of Analysis : 04.09.2024 to 16.09.2024

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.	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	0.14	-	-
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	37.1	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	12.5	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	6.2	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	54.6	-	-
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	0.20	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	0.10	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

(Signature)
(Manali Vyás)
Chemist

Authorized Signatory

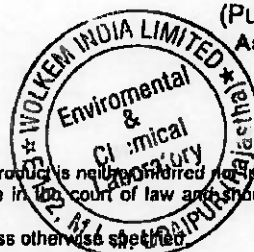
(Signature)
(Puran Singh)
Asst. Officer

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Page 2 of 2

End of Report



TC - 5941



Report No. 20240904010

Report Issue Date: - 16.09.2024

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. Sample Identification : Surface Water
4. Condition of Sample : Sealed/OK
5. Date & Time of Sampling : 04.09.2024/04:10PM
6. Sample received on : 04.09.2024
7. Period of Analysis : 04.09.2024 to 16.09.2024
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	31.4
2.	Relative Humidity	%	65

S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water- Surface Water				
1.	pH (at 25°C)	IS:3025(Part-11)	-	7.69
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms/cm	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	1140
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	28
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	416
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	86.4
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	48
10.	Alkalinity	IS:3025(Part-23)	mg/L	328
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	248
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	8.0
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	2.6

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Report No. 20240904010

Report Issue Date: - 16.09.2024

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. Sample Identification : Surface Water
4. Condition of Sample : Sealed/OK
5. Date & Time of Sampling : 04.09.2024/04:10PM
6. Sample received on : 04.09.2024
7. Period of Analysis : 04.09.2024 to 16.09.2024
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-58)	mg/L	10.7
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.40
19.	Phosphate	IS:3025(Part-31)	mg/L	3.5
20.	Sulphate as SO ₄ ⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	238.2
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	13.8
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 (3-99 to 3-100)	mg/L	79.4
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	1.96
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	0.12

BDL-Below Detection Limit

Tested By

(Signature)
(Manali Vyas)
Chemist

Authorized Signatory

(Signature)
(Puran Singh)
Asst. Officer

Note

1. Complaint Register is available in lab / Email ID amrsh.malik@wolkem.com
2. The results listed refer only to the tested sample (s) and parameter (s) Endorsement of product is neither offered nor implied.
3. 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.
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.

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End of Report



TC - 5941



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