

Registered AD

Ref: HZL/ Maton /MoEF/2023-24/ 19

Date: 25.05.2024

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 October'23 to March'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 October'23 to March'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, Sahakar Bhawan, North T.T. Nagar, BHOPAL-(MP)-462 003
2. Member Secretary, Rajasthan Pollution Control Board, 4 - Institutional Area, Jhalana Dungri, JAIPUR (RAJ.) - 305001.
3. The Regional Office, Rajasthan State Pollution Control Board, F-470, Near UCCI Building, Mewar Industrial Area, Udaipur (Raj.) - 313001.
4. Office Copy (Env. Cell)

Hindustan Zinc Limited

Maton Rock Phosphate Mines.

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CIN : L27204RJ1966PLC001208

Six Monthly Compliance Report of Environmental Clearance

Name of the Project : Maton Rock Phosphate Mining Project of M/s Hindustan Zinc Ltd.
 Project Code :
 Clearance Letter No.: J-11015/169/2009-IA.II(M) Dt. 17/03/2010
 Period of Compliance Report: October'23 to March'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
	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 Anicut 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
	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
	Company in public domain. The circular No. J-20012/I/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	
xvii	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 Rockphosphate and waste should be made.	Calendar plan, as per approved mine plan, is being adhered to.
iii	At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 μm i.e., PM ₁₀) & 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 10 μm 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.

S.No.	Conditions	Status
	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 Parishad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied
xv	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ Tehsildar's Office for 30 days.	Complied.
xvi	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the Regional Office of the Ministry of Environment and Forests, at Lucknow by e-mail.	Environment statement in Form V is submitted periodically as stipulated. Environmental statement for the year 2022-23 was submitted on 28.09.2023.
xvii	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located at Lucknow.	Advertised in two News papers named Dainik Bhashkar and Rajasthan Patrika on 19.03.2010 (Annexure – 12).

ANNEX(1)

DETAILS OF THE SUBMISSION OF THE PROBLEMS FROM INDIA
AND THE STATE AND THE NUMBER OF THE PROBLEMS SUBMITTED

STATEMENT

The problems submitted by India consist of 11 problems, which are given below. The problems are of the following nature:-
1. A problem on the effect of the variation of the parameter α on the solution of the differential equation $y' = f(x, y)$.
2. A problem on the effect of the variation of the parameter α on the solution of the differential equation $y' = f(x, y)$.
3. A problem on the effect of the variation of the parameter α on the solution of the differential equation $y' = f(x, y)$.

STATEMENT

DETAILS OF THE PROBLEMS
SUBMITTED BY INDIA

THE NUMBER OF
THE PROBLEMS SUBMITTED

ARYA SX-2A

175

चायासंघ भूमि प्रबालित अधिकारी,

उदयपुर-सलूक्यर, राजस्थान

क्रमांक :- २२/१८

ठुड़वड़

सम-दिविजन

दिनांक २५-२-४० १८७

अवार्ड

(चंतुरगंत घारा ११, राजस्थान भूमि प्रबालित अधिकारी, संख्या १६५३)
विषय:- हिन्दुस्तान चिक लिंग के काम में आने वाली भूमि को छापाए करने हेतु ।

प्राचीनी घटनाकाल की गई है। हिन्दुस्तान चिक लिंग, जया कलहपुरा, उदयपुर की शाका जायर/मदून/दोरीया/माईस के लिए भूमि प्रबालित बाबत राण्य/राकार से राजस्थान भूमि प्रबालित अधिकारी, संख्या १६५३ की घटना ५ को विषयित विषयित विभाग द्वारा बाबर उदयपुर चिक लिंग के लिए १३-६-७३ को आद्य हो जाने से भूमि प्रबालित अधिकारी/जिवा/सलूक्यर/राजसमेत्य की ओर से बाबर इस दिनियान में घोषित की गई है। यहां पर प्रकाशित हो चुकी है प्रीर इस दिनियान में घोषित की गई है। जायर/मदून/दोरीया/माईस की घटना समझी जायर/मदून/दोरीया/माईस के लिए नियू रजायन है।

उपरोक्त प्रकरण में नियन्मित यातामियान की भूमि प्रबालित हो रही है। इस भूमि की सर्वे की गई है। चिक का विवरण नियन्मित है :-

साम नंम	गाम तहसील	संस्था नं.	इकाया		किलम-भूमि	मराम	विवरण
			बीथा	विस्ता			
सर्व	गिलि	१५७७	८-	८०	७७	१-००	

भाली कामजात से इस भूमि के यालिक प्रीर कामियान की घोषित कराई गई है। प्रामाण्य कि घबालित होने वाली भूमि चिक का विवरण चलार दिया गया है। भी उपरोक्त प्रबालित अधिकारी के नाम पर इस्ताज है जिसकी जाति नियासी तहसील गिलि वहां पर चलाने वाली है। प्रीर चलाने वाली भूमि प्रसारित किया है कि घबालित तस्तीक तहसीलदार सा। जिवा/सलूक्यर/राजसमेत्य के लिए हो। भी घबालित किया है कि घबालित भी उपरोक्त प्रबालित अधिकारी के नाम पर चलाने जाने।

वे कि यातामियान यापसी समझते पर एकजाना के लिए ठुड़वड़ है। ऐसी सूत्रत में भूमि प्रबालित अधिकारी, १६५३ की साल ६ (१) व ८ (१) के प्रयुक्त नोटिव जारी करने की कोई आवश्यकता नहीं है।

तहसीलदार सा। जिवा/सलूक्यर/राजसमेत्य के नाम हैं। यहां पर प्राप्त सामान देने के लिये स्वीकृत जाही जो फाईस तहान है।

न अवाप्ति नियमावली प्रपञ्च १० (भूमि आवर्ति नियमावली अनुच्छेद ७६)

राजी नाम।

महाराष्ट्र राज्यालय नं ८०० दस्तावेज़ (राजीनामे पर इसाक्षर करने वाले पक्ष विधिक) एवं इस निम्न निश्चित सूचि की अवधियोगी घोर मुआवजे की एवं उनके लिए शपली सहमति प्रदित करते हैं घोर गिरी तरह का हमारे इस चढ़ाया हुआ वास्तविक हमारी कोइ-आधिक भाग (खेज) गिरी रुपन पर दापर की गई, तुरन्त इह शर्तभी जाओ।

फिरा	तात्त्वीक	गाँव	जावदाव/ हुगा का विवरण	मुआवजे का विवरण	
				वार्षिक अदायगी लगान वा घृट होगा	नकद मुआवजा
उदाहर	गिरी	गाँव	१५७७	४.००	१.००
					१५८५.८०
					११२५.६०
					३४५०.००
					<u>१५८०५.८०</u>
					१७.५ रुपया
					२०.००
					PROJECT MANAGER
					दिनुखान जिला लिस्टेशन (शास्त्र दरबार का दस्तावेज) गढ़ा रोड-मुंशोड-वासा पोखरा-मुंशोड-वासा-कम्पुर मो-२१३०१४

प्रमाणिकार "पर्सिक" वार अपार्टमेंट में या दर्शक वा प्रबोधक किमे जाते हैं या जब वृत्त मिना मुआवजा

मानव अधिकार - २८
७६

राजस्थान कालांक
राजस्थान कालांक

प्राप्ति:- अन्वेषण कालांक
राजस्थान ।

363/
२७.५.१
अंकोली
२६/२/९७

क्रमांक:- ५. ८३३ दाला-६/८६/।

मापदण्ड:- १८. २-७७

विवरण:- भूमि दाला जनपद, गोपनी राजस्थान प्रान्त भूमि
ने गोट नार्ह इसे या त्रै नार्ह कहते हैं ।

प्रकृष्टि,

केन्द्रीय भूमि आदाएँ गोपनीय, १८९६ के अन्तर्गत उपचान
एवं विशेष अवधियोंके विवरण में भूमि नार्ह का वर्णन किया गया है । लोकों द्वारा भूमि आदाएँ गोपनीय के अन्तर्गत भूमि आ
आदाएँ जारी कर लकड़ बदौलतों द्वारा भूमि नार्ह आदा करने के
पश्चात भूमि का कर्जा संभव धूमान भूमि ने नियम जारी किया है ।

जब ६८८ वर्ष द्वारा भूमि आदाएँ भूमि नार्ह करने का विधान
भू-राजस्त आदाएँ विधान, १८९६ के अन्तर्गत भूमि नार्ह के अन्तर्गत भूमि नार्ह के अन्तर्गत भूमि नार्ह करने का विधान है ।

उस विधि विधि के अन्तर्गत भूमि आदाएँ नार्ह करने का विधान है ।
भूमि देनदार भूमि आदाएँ नार्ह करने का विधान, १८९६ के अन्तर्गत भूमि नार्ह के
विधान विधि विधि के अन्तर्गत भूमि आदाएँ नार्ह करने के अन्तर्गत भूमि नार्ह के अन्तर्गत भूमि आदाएँ नार्ह करने का विधान है ।
अन्तर्गत एक विधि विधि विधि के अन्तर्गत भूमि आदाएँ नार्ह करने का विधान है ।
अन्तर्गत एक विधि विधि विधि के अन्तर्गत भूमि आदाएँ नार्ह करने का विधान है ।

१७३
२४.२.५.

प्राप्ति:- निम्न विवरण द्वारा जारी रखा जाएँगा इसी के अन्तर्गत ।:-

१. निकन्दा, राजस्थान कालांक, राजस्थान, राजस्थान ।

राजस्थान कालांक

ANM 645



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

Dt 14.07.2014

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

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 Udalpur situated in Girwa block

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

Sir,

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

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

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

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

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

With regards

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

Encl: above application form

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

2. Office Copy (Env. Cell)

Name of Person/Firm	Hindustan Zinc Limited; Maton Rock Phosphate Mines Chittaur Dist. Udaipur
Letter Reference No. and Date	HZL/maton/cawat/mining/no. 2079-7542 14/7/2014
Subject	Application for grant of NOC to extract 1FB1 m ³ /day Water at Jhalana Teliwali, Chittaur Dist. Udaipur
Dated signatures of diarist/dispatcher (CGWBD, WR, 6-A, Jhalana Doongri, Jaipur 302 004)	Asst. Manager Chit 16/7/14
Remarks if any	

ANNEXURE 2

HINDUSTAN ZINC LIMITED
Mimon Rock Phosphate Mine
Tehsil- Girwa, Distt. Udaipur- 313004 (Raj)
Phone - 0294-2342093

January 10, 2011

To:

Executive Engineer
Irrigation Department
Udaipur (Raj) 313004

Subject: NOC for construction of five Anicut in respect of comply of EC condition.
Mehf [Ref. F No J-11615/169/2000-L&H-(M) Dated 17.03.2010]

Su.

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

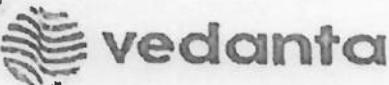
Anicut No. 1 near village Kahuwas
Anicut No.2 near village Parols
Anicut No.3 near village Bichhri
Anicut No.4 near village Kompur
Anicut No.5 near Village Dundiya

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

Thanking you

Yours truly
(Hemant Sharma)

Mine Manager



A7 161084-5



Ref. No: M/ton RSPC/B/2015/16/65

Date: 18.09.2015

To,

The S-E Mines,
Rajasthan State Pollution Control Board,
4, Institutional Area,
Jhalana Dongri, Jaipur (Raj.) 302004.

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

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

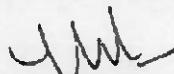
Further, HCL has entered into a tripartite agreement with Municipal Council Udaipur and Urban Improvement Trust Udaipur for laying of Sewage Trunk Line from Udaipur city to STP to divert sewage of city from entering into Ahar River and thereby avoiding pollution from entering into it. This 20 MLD STP is also set up by HCL at cost of Rs. 63 Crore at Munwa 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 - L27204RJ1966PLC00120B

Thanking you,

Yours sincerely,



(V.P. Joshi)

G.M. & Unit Head **Unit Head**

Hindustan Zinc Ltd.

Encl: As above. **Malon 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 UCCI
Building, Madri Industrial Area, Udaipur (Raj.) - 313003.

~~3. Office Copy (Env. Cell)~~

ANNEX



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

Dt 14.07.2014

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

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): L27204RJ1966PLC00120K, Website: www.hzlindia.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.

Ans
With regards

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

Encl: above application form

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

2. Office Copy (Env. Cell)

Name of Person/Firm	Hindustan Zinc Ltd., Maton Rock Phosphate Mine Udaipur Dist. Udaipur
Letter Reference No. and Date	H2L/maton/cgwbd/met/strg/2014-15-43 14/7/14
Subject	Request for grant of NOC, to abstract 20m ³ /day vintage Maton Tech Udaipur Dist. Udaipur
Dated signatures of diarist/dispatcher (CGWB, WR, 6-A, Jhalana Doongri, Jaipur-302004)	
Remarks if any	Chkd 16/7/14

Annex-7

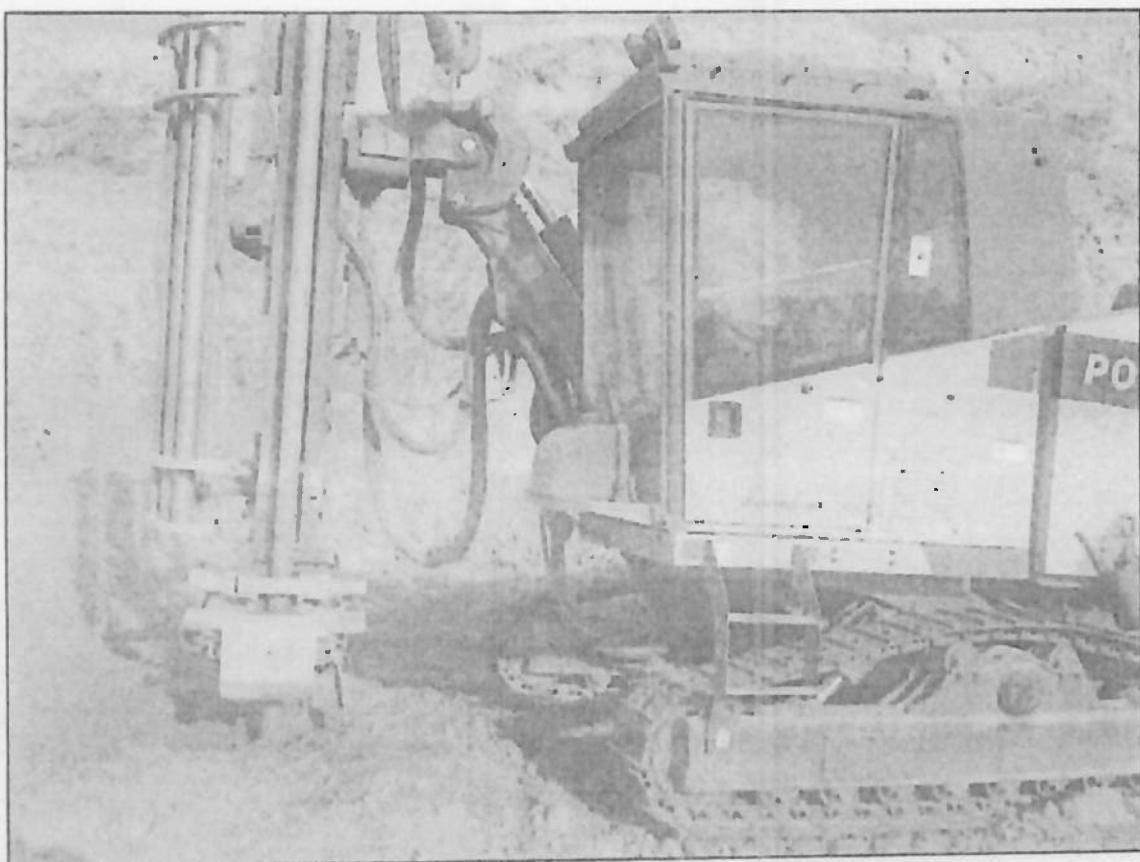


Fig : Wet Drilling

87/8x(B)

कायाचिल्य उप वन वरिकाक, उदयपुर (राजस्थान)

कमाक - प. १) रावे / उवास / जतार / ८८७५ दिनांक १५.१२.२००६

माईन्स मेंटेनर
मिनी-एलान एफ सिमिटेल
मनोज 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 Minton Mines (ML No. 6/89) Near village Moton, Tehsil Girwa, Distt. Udaipur (Raj.)

पराम - अधिकारी यात्रा का कमाक निल. UZL/Minton/env/09/ दिनांक १८.१२.२००६

मान्यता,

उपरांत निम्नलिखि यात्रागत प्राक्षेपण पत्र वा दस्तावेज नहीं आपात दिनांक १८.१२.२००६ को कांसर एवं बफार दोनों १० किमी दूरी के निश्चाल कान्हा नामक वन्यजीव विहार नाईनी लाइफ नामिंग द्वारा एलिकेट रिलेस निर्माण नहीं है।

मान्यता
अधिकारी
उदयपुर (राजस्थान)

कार्यालय उप वन संरक्षक, उदयपुर (उत्तर)

क्रमांक-प. () सर्व/उवस/उत्तर/ 609.5

दिनांक : 14-12-09

माईंस मेनेजर
हिन्दूस्तान जिंक लिमिटेड
मटून माईंस
उदयपुर

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

प्रसंग:- आपका प्रार्थना पत्र क्रमांक निल HZL/Matun/env/09/ दिनांक 18.11.2009

महोदय,

उपरोक्त विषयान्तर्गत प्रासाधिक प्रार्थना पत्र के क्रम में लिखा जाता है कि आपके लिज नं.
एम.एल. 08 / 1989 के कोर एवं बफर क्षेत्र में पाये जाने वाले प्लोरा एवं फोना की सूचीयां आवश्यक
कार्यवाही हेतु संलग्न प्रस्तुत है।

संलग्न:- उपरोक्तानुसार।

भवदीय,
उप वन संरक्षक
उदयपुर (उत्तर)

FLORA & FAUNA OF TREE

**FLORA WITHIN THE STUDY AREA OF MATTUN MINES OF HIS
HINDUSTAN ZINC LIMITED**

Sl No.	Local Name	Dominant Zone 10 KM
1	TREES	
1	BONI	ACACIA EUCOPHILICA
2	BABUL	ACACIA SENEGAL
3	ARDUSA	ALANTHUS VULGARIS JACQUIN
4	DHOKADA	ANDROPSIS PTEROPHYLLA EDG
5	NEEM	AZADIKARITA INDICA
6	KHAKHRA	BUTEA MONOSPERMA
7	BORDI	COPROSMA MAINTINIA
8	VILAYATI BARIJ	FRAXINELLA FLORIP
9	HET PAL	FICUS RELIGIOSA
10	BARGAD	FICUS BENJALIFER
11	BEI	GNETUM MAJILLIOS
12	GONDA	CORDIA NOXA
13	KANTA	DISPERSUS MONTANIA
14	KACHINAR	BAPHIA DECEMPLA
15	IMI	TAMARINDUS INDICA
16	EKAR	PIMENTO CORYNIFOLIA
17	AAM	MANGIFERA INDICA
18	DI SIBARI	ACACIA NILOTICA
19	BANSI	DENDROCALAMUS STRICTUS
20	VISAM	DRYASIA SISSO
21	SHAMPA	PLUMARIA BUEKA
22	PHAJUR	PHOENIX ACHILIS
23	SHRUBS	
1	AKDO	CALOTROPIS PROCERA
2	ANDHIIHARA	APHRANTHUS ASPIRA
3	ANAI	ASSA ALBICULATA
4	DHATURA	DHATURA STRIATI
5	I. HANNOOK	ZEPHYRUS NUMMULARIA
6	THOR	DUPHORDIA NEVULIS
24	GRASSES	
1	PHARUT	FENICHRIS FALCIPLANA
2	LUDHI	KACEDARUM MINIMA
3	BHUNAR	EREMOPOGON FORESTATUS
4	LAMPLA	ANISTIA SP
5	LATNA	LATRO CAMARA
6	DHATURA	DHATURA METTAI
7	NEAD BHUA	ZEPHYRUS NUMMULARIA


 राज्य सरकार
 झज्जर (झज्जर)

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

REPTILES :

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

राष्ट्रीय संग्रहालय
मुख्यमंत्री (राजपत्र)

Annexure-3



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

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



www.wolkem.com

Report No. 20231205002/A

Report Issue Date: - 18.12.2023

1. Name of Customer

TEST REPORT

: HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 04.12.2023/10:05AM
 Air Sample
 Sealed/Ok
 05.12.2023
 05.12.2023 to 15.12.2023
 Kharwaria Village
 N 24° 33' 9" - E 73° 47' 3"
 IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

2. Purchase order Number

3. Date & Time of Monitoring

4. Sample Identification

5. Condition of Sample

6. Sample received on

7. Period of Analysis

8. Name of Location

9. Coordinates

10. Method of Sampling

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1425.30	Minutes
2.	Average Flow rate for PM10	1.190	M ³ / Min
3.	Ambient Temperature	22.0	°C
4.	Relative Humidity	63	%

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)	49.24	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	25.16	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	7.62	80
4.	NO ₂	µg/m ³	IS.5182 (Part-6)	9.19	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Manish Bhagora)
Chemist

Authorized Signatory

(Amreesh Kumar)
Head & Dy. GM

Note

- Complaint Register is available in lab / Email ID lab.office@wolkem.com
- The results listed refer only to the tested sample (s) and parameter (s). Endorsement of product is neither inferred nor implied.
- 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.
- The samples will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.
- Any discrepancy in test results should be reported within 15 days.



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 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust

Report No. 20231205002/B

Report Issue Date: - 18.12.2023

1. Name of Customer

TEST REPORT

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

: 04.12.2023/10:05AM

: Air Sample

: Sealed/Ok

: 05.12.2023

: 05.12.2023 to 15.12.2023

: Kharwaria Village

: N 24° 33' 9" - E 73° 47' 3"

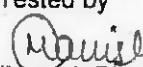
: Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	22.0	°C
2.	Relative Humidity	63	%

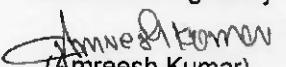
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.40	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.94	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.228	-

Tested by


 (Manish Bhagora)
 Chemist

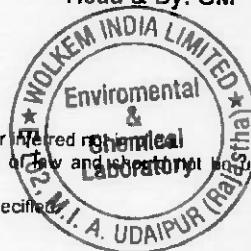
Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

Note

1. Complaint Register is available in lab / Email ID lab.office@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 is not to 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.

Page 1 of 1
 End of Report





Report No. 20231206002/A

Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date & Time of Monitoring	: 05.12.2023/10:30AM
4. Sample Identification	: Air Sample
5. Condition of Sample	: Sealed/Ok
6. Sample received on	: 06.12.2023
7. Period of Analysis	: 06.12.2023 to 15.12.2023
8. Name of Location	: Maton Village
9. Coordinates	: N 24° 33' 13" - E 73° 47' 39"
10. Method of Sampling	: IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

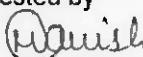
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1433.70	Minutes
2.	Average Flow rate for PM10	1.155	M³/ Min
3.	Ambient Temperature	22.6	°C
4.	Relative Humidity	60	%

Results Ambient Air Quality

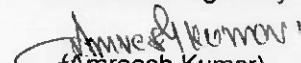
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m³	IS:5182 (Part-23)	53.25	100
2.	PM _{2.5}	µg/m³	WIL/SOP No. 10/25 Issue date 01.05.2019	26.26	60
3.	SO ₂	µg/m³	IS:5182 (Part-2)	8.24	80
4.	NO ₂	µg/m³	IS:5182 (Part-6)	10.10	80
5.	Lead	µg/m³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Manish Bhagora)
 Chemist

Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

Note

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Page 1 of 1
 End of Report



Report No. 20231206002/B

Report Issue Date: - 18.12.2023

TEST REPORT

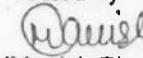
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023
4. Sample Identification	:	05.12.2023/10:30AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	06.12.2023
8. Name of Location	:	06.12.2023 to 15.12.2023
9. Coordinates	:	Maton Village
10. Method of Sampling	:	N 24° 33' 13" - E 73° 47' 39" Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	22.6	°C
2.	Relative Humidity	60	%

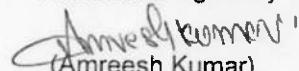
Results Ambient Air Quality

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	2.50	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.249	-

Tested by


 (Manish Bhagora)
 Chemist

Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

Note

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 Page 1 of 1
End of Report




Report No. 20231207002/A

Report Issue Date: - 18.12.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date & Time of Monitoring	:	06.12.2023/10:15AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	07.12.2023
7. Period of Analysis	:	07.12.2023 to 15.12.2023
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

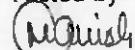
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1420.80	Minutes
2.	Average Flow rate for PM10	1.185	M³/ Min
3.	Ambient Temperature	23.4	°C
4.	Relative Humidity	60	%

Results Ambient Air Quality

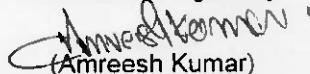
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m³	IS:5182 (Part-23)	56.13	100
2.	PM _{2.5}	µg/m³	WIL/SOP No. 10/25 Issue date 01.05.2019	27.34	60
3.	SO ₂	µg/m³	IS:5182 (Part-2)	9.06	80
4.	NO ₂	µg/m³	IS:5182 (Part-6)	10.41	80
5.	Lead	µg/m³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Manish Bhagora)
 Chemist

Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

Note

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Page 1 of 1

End of Report



Report No. 20231207002/B

Report Issue Date: - 18.12.2023

1. Name of Customer
TEST REPORT

: HINDUSTAN ZINC LIMITED
 Rockphosphate Maton Mine
 P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
 PO No. 2016.1201/ 5100019025 Date 13.01.2016
 Amendment Dated: - 27.02.2023
 06.12.2023/10:15AM
 Air Sample
 Sealed/Ok
 07.12.2023
 07.12.2023 to 15.12.2023
 Lakadwas Village
 N 24° 33' 3" - E 73° 48' 28"
 Instrument Manual

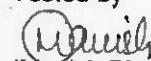
2. Purchase order Number
3. Date & Time of Monitoring
4. Sample Identification
5. Condition of Sample
6. Sample received on
7. Period of Analysis
8. Name of Location
9. Coordinates
10. Method of Sampling

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	23.4	°C
2.	Relative Humidity	60	%

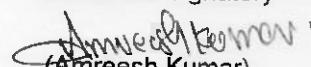
Results Ambient Air Quality

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	0.43	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.16	-
3.	PO ₄	µg/m ³	SOP NO WIL/AIR/TP/ 24/25	0.306	-

Tested by


 (Mahish Bhagora)
 Chemist

Authorized Signatory

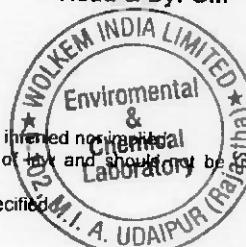

 (Amreesh Kumar)
 Head & Dy. GM

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 2494600 - 02 E-mail : info.wcs@wolkem.com

CIN- U29299RJ1971PLC001379


 Certificate No
 01130126322

Our Commitment.. Your Trust



Report No. 20231208002/A

Report Issue Date: - 18.12.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date & Time of Monitoring	:	07.12.2023/10:25AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	08.12.2023
7. Period of Analysis	:	08.12.2023 to 15.12.2023
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	1435.60	Minutes
2.	Average Flow rate for PM10	1.155	M ³ / Min
3.	Ambient Temperature	21.5	°C
4.	Relative Humidity	70	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	62.51	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	33.30	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	10.37	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	12.28	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

 (Manish Bhagora)
Chemist

Authorized Signatory

 (Amreesh Kumar)
Head & Dy. GM

Note

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Report No. 20231208002/B

Report Issue Date: - 18.12.2023

1. Name of Customer
TEST REPORT

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

: 07.12.2023/10:25AM

: Air Sample

: Sealed/Ok

: 08.12.2023

: 08.12.2023 to 15.12.2023

: Umarda Village

: N 24° 31' 26" - E 73° 46' 48"

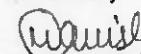
: Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	21.5	°C
2.	Relative Humidity	70	%

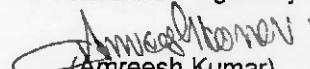
Results Ambient Air Quality

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	0.58	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.96	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.362	-

Tested by

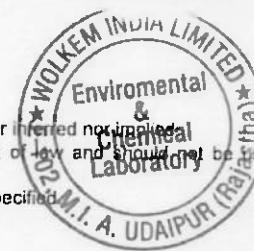

 (Mahish Bhagora)
 Chemist

Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

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 Page 1 of 1
 End of Report




Report No. 20231211002/A

Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date & Time of Monitoring	: 08.12.2023/10:10AM
4. Sample Identification	: Air Sample
5. Condition of Sample	: Sealed/Ok
6. Sample received on	: 11.12.2023
7. Period of Analysis	: 11.12.2023 to 15.12.2023
8. Name of Location	: Mine Lease Area
9. Coordinates	: N- 24° 32' 33" E- 73° 47' 47"
10. Method of Sampling	: IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

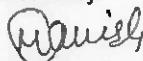
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1432.50	Minutes
2.	Average Flow rate for PM10	1.195	M³/ Min
3.	Ambient Temperature	23.6	°C
4.	Relative Humidity	65	%

Results Ambient Air Quality

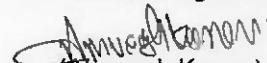
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m³	IS:5182 (Part-23)	50.33	100
2.	PM _{2.5}	µg/m³	WIL/SOP No. 10/25 Issue date 01.05.2019	25.03	60
3.	SO ₂	µg/m³	IS:5182 (Part-2)	7.16	80
4.	NO ₂	µg/m³	IS:5182 (Part-6)	9.57	80
5.	Lead	µg/m³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Manish Bhagora)
 Chemist

Authorized Signatory

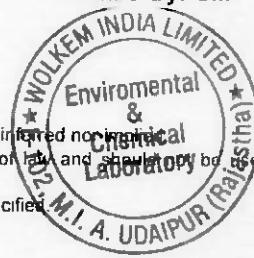

 (Amreesh Kumar)
 Head & Dy. GM

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 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379

Report No. 20231211002/B

Report Issue Date: - 18.12.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023
4. Sample Identification	:	08.12.2023/10:10AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	11.12.2023
8. Name of Location	:	11.12.2023 to 15.12.2023
9. Coordinates	:	Mine Lease Area
10. Method of Sampling	:	N 24° 32' 33" - E 73° 47' 47" Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	23.6	°C
2.	Relative Humidity	65	%

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	2.09	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.231	-

Tested by

(Manish Bhagora)
Chemist

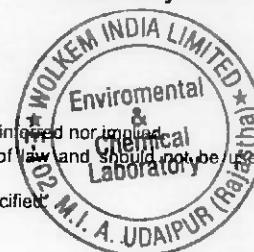
Authorized Signatory

(Amresh Kumar)
Head & Dy. GM

Note

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Page 1 of 1
End of Report





Report No. 20240307002/A

Report Issue Date: - 19.03.2024

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	:	06.03.2024/10:45AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	07.03.2024
7. Period of Analysis	:	07.03.2024 to 15.03.2024
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	1442.60	Minutes
2.	Average Flow rate for PM10	1.150	M³/ Min
3.	Ambient Temperature	26.5	°C
4.	Relative Humidity	39	%

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)	48.91	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	24.44	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	7.41	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	10.04	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

(Anreesh Kumar)
Head & Dy. GM

Note

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





Report Issue Date: - 19.03.2024

Report No. 20240307002/B

1. Name of Customer

TEST REPORT

: HINDUSTAN ZINC LIMITED
Rockphosphate Maton Mine
P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
PO No. 2016.1201/ 5100019025 Date 13.01.2016
Amendment Dated: - 27.02.2023
06.03.2024/10:45AM

2. Purchase order Number

: Air Sample

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

: Sealed/Ok

: 07.03.2024

: 07.03.2024 to 15.03.2024

: Mine Lease Area

: N 24° 32' 33" - E 73° 47' 47"

: Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	26.5	°C
2.	Relative Humidity	39	%

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	2.28	-
3.	PO ₄	µg/m ³	SOP NO WIL/AIR/TP/ 24/25	0.212	-

Tested by

(Leena Sharma)
Chemist

Authorized Signatory

(Amreesh Kumar)
Head & Dy. GM



Note

1. 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. 20240308002/A

Report Issue Date: - 19.03.2024

1. Name of Customer :

TEST REPORT

HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

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

PO No. 2016.1201/ 5100019025 Date 13.01.2016

Amendment Dated: - 27.02.2023

07.03.2024/11:00AM

Air Sample

Sealed/OK

08.03.2024

08.03.2024 to 15.03.2024

Umarda Village

N 24° 31' 26" - E 73° 46' 48"

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

Manual

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

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1440.70	Minutes
2.	Average Flow rate for PM10	1.190	M ³ / Min
3.	Ambient Temperature	26.9	°C
4.	Relative Humidity	37	%

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)	60.41	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	31.94	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	10.06	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	11.11	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

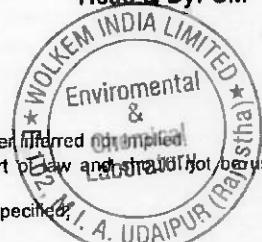
Tested by

Leena Sharma
(Leena Sharma)
Chemist

Authorized Signatory

Amreesh Kumar
(Amreesh Kumar)

Head & Dy. GM



Note

1. 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. 20240308002/B

Report Issue Date: - 19.03.2024

TEST REPORT

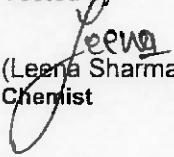
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date & Time of Monitoring	:	07.03.2024/11:00AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	08.03.2024
7. Period of Analysis	:	08.03.2024 to 15.03.2024
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	26.9	°C
2.	Relative Humidity	37	%

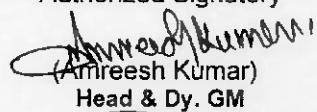
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.54	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.32	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.340	-

Tested by

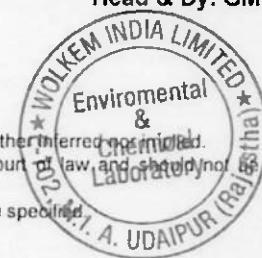

 (Leena Sharma)
 Chemist

Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

Note

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




Report No. 20240309002/A

Report Issue Date: - 19.03.2024

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
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023 08.03.2024/10:35AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	09.03.2024
7. Period of Analysis	:	09.03.2024 to 15.03.2024
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	1437.90	Minutes
2.	Average Flow rate for PM10	1.120	M³/ Min
3.	Ambient Temperature	25.6	°C
4.	Relative Humidity	42	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m³	IS:5182 (Part-23)	58.38	100
2.	PM _{2.5}	µg/m³	WIL/SOP No. 10/25 Issue date 01.05.2019	29.51	60
3.	SO ₂	µg/m³	IS:5182 (Part-2)	8.70	80
4.	NO ₂	µg/m³	IS:5182 (Part-6)	11.37	80
5.	Lead	µg/m³	IS: 5182(Part-22)	BDL(<0.05)	1.0

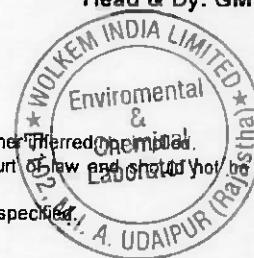
BDL- Below Detection Limit

Tested by

Leena Sharma
(Leena Sharma)
Chemist

Authorized Signatory

Amreesh Kumar
(Amreesh 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 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379





Report No. 20240309002/B

Report Issue Date: - 19.03.2024

TEST REPORT

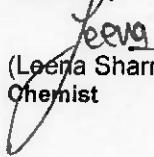
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023 08.03.2024/10:35AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	09.03.2024
7. Period of Analysis	:	09.03.2024 to 15.03.2024
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	25.6	°C
2.	Relative Humidity	42	%

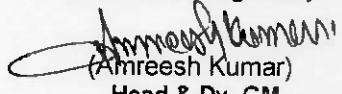
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.41	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.91	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.325	-

Tested By

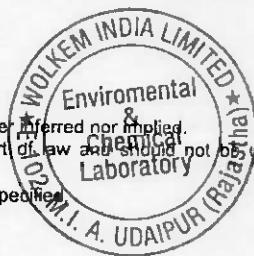

 (Leena Sharma)
 Chemist

Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

Note

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 Page 1 of 1
End of Report




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



INDIA LIMITED

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

www.wolkem.com

Report No. 20240310002/A

Report Issue Date: - 19.03.2024

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
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023 09.03.2024/11:10AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	10.03.2024
7. Period of Analysis	:	11.03.2024 to 18.03.2024
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	1438.00	Minutes
2.	Average Flow rate for PM10	1.160	M ³ / Min
3.	Ambient Temperature	26.3	°C
4.	Relative Humidity	40	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	51.36	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	25.35	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	7.84	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	10.50	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

Leena Sharma
Chemist

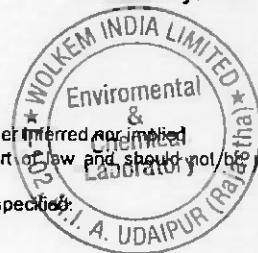
Authorized Signatory

Amresh Kumar
Head & Dy. GM

Note

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



TC-5941

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Registered & Corporate Office :

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

CIN- U29299RJ1971PLC001379



INDIA LIMITED

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

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



www.wolkem.com

Report No. 20240310002/B

Report Issue Date: - 19.03.2024

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
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023 09.03.2024/11:10AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	10.03.2024
7. Period of Analysis	:	11.03.2024 to 18.03.2024
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	26.3	°C
2.	Relative Humidity	40	%

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	0.34	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.29	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.216	-

Tested by

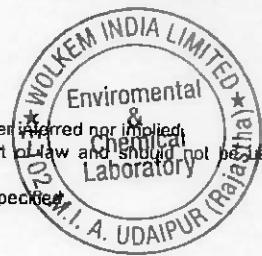
(Leena Sharma)
Chemist

Authorized Signatory

(Amreesh Kumar)
Head & Dy. GM

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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



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Report No. 20240311002/A

Report Issue Date: - 19.03.2024

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
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023
4. Sample Identification	:	10.03.2024/10:25AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	11.03.2024
8. Name of Location	:	11.03.2024 to 18.03.2024
9. Coordinates	:	Kharwaria Village
10. Method of Sampling	:	N 24° 33' 9" - E 73° 47' 3"
	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1443.00	Minutes
2.	Average Flow rate for PM10	1.160	M ³ / Min
3.	Ambient Temperature	24.3	°C
4.	Relative Humidity	37	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	48.71	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	25.68	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	8.02	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	9.80	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

Amreesh Kumar
(Amreesh Kumar)
Head & Dy. GM



Note

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Page 1 of 1
End of Report





Report No. 20240311002/B

Report Issue Date: - 19.03.2024

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
3. Date & Time of Monitoring	:	Amendment Dated: - 27.02.2023
4. Sample Identification	:	10.03.2024/10:25AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	11.03.2024
8. Name of Location	:	11.03.2024 to 18.03.2024
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	24.3	°C
2.	Relative Humidity	37	%

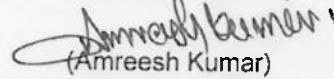
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.36	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.07	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.205	-

Tested by


 (Leeha Sharma)
 Chemist

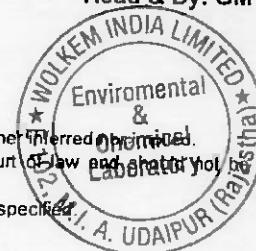
Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

Note

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Page 1 of 1
 End of Report



Report No. 20231211003

Report Issue Date: 18.12.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date of Monitoring	:	08.12.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	11.12.2023
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
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	37.7	38.6	36.9	38.6
2.	7-8 AM	40.4	42.5	38.2	42.6
3.	8-9 AM	42.7	44.3	41.2	44.3
4.	9-10 AM	46.9	48.5	45.5	48.5
5.	10-11 AM	47.4	48.5	46.2	48.5
6.	11-12 AM	52.0	53.5	50.0	53.6
7.	12-13 PM	53.8	56.2	52.5	56.2
8.	13-14 PM	54.8	56.2	53.6	56.2
9.	14-15 PM	56.0	58.5	52.6	58.7
10.	15-16 PM	54.7	56.3	52.5	56.4
11.	16-17 PM	54.8	58.5	52.8	58.6
12.	17-18 PM	56.2	57.5	54.3	57.6
13.	18-19 PM	57.2	58.5	56.3	58.5
14.	19-20 PM	52.5	54.2	50.2	54.3
15.	20-21 PM	49.0	50.2	46.9	50.3
16.	21-22 PM	46.3	48.2	43.5	48.3
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					52.0

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
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Report No. 20231211003

Report Issue Date: 18.12.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	NA
3. Date of Monitoring	:	08.12.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	11.12.2023
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
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	37.0	38.6	34.5	38.7
2.	23-24PM	34.7	36.5	33.5	36.5
3.	0-1 AM	34.6	35.2	33.6	35.2
4.	1-2 AM	33.7	35.2	32.5	35.2
5.	2-3 AM	34.5	36.3	33.5	36.3
6.	3-4 AM	34.8	36.4	32.6	36.5
7.	4-5 AM	33.1	33.8	32.4	33.8
8.	5-6 AM	36.5	37.5	35.5	37.5
Leq Night (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					36.2
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					50.7

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

(Manish Bhagora)
Chemist

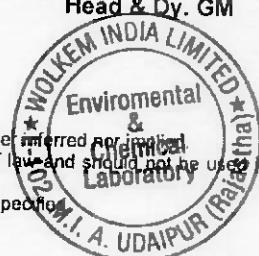
Authorized Signatory

Amreesh Kumar
Head & Dy. GM

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 2494600 - 02 E-mail : info@wolkem.com
CIN- U29299RJ1971PLC001379



Report No. 20231211004

Report Issue Date: 18.12.2023

TEST REPORT	
1. Name of Customer	:
	HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
	P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date of Monitoring	:
4. Sample Identification	:
5. Condition of Sample	:
6. Sample Received On	:
7. Period of Analysis	:
8. Test Methods Reference	:
9. Name of location	:
	Amendment Dated: - 27.02.2023
	07.12.2023
	NA
	NA
	11.12.2023
	NA
	IS: 9989– 1981 (Reaffirmed 2008)
	Umarda Village

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	44.9	48.2	42.6	48.3
2.	7-8 AM	44.2	46.2	41.0	46.4
3.	8-9 AM	48.9	50.1	47.6	50.1
4.	9-10 AM	51.8	53.2	49.0	53.3
5.	10-11 AM	53.1	54.2	51.2	54.3
6.	11-12 AM	54.5	55.2	53.8	55.2
7.	12-13 PM	56.4	58.1	54.2	58.2
8.	13-14 PM	55.7	57.0	54.2	57.0
9.	14-15 PM	53.4	54.6	50.2	54.8
10.	15-16 PM	53.2	54.2	51.2	54.3
11.	16-17 PM	54.6	56.2	53.6	56.2
12.	17-18 PM	57.1	58.2	54.8	58.3
13.	18-19 PM	52.1	53.4	50.2	53.5
14.	19-20 PM	48.2	50.1	46.6	50.1
15.	20-21 PM	46.6	48.2	45.7	48.2
16.	21-22 PM	46.1	47.5	44.8	47.5
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					52.9

Note

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Page 1 of 2

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Registered & Corporate Office :

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 CIN- U29299RJ1971PLC001379





Report No. 20231211004

Report Issue Date: 18.12.2023

1. Name of Customer

TEST REPORT

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

: 07.12.2023

: NA

: NA

: 11.12.2023

: NA

: IS: 9989– 1981 (Reaffirmed 2008)

: Umarda Village

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

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		Night Time	L₁₀	L₅₀	
1.	22-23PM	43.3	45.2	41.5	45.3
2.	23-24PM	40.1	43.1	37.6	43.2
3.	0-1 AM	36.4	38.2	34.5	38.3
4.	1-2 AM	35.0	36.2	34.2	36.2
5.	2-3 AM	34.0	35.2	33.4	35.2
6.	3-4 AM	33.1	34.2	31.2	34.3
7.	4-5 AM	42.0	43.2	39.9	43.3
8.	5-6 AM	43.8	45.1	42.6	45.1
Leq Night (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					40.1
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					52.1

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

Manish
(Manish Bhagora)
Chemist

Authorized Signatory

Amreesh Kumar
(Amreesh Kumar)

Head & Dy. GM



Note

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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





Report No. 20231211005

Report Issue Date: 18.12.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date of Monitoring	:	06.12.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	11.12.2023
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
		Day	Time	Leq	
1.	6-7 AM	45.5		46.9	43.5
2.	7-8 AM	51.6		54.1	48.6
3.	8-9 AM	53.4		54.2	52.2
4.	9-10 AM	52.9		54.2	51.2
5.	10-11 AM	56.7		58.2	55.6
6.	11-12 AM	56.1		58.5	54.2
7.	12-13 PM	56.1		58.5	54.2
8.	13-14 PM	56.7		58.5	53.3
9.	14-15 PM	57.5		60.0	55.7
10.	15-16 PM	57.2		58.3	55.6
11.	16-17 PM	58.7		60.2	56.0
12.	17-18 PM	59.3		61.2	57.3
13.	18-19 PM	58.2		60.2	56.5
14.	19-20 PM	53.8		55.3	52.6
15.	20-21 PM	50.9		53.2	48.6
16.	21-22 PM	47.2		49.5	44.8
Leq Day (Leq = $L_{eq} = L_{10} + [(L_{10} - L_{90})^2 / 60]$)					56.4

Note

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Continue





Report No. 20231211005

Report Issue Date: 18.12.2023

TEST REPORT

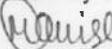
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date of Monitoring	:	06.12.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	11.12.2023
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) Night Time			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	44.3	45.6	42.8	45.6
2.	23-24PM	37.6	40.2	35.1	40.3
3.	0-1 AM	34.6	35.4	33.6	35.4
4.	1-2 AM	33.7	35.2	32.6	35.2
5.	2-3 AM	33.1	34.2	32.0	34.2
6.	3-4 AM	35.9	36.8	34.5	36.8
7.	4-5 AM	40.8	43.0	38.6	43.1
8.	5-6 AM	44.3	45.8	43.5	45.8
Leq Night (L _{eq} = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					39.6
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)]}					55.1

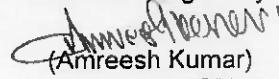
CPCB Norms

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


 (Manish Bhagora)
 Chemist

Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

Note

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 Page 2 of 2
 End of Report




Report No. 20231211006

Report Issue Date: 18.12.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date of Monitoring	:	05.12.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	11.12.2023
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	L ₅₀	L ₉₀	
1.	6-7 AM	44.1	46.0	42.3	46.1
2.	7-8 AM	47.9	49.6	45.7	49.7
3.	8-9 AM	51.4	53.8	49.6	53.9
4.	9-10 AM	50.1	51.8	48.6	51.8
5.	10-11 AM	53.1	54.2	51.2	54.3
6.	11-12 AM	52.6	53.6	51.2	53.6
7.	12-13 PM	54.4	56.2	53.5	56.2
8.	13-14 PM	53.9	55.8	53.2	55.8
9.	14-15 PM	57.0	58.6	55.9	58.6
10.	15-16 PM	55.4	57.2	51.8	57.4
11.	16-17 PM	56.6	58.2	54.7	58.3
12.	17-18 PM	56.7	58.6	53.7	58.7
13.	18-19 PM	55.8	56.8	54.8	56.8
14.	19-20 PM	51.4	54.2	48.6	54.3
15.	20-21 PM	45.9	48.2	43.8	48.3
16.	21-22 PM	44.2	46.2	42.8	46.2
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60]))					53.8

Note

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Page 1 of 2

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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. 20231211006

Report Issue Date: 18.12.2023

1. Name of Customer

TEST REPORT

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

: 05.12.2023

: NA

: NA

: 11.12.2023

: NA

: IS: 9989– 1981 (Reaffirmed 2008)

: Maton Village

2. Purchase order Number

3. Date of Monitoring

4. Sample Identification

5. Condition of Sample

6. Sample Received On

7. Period of Analysis

8. Test Methods Reference

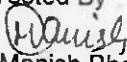
9. Name of location

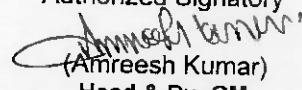
S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	42.6	44.2	40.2	44.3
2.	23-24PM	38.3	40.2	35.6	40.3
3.	0-1 AM	35.1	36.8	33.6	36.8
4.	1-2 AM	34.4	35.6	33.8	35.6
5.	2-3 AM	33.7	35.2	32.7	35.2
6.	3-4 AM	34.3	35.2	33.5	35.2
7.	4-5 AM	42.5	44.2	39.8	44.3
8.	5-6 AM	45.7	46.5	44.7	46.5
Leq Night (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					39.8
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					52.8

CPCB Norms

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

Tested By


 (Manish Bhagora)
 Chemist

Authorized Signatory

 (Amreesh Kumar)
 Head & Dy. GM

Note

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End of Report



Registered & Corporate Office :

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

CIN- U29299RJ1971PLC001379

Report No. 20231211007

Report Issue Date: 18.12.2023

TEST REPORT	
1. Name of Customer	:
	HINDUSTAN ZINC LIMITED
2. Purchase order Number	:
	Rockphosphate Maton Mine
3. Date of Monitoring	:
4. Sample Identification	:
5. Condition of Sample	:
6. Sample Received On	:
7. Period of Analysis	:
8. Test Methods Reference	:
9. Name of location	:
	P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
	Amendment Dated: - 27.02.2023
	04.12.2023
	NA
	NA
	11.12.2023
	NA
	IS: 9989– 1981 (Reaffirmed 2008)
	Kharwaria Village

S.No.	Time hours	Sound Pressure Level dB(A) Day Time			Leq
		L₁₀	L₅₀	L₉₀	
1.	6-7 AM	42.8	44.5	41.5	44.5
2.	7-8 AM	46.0	48.2	44.8	48.2
3.	8-9 AM	48.5	50.1	45.8	50.2
4.	9-10 AM	51.7	53.2	49.6	53.3
5.	10-11 AM	53.8	54.6	52.6	54.6
6.	11-12 AM	57.4	58.3	56.3	58.3
7.	12-13 PM	55.3	56.5	53.5	56.6
8.	13-14 PM	56.3	58.2	54.2	58.3
9.	14-15 PM	57.5	58.3	56.6	58.3
10.	15-16 PM	58.5	61.2	54.2	61.5
11.	16-17 PM	56.5	59.3	54.2	59.4
12.	17-18 PM	58.2	60.2	56.5	60.2
13.	18-19 PM	57.2	59.6	54.2	59.8
14.	19-20 PM	54.9	58.5	52.2	58.6
15.	20-21 PM	47.8	50.0	45.6	50.1
16.	21-22 PM	39.3	43.2	36.8	43.3
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60]))					54.7

Note

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CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust

Report No. 20231211007

Report Issue Date: 18.12.2023

TEST REPORT

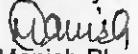
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	
3. Date of Monitoring	:	04.12.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	11.12.2023
7. Period of Analysis	:	NA
8. Test Methods Reference	:	IS: 9989– 1981 (Reaffirmed 2008)
9. Name of location	:	Kharwaria Village

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	36.1	38.2	34.2	38.3
2.	23-24PM	35.2	36.5	34.2	36.5
3.	0-1 AM	34.7	36.3	33.6	36.3
4.	1-2 AM	33.1	34.2	32.3	34.2
5.	2-3 AM	33.3	35.2	32.0	35.2
6.	3-4 AM	35.2	36.5	34.0	36.5
7.	4-5 AM	41.3	43.5	38.9	43.6
8.	5-6 AM	45.9	46.8	45.2	46.8
Leq Night (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					38.4
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					53.4

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


(Manish Bhagora)
Chemist

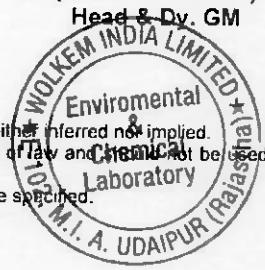
Authorized Signatory


(Amreesh Kumar)
Head & Dy. GM

Note

1. Complaint Register is available In lab / Email ID lab.office@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



Report No. 20231211008

Report Issue Date: 18.12.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	
3. Date of Monitoring	:	09.12.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	11.12.2023
7. Period of Analysis	:	NA
8. Test Methods Reference	:	IS: 9989– 1981 (Reaffirmed 2008)
9. Name of location	:	Nr. Udaisagar

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	43.7	44.6	42.5	44.6
2.	7-8 AM	46.3	48.2	45.2	48.2
3.	8-9 AM	49.8	51.2	48.6	51.2
4.	9-10 AM	56.4	58.6	54.8	58.6
5.	10-11 AM	56.6	58.2	54.2	58.3
6.	11-12 AM	59.5	61.3	56.9	61.4
7.	12-13 PM	59.3	61.2	56.9	61.3
8.	13-14 PM	62.6	63.8	61.2	63.8
9.	14-15 PM	56.3	58.2	54.3	58.3
10.	15-16 PM	53.1	55.3	50.6	55.4
11.	16-17 PM	54.1	57.3	51.2	57.4
12.	17-18 PM	52.7	55.2	51.2	55.2
13.	18-19 PM	52.0	53.4	50.6	53.4
14.	19-20 PM	50.9	54.3	48.0	54.4
15.	20-21 PM	47.3	50.1	44.3	50.3
16.	21-22 PM	42.6	44.2	40.9	44.2
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					54.8

Note

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Registered & Corporate Office :

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CIN- U29299RJ1971PLC001379


 TC-5941
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Report No. 20231211008

Report Issue Date: 18.12.2023

TEST REPORT

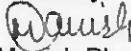
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	
3. Date of Monitoring	:	09.12.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	11.12.2023
7. Period of Analysis	:	NA
8. Test Methods Reference	:	IS: 9989— 1981 (Reaffirmed 2008)
9. Name of location	:	Nr. Udaisagar

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	41.8	44.2	39.6	44.3
2.	23-24PM	38.1	40.1	35.2	40.2
3.	0-1 AM	36.8	38.6	35.4	38.6
4.	1-2 AM	34.5	35.5	33.4	35.5
5.	2-3 AM	35.0	36.2	33.9	36.2
6.	3-4 AM	35.6	40.2	34.2	40.2
7.	4-5 AM	44.4	48.5	40.2	48.8
8.	5-6 AM	50.2	53.2	48.5	53.2
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					42.1
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					54.1

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

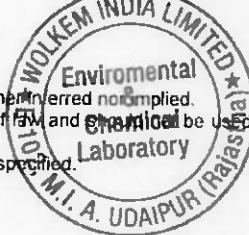

 (Manish Bhagora)
 Chemist

Authorized Signatory


 (Amreesh Kumar)
 Head & Dy. GM

Note

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 Page 2 of 2
 End of Report


TC-5941

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

CIN- U29299RJ1971PLC001379

Report No. 20240312002

Report Issue Date: 19.03.2024

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	06.03.2024
3. Date of Monitoring	:	NA
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	12.03.2024
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
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	49.5	55.1	46.3	55.3
2.	7-8 AM	42.8	50.7	39.0	50.9
3.	8-9 AM	45.8	51.0	42.1	51.2
4.	9-10 AM	49.7	54.9	43.2	55.6
5.	10-11 AM	41.9	43.7	40.0	43.8
6.	11-12 AM	46.6	47.4	45.1	47.4
7.	12-13 PM	60.5	61.0	59.8	61.0
8.	13-14 PM	49.1	50.2	48.3	50.2
9.	14-15 PM	49.6	50.8	48.8	50.8
10.	15-16 PM	51.8	53.4	49.8	53.5
11.	16-17 PM	53.7	55.4	51.2	55.5
12.	17-18 PM	42.1	43.1	40.7	43.1
13.	18-19 PM	53.2	58.6	49.3	58.9
14.	19-20 PM	45.9	48.5	42.1	48.7
15.	20-21 PM	47.0	47.9	46.1	47.9
16.	21-22 PM	39.4	40.2	38.1	40.2
Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					50.9

Note

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Registered & Corporate Office :

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CIN- U29299RJ1971PLC001379



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Report No. 20240312002

Report Issue Date: 19.03.2024

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	:	06.03.2024
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	12.03.2024
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
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	34.4	34.8	34.3	34.8
2.	23-24PM	34.3	35.2	32.8	35.2
3.	0-1 AM	35.6	37.0	34.4	37.0
4.	1-2 AM	36.7	38.1	36.0	38.1
5.	2-3 AM	35.0	35.6	34.3	35.6
6.	3-4 AM	40.8	41.8	39.7	41.8
7.	4-5 AM	39.3	40.2	38.3	40.2
8.	5-6 AM	35.7	36.6	34.7	36.6
Leq Night (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					37.4
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					50.0

CPCB Norms

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

Tested By

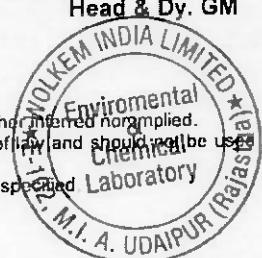
 (Leena Sharma)
 Chemist

Authorized Signatory

 Animesh Kumar
 Head & Dy. GM

Note

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




Report No. 20240312003

Report Issue Date: 19.03.2024

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	:	07.03.2024
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	12.03.2024
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) Day Time			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	55.1	60.6	52.2	60.7
2.	7-8 AM	56.2	58.1	53.7	58.2
3.	8-9 AM	54.6	57.0	50.3	57.3
4.	9-10 AM	56.0	60.8	51.5	61.1
5.	10-11 AM	54.8	58.6	51.2	58.8
6.	11-12 AM	52.1	52.9	50.2	53.0
7.	12-13 PM	66.0	66.5	65.3	66.5
8.	13-14 PM	54.3	55.3	53.0	55.3
9.	14-15 PM	55.1	56.3	54.1	56.3
10.	15-16 PM	57.2	58.6	55.7	58.6
11.	16-17 PM	59.2	60.9	57.4	61.0
12.	17-18 PM	47.6	48.6	46.2	48.6
13.	18-19 PM	58.5	63.8	54.5	64.1
14.	19-20 PM	51.2	53.2	47.8	53.4
15.	20-21 PM	52.1	52.8	51.3	52.8
16.	21-22 PM	44.9	45.7	44.1	45.7
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60]))					57.0

Note

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CIN- U29299RJ1971PLC001379



TC-5941

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Report No. 20240312003

Report Issue Date: 19.03.2024

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	:	07.03.2024
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	12.03.2024
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	35.3	36.1	34.5	36.1
2.	23-24PM	35.9	37.0	34.6	37.0
3.	0-1 AM	37.5	38.7	36.1	38.7
4.	1-2 AM	38.4	39.9	37.8	39.9
5.	2-3 AM	36.6	37.2	36.1	37.2
6.	3-4 AM	42.4	43.5	41.2	43.5
7.	4-5 AM	41.1	41.9	40.1	41.9
8.	5-6 AM	37.4	38.3	36.5	38.3
Leq Night (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					39.1
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					55.5
Ldn					

CPCB Norms

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

Tested By

 (Leena Sharma)
 Chemist

 Amreesh Kumar
 Head & Dy. GM

Note

- Complaint Register is available in lab / Email ID amrishi.malik@wolkem.com
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 Page 2 of 2
 End of Report


Report No. 20240312004

Report Issue Date: 19.03.2024

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	08.03.2024
3. Date of Monitoring	:	NA
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	12.03.2024
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) Day Time			Leq
		L₁₀	L₅₀	L₉₀	
1.	6-7 AM	52.4	57.9	49.5	58.0
2.	7-8 AM	45.7	53.8	42.6	54.0
3.	8-9 AM	48.5	53.5	44.9	53.7
4.	9-10 AM	52.3	57.7	45.9	58.4
5.	10-11 AM	44.9	47.6	42.8	47.7
6.	11-12 AM	49.3	50.2	47.3	50.3
7.	12-13 PM	63.3	63.8	62.6	63.8
8.	13-14 PM	51.4	52.6	50.2	52.6
9.	14-15 PM	52.0	53.6	51.0	53.6
10.	15-16 PM	54.3	55.6	52.6	55.6
11.	16-17 PM	56.7	58.4	54.9	58.5
12.	17-18 PM	44.7	45.9	43.8	45.9
13.	18-19 PM	55.8	61.1	51.1	61.5
14.	19-20 PM	48.4	50.5	44.3	50.8
15.	20-21 PM	49.3	50.1	48.7	50.1
16.	21-22 PM	41.9	42.5	41.1	42.5
		Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60]))			53.6

Note

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Page 1 of 2

Continue





Report No. 20240312004

Report Issue Date: 19.03.2024

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	:	08.03.2024
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	12.03.2024
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
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	34.4	35.1	33.6	35.1
2.	23-24PM	35.0	36.0	33.6	36.0
3.	0-1 AM	36.4	37.8	35.2	37.8
4.	1-2 AM	37.5	38.9	36.0	38.9
5.	2-3 AM	35.6	36.6	35.0	36.6
6.	3-4 AM	41.5	42.6	40.5	42.6
7.	4-5 AM	40.1	41.0	39.2	41.0
8.	5-6 AM	36.5	37.4	35.5	37.4
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					38.2
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10Lnight + 10)/10])}					52.4

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)
Chemist

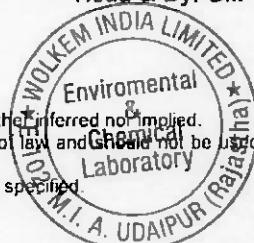
Authorized Signatory

(Amreesh Kumar)
Head & Dy. GM

Note

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Page 2 of 2
End of Report



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CIN- U29299RJ1971PLC001379



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Report No. 20240312005

Report Issue Date: 19.03.20224

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	:	09.03.2024
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	12.03.2024
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) Day Time			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	51.9	57.4	49.2	57.5
2.	7-8 AM	45.2	53.0	42.1	53.2
3.	8-9 AM	48.2	53.3	44.4	53.5
4.	9-10 AM	52.0	57.2	45.5	57.9
5.	10-11 AM	44.2	46.0	42.3	46.1
6.	11-12 AM	49.0	49.7	47.9	49.7
7.	12-13 PM	62.8	63.3	62.1	63.3
8.	13-14 PM	51.4	52.5	50.7	52.5
9.	14-15 PM	51.9	53.1	51.1	53.1
10.	15-16 PM	54.1	55.7	52.1	55.8
11.	16-17 PM	56.0	57.7	53.5	57.8
12.	17-18 PM	44.4	45.4	43.0	45.4
13.	18-19 PM	55.5	60.9	51.6	61.2
14.	19-20 PM	48.2	50.8	44.4	51.0
15.	20-21 PM	49.2	49.8	48.4	49.8
16.	21-22 PM	41.6	42.3	40.4	42.3
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					53.1

Note

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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


1. Name of Customer
TEST REPORT

:

HINDUSTAN ZINC LIMITED

Rockphosphate Maton Mine

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

PO No. 2016.1201/ 5100019025 Date 13.01.2016

Amendment Dated: - 27.02.2023

09.03.2024

NA

NA

12.03.2024

NA

IS: 9989– 1981 (Reaffirmed 2008)

Maton Village

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

S. No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	Night Time L ₅₀	L ₉₀	
1.	22-23PM	33.7	34.4	32.9	34.4
2.	23-24PM	34.3	35.3	32.9	35.3
3.	0-1 AM	35.7	37.1	34.5	37.1
4.	1-2 AM	36.8	38.2	36.1	38.2
5.	2-3 AM	35.0	35.5	34.4	35.5
6.	3-4 AM	40.8	41.9	39.8	41.9
7.	4-5 AM	39.5	40.3	38.5	40.3
8.	5-6 AM	35.8	36.7	34.8	36.7
		Leq Night (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])			37.4
		Day-Night Sound Level (L _{dn}) = 10 log {1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)]}			51.9
		L _{dn}			

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

(Amritesh Kumar)

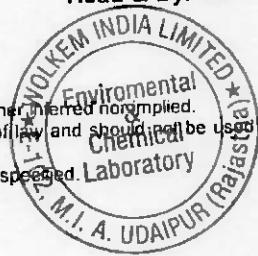
Head & Dy. GM

Note

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

End of Report





Report No. 20240312006

Report Issue Date: 19.03.2024

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	:	10.03.2024
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	12.03.2024
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) Day Time			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	53.5	59.0	50.6	59.1
2.	7-8 AM	42.3	54.9	43.5	54.9
3.	8-9 AM	49.6	54.8	46.5	55.0
4.	9-10 AM	53.5	58.8	47.0	59.5
5.	10-11 AM	45.5	47.5	43.4	47.6
6.	11-12 AM	50.6	51.3	48.6	51.4
7.	12-13 PM	64.1	64.9	63.2	64.9
8.	13-14 PM	52.4	53.7	51.2	53.7
9.	14-15 PM	53.2	54.7	52.3	54.7
10.	15-16 PM	55.6	57.0	53.2	57.1
11.	16-17 PM	57.4	58.9	54.4	59.1
12.	17-18 PM	46.0	47.0	44.6	47.0
13.	18-19 PM	55.4	53.0	50.3	53.4
14.	19-20 PM	45.5	51.6	42.5	51.7
15.	20-21 PM	45.4	50.0	41.7	50.2
16.	21-22 PM	40.0	43.9	34.7	44.4
		Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])			54.0

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INDIA LIMITED

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

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



www.wolkem.com

Report No. 20240312006

Report Issue Date: 19.03.2024

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	:	10.03.2024
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	12.03.2024
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	L ₅₀	L ₉₀	
1.	22-23PM	35.1	35.8	34.3	35.8
2.	23-24PM	35.7	36.7	34.4	36.7
3.	0-1 AM	37.2	38.5	35.9	38.5
4.	1-2 AM	38.1	39.6	37.3	39.6
5.	2-3 AM	36.4	36.9	35.8	36.9
6.	3-4 AM	42.3	43.3	41.2	43.3
7.	4-5 AM	40.9	41.7	39.9	41.7
8.	5-6 AM	37.2	38.1	36.2	38.1
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					38.8
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					52.8

CPCB Norms

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

Tested By

(Leena Sharma)
 Chemist

Authorized Signatory

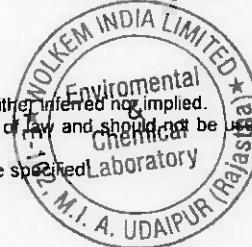
 Amritesh Kumar
 Head & Dy. GM

Note

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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. 20240312007

Report Issue Date: 19.03.2024

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	:	11.03.2024
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	12.03.2024
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
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	46.7	51.1	43.2	51.3
2.	7-8 AM	48.9	61.0	44.5	61.3
3.	8-9 AM	50.8	59.1	45.7	59.5
4.	9-10 AM	49.8	50.9	47.1	51.0
5.	10-11 AM	50.6	60.2	45.6	60.6
6.	11-12 AM	53.0	60.5	44.9	61.6
7.	12-13 PM	51.9	56.0	47.9	56.3
8.	13-14 PM	55.6	61.1	45.7	62.7
9.	14-15 PM	56.2	57.7	54.2	57.8
10.	15-16 PM	60.3	61.3	58.2	61.4
11.	16-17 PM	58.5	59.2	57.8	59.2
12.	17-18 PM	44.1	46.1	42.1	46.2
13.	18-19 PM	45.0	46.1	43.2	46.2
14.	19-20 PM	46.9	49.4	45.3	49.4
15.	20-21 PM	47.2	47.9	46.2	47.9
16.	21-22 PM	45.3	47.1	43.4	47.2
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60]))					55.0

Note

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Page 1 of 2

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CIN- U29299RJ1971PLC001379



TC-5941

Our Commitment.. Your Trust



Report No. 20240312007

Report Issue Date: 19.03.2024

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	:	11.03.2024
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	12.03.2024
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
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	39.3	43.3	32.1	44.2
2.	23-24PM	40.7	42.4	38.4	42.5
3.	0-1 AM	37.2	41.4	32.1	41.9
4.	1-2 AM	31.6	37.6	4.4	49.9
5.	2-3 AM	34.9	37.3	32.2	37.5
6.	3-4 AM	35.8	42.0	32.5	42.2
7.	4-5 AM	37.1	40.6	32.4	41.0
8.	5-6 AM	37.0	40.5	32.1	40.9
Leq Night (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					42.5
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10L _{day} /10) + 8 (10(L _{night} + 10)/10)]}					54.3

CPCB Norms

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

Tested By

 (Leena Sharma)
 Chemist

Authorized Signatory

 (Amreesh Kumar)
 Head & Dy. GM

Note

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 Page 2 of 2
 End of Report


Report No. 20231205009

Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
	P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016
	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 05.12.2023/10:30AM
6. Sample received on	: 05.12.2023
7. Period of Analysis	: 05.12.2023 to 18.12.2023
8. Name of sample & Location	: Mine Lease Area (Ground water)
9. Coordinates	: N- 24° 32' 51" E- 73° 47' 25"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Environment Condition		Unit	Results	
				°C	%
1.	Ambient Temperature			23.4	
2.	Relative Humidity			52	Limits :- IS-10500:2012

S. No.	Parameters	Test Method	Unit	Results	Acceptable	Permissible
Chemical Testing – Water- Ground Water						
1.	pH (at 25°C)	IS:3025(Part-11)	-	7.22	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs/cm	637.4	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS:3025(Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	454	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	BDL(<5)	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	174	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	56	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	8.16	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	212	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	120	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	5.2	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.1	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Page 1 of 2

Continue



Report No. 20231205009

Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 05.12.2023/10:30AM
6. Sample received on	: 05.12.2023
7. Period of Analysis	: 05.12.2023 to 18.12.2023
8. Name of sample & Location	: Mine Lease Area (Ground water)
9. Coordinates	: N- 24° 32' 51" E- 73° 47' 25"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012
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	0.76	1.0 1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.16	- -
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	39.64	200 400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	6.7	45 No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	4.0	- -
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	63.4	- -
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	0.26	5 15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01 No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1 0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.3 No Relaxation

BDL-Below Detection Limit

Tested By

(Manali Vyas)
Asst.Chemist

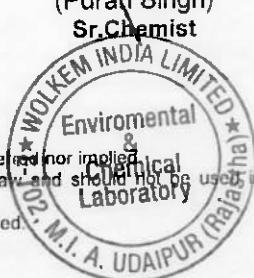
Authorized Signatory

(Puran Singh)
Sr.Chemist

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Page 2 of 2
End of Report





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	: 06.12.2023/10:50AM
6. Sample received on	: 06.12.2023
7. Period of Analysis	: 06.12.2023 to 18.12.2023
8. Name of sample & Location	: Kharwaria village (Ground water)
9. Coordinates	: N- 24° 33' 12" E- 73° 47' 27"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Test Method	Unit	Results	
				Unit	Results
S. No.	Parameters	Test Method	Unit	Results	Acceptable Permissible
Chemical Testing – Water- Ground Water					
1.	pH (at 25°C)	IS:3025(Part-11)	-	6.86	6.5 to 8.5
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.110	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5
4.	Odour	IS 3025 (Part-5)	-	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1376	500
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	20	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	548	200
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	134.4	75
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	50.88	30
10.	Alkalinity	IS:3025(Part-23)	mg/L	448	200
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	380	250
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	7.0	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.1	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-

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Report No. 20231206010

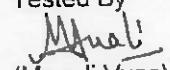
Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
	P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016
	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 06.12.2023/10:50AM
6. Sample received on	: 06.12.2023
7. Period of Analysis	: 06.12.2023 to 18.12.2023
8. Name of sample & Location	: Kharwaria village (Ground water)
9. Coordinates	: N- 24° 33' 12" E- 73° 47' 27"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

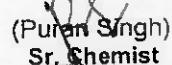
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F-	APHA 23 rd Ed., 4500 FD	mg/L	0.82	1.0	1.5
19.	Phosphate	IS 3025(Part-31)	mg/L	0.13	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	155.5	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	17.6	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	56.2	-	-
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	0.22	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.14	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


 (Manali Vyas)
 Asst.Chemist

Authorized Signatory

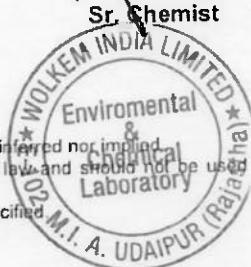

 (Puran Singh)
 Sr. Chemist

Note

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Page 2 of 2

End of Report





Report No. 20231206011

Report Issue Date: - 18.12.2023

1. Name of Customer

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

3. Sample Identification

: Ground Water

4. Condition of Sample

: Sealed/Ok

5. Date & Time of Sampling

: 06.12.2023/11:00AM

6. Sample received on

: 06.12.2023

7. Period of Analysis

: 06.12.2023 to 18.12.2023

8. Name of sample & Location

: Maton village (Ground water)

9. Coordinates

: N- 24° 33' 33" E- 73° 47' 33"

10. Method of Sampling

: IS: 3025 (Pt 1) 1987

S. No	Environment Condition		Unit	Results	
1.	Ambient Temperature		°C	23.5	
2.	Relative Humidity		%	51	Limits :- IS-10500:2012

S. No.	Parameters	Test Method	Unit	Results	Acceptable	Permissible
Chemical Testing – Water- Ground Water						
1.	pH (at 25°C)	IS:3025(Part-11)	-	7.28	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.012	-	-
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	1300	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	516	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	121.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	50.88	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	392	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	290	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	6.3	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.5	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20231206011

Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 06.12.2023/11:00AM
6. Sample received on	: 06.12.2023
7. Period of Analysis	: 06.12.2023 to 18.12.2023
8. Name of sample & Location	: Maton village (Ground water)
9. Coordinates	: N- 24° 33' 33" E- 73° 47' 33"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F-	APHA 23 rd Ed., 4500 FD	mg/L	0.75	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.26	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	230.6	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	9.6	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	5.8	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	73.7	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.30	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.13	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

(Manali Vyas)
Asst.Chemist

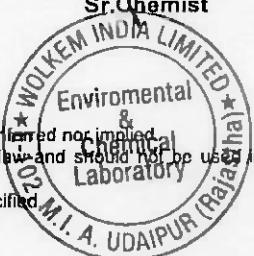
Authorized Signatory

(Puran Singh)
Sr.Chemist

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Page 2 of 2
End of Report





Report No. 20231206012

Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 06.12.2023/11:30AM
6. Sample received on	: 06.12.2023
7. Period of Analysis	: 06.12.2023 to 18.12.2023
8. Name of sample & Location	: Lakanwas 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	24.0
2.	Relative Humidity	%	53

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)	-	6.94	6.5 to 8.5	No Relaxation	
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.810	-	-	
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	20	-	-	
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	552	200	600	
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	174.4	75	200	
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	27.84	30	100	
10.	Alkalinity	IS:3025(Part-23)	mg/L	396	200	600	
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	580	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	6.6	-	-	
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.0	-	-	
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1	
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-	

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Report No. 20231206012

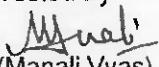
Report Issue Date: - 18.12.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	06.12.2023/11:30AM
6. Sample received on	:	06.12.2023
7. Period of Analysis	:	06.12.2023 to 18.12.2023
8. Name of sample & Location	:	Lakarwas village (Ground water)
9. Coordinates	:	N- 24° 36' 5" E- 73° 47' 47"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

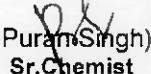
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.76	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	1.18	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	221.2	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	6.5	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	43.2	-	-
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	0.34	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.14	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


(Manali Vyas)
Asst.Chemist

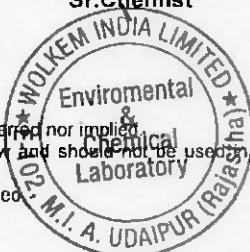
Authorized Signatory


(Puran Singh)
Sr.Chemist

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Page 2 of 2
End of Report





Report No. 20231206013

Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 06.12.2023/12:30PM
6. Sample received on	: 06.12.2023
7. Period of Analysis	: 06.12.2023 to 18.12.2023
8. Name of sample & Location	: Umrada village (Ground water)
9. Coordinates	: N- 24° 31' 43" E- 73° 47' 3"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	24.9
2.	Relative Humidity	%	56

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

Chemical Testing – Water- Ground Water

1.	pH (at 25°C)	IS:3025(Part-11)	-	6.84	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.248	-	-
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	814	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	480	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	51.84	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	344	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	112	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	6.0	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20231206013

Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 06.12.2023/12:30PM
6. Sample received on	: 06.12.2023
7. Period of Analysis	: 06.12.2023 to 18.12.2023
8. Name of sample & Location	: Umarda village (Ground water)
9. Coordinates	: N- 24° 31' 43" E- 73° 47' 3"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F-	APHA 23 rd Ed., 4500 FD	mg/L	0.77	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.17	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	60.8	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	9.0	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	24.4	-	-
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	0.23	5	15
26.	Lead	APHA 23 rd Ed 3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed 3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

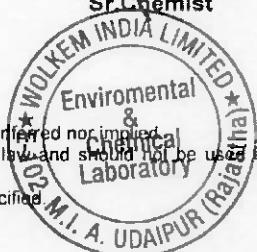
 (Manali Vyas)
 Asst.Chemist

Authorized Signatory

 (Puran Singh)
 Sr.Chemist

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 Page 2 of 2
 End of Report




Report No. 20231206014

Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
2. Purchase order Number	: P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Sample Identification	: AMENDMENT Dated: - 27.02.2023
4. Condition of Sample	: Ground Water
5. Date & Time of Sampling	: Sealed/Ok
6. Sample received on	: 06.12.2023
7. Period of Analysis	: 06.12.2023 to 18.12.2023
8. Name of sample & Location	: Kanpur village (Ground water)
9. Coordinates	: N- 24° 34' 7" E- 73° 45' 57"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Test Method	Unit	Results	
				%	Results
1.	Ambient Temperature		°C	25.8	
2.	Relative Humidity		%	50	
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)	-	7.42	6.5 to 8.5
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.752	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5
4.	Odour	IS:3025(Part-5)	-	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1152	500
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	14	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	384	200
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	105.6	75
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	28.8	30
10.	Alkalinity	IS:3025(Part-23)	mg/L	360	200
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	342	250
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	6.0	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.0	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2
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

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

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CIN- U29299RJ1971PLC001379



TC-5941

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Report No. 20231206014

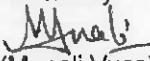
Report Issue Date: - 18.12.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	06.12.2023/01:25PM
6. Sample received on	:	06.12.2023
7. Period of Analysis	:	06.12.2023 to 18.12.2023
8. Name of sample & Location	:	Kanpur village (Ground water)
9. Coordinates	:	N- 24° 34' 7" E- 73° 45' 57"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

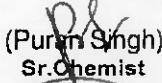
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	Acceptable	Permissible
Chemical Testing – Water – Ground Water							
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.75	1.0	1.5	
19.	Phosphate	IS.3025(Part-31)	mg/L	0.18	-	-	
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	170.9	200	400	
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	22.92	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	26.9	-	-	
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	0.90	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	0.11	0.3	No Relaxation	

BDL-Below Detection Limit

Tested By


(Manali Vyas)
Asst.Chemist

Authorized Signatory

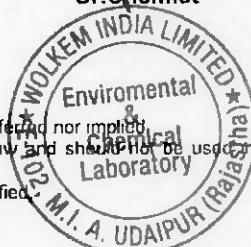

(Puran Singh)
Sr.Chemist

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Page 2 of 2

End of Report





Report No. 20231206015

Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
	P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016
	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 06.12.2023/01:50PM
6. Sample received on	: 06.12.2023
7. Period of Analysis	: 06.12.2023 to 18.12.2023
8. Name of sample & Location	: Nakoli village (Ground water)
9. Coordinates	: N- 24° 31' 48" E- 73° 48' 0"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	26.4
2.	Relative Humidity	%	50

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)	-	6.85	6.5 to 8.5	No Relaxation	
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.134	-	-	
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	746	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	360	200	600	
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	100	75	200	
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	26.4	30	100	
10.	Alkalinity	IS:3025(Part-23)	mg/L	292	200	600	
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	214	250	1000	
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation	
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	7.6	-	-	
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.2	-	-	
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1	
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-	

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Registered & Corporate Office :

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CIN- U29299RJ1971PLC001379


 TC-5941
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Report No. 20231206015

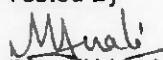
Report Issue Date: - 18.12.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	06.12.2023/01:50PM
6. Sample received on	:	06.12.2023
7. Period of Analysis	:	06.12.2023 to 18.12.2023
8. Name of sample & Location	:	Nakoli village (Ground water)
9. Coordinates	:	N- 24° 31' 48" E- 73° 48' 0"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

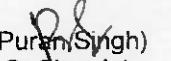
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F-	APHA 23 rd Ed., 4500 FD	mg/L	0.78	1.0	1.5
19.	Phosphate	IS-3025(Part-31)	mg/L	0.38	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	84.9	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	8.18	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-K (3-89 to 3-90)	mg/L	7.5	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	44.2	-	-
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	0.16	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.12	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr.Chemist


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 Page 2 of 2
 End of Report



Report No. 20231206016

Report Issue Date: - 18.12.2023

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
	P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016
	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 06.12.2023/02:45PM
6. Sample received on	: 06.12.2023
7. Period of Analysis	: 06.12.2023 to 18.12.2023
8. Name of sample & Location	: Dhoonimata village (Ground water)
9. Coordinates	: N- 24° 38' 9" E- 73° 52' 54"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	26.5
2.	Relative Humidity	%	45

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)	-	7.12	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.544	-	-
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	1008	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	414	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	86.4	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	47.52	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	288	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	312	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	6.9	-	-
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)	-	-

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Report No. 20231206016

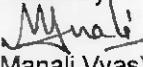
Report Issue Date: - 18.12.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Ground Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	06.12.2023/02:45PM
6. Sample received on	:	06.12.2023
7. Period of Analysis	:	06.12.2023 to 18.12.2023
8. Name of sample & Location	:	Dhoonimata village (Ground water)
9. Coordinates	:	N- 24° 38' 9" E- 73° 52' 54"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

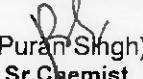
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F-	APHA 23 rd Ed., 4500 FD	mg/L	0.78	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.16	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	49.0	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	13.2	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	7.6	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	65.3	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.20	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

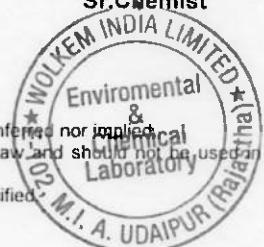

 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr.Chemist

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 Page 2 of 2
End of Report




Report No. 20231206017

Report Issue Date: - 18.12.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Surface Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	06.12.2023/03:40PM
6. Sample received on	:	06.12.2023
7. Period of Analysis	:	06.12.2023 to 18.12.2023
8. Name of sample & Location	:	Bagdara Talav (Surface water)
9. Coordinates	:	N- 24° 31' 48" E- 73° 48' 0"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	27.4
2.	Relative Humidity	%	42

S. No.	Parameters	Test Method	Unit	Results
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Chemical Testing – Water- Surface Water

1.	pH (at 25°C)	IS:3025(Part-11)	-	7.60
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.744
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	1198
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	34
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	442
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	95.2
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	48.96
10.	Alkalinity	IS:3025(Part-23)	mg/L	336
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	270
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	8.0
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	2.5

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Report No. 20231206017

Report Issue Date: - 18.12.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 AMENDMENT Dated: - 27.02.2023
3. Sample Identification	:	Surface Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	06.12.2023/03:40PM
6. Sample received on	:	06.12.2023
7. Period of Analysis	:	06.12.2023 to 18.12.2023
8. Name of sample & Location	:	Bagdara Talav (Surface water)
9. Coordinates	:	N- 24° 31' 48" E- 73° 48' 0"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water – Surface Water				
17.	Chemical Oxygen Demand	IS:3025(Part-5B)	mg/L	16.32
18.	Fluoride as F-	APHA 23 rd Ed., 4500 FD	mg/L	0.55
19.	Phosphate	IS:3025(Part-31)	mg/L	3.2
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	251.9
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	17.9
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	9.6
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	85.6
Chemical Testing – Residues – Surface water				
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	1.5
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)
Asst.Chemist

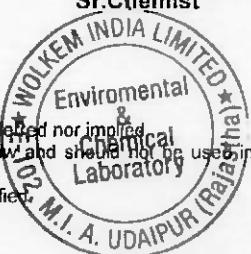
Authorized Signatory

(Puran Singh)
Sr.Chemist

Note

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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 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust

Report No. 20240307009

Report Issue Date: - 19.03.2024

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	: 07.03.2024/10:00AM
6. Sample received on	: 07.03.2024
7. Period of Analysis	: 07.03.2024 to 18.03.2024
8. Name of sample & Location	: Mine Lease Area (Ground water)
9. Coordinates	: N- 24° 32' 51" E- 73° 47' 25"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	24.3
2.	Relative Humidity	%	39

Limits :- IS-10500:2012

Acceptable Permissible

Chemical Testing – Water- Ground Water

S. No.	Parameters	Test Method	Unit	Results	Limits	
1.	pH (at 25°C)	IS:3025(Parl-11)	-	7.26	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs/cm	646.6	-	-
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	466	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	BDL(<5)	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	174	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	56	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	8.16	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	212	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	120	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	5.8	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.2	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

Note

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Report No. 20240307009

Report Issue Date: - 19.03.2024

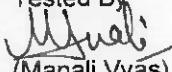
TEST REPORT

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	:	07.03.2024/10:00AM
6. Sample received on	:	07.03.2024
7. Period of Analysis	:	07.03.2024 to 18.03.2024
8. Name of sample & Location	:	Mine Lease Area (Ground water)
9. Coordinates	:	N- 24° 32' 51" E- 73° 47' 25"
10. Method of Sampling	:	IS: 3025 (Pt 1) 1987

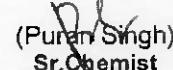
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-5B)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.70	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.18	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	39.64	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	6.6	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	4.4	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	63.4	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed 3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.25	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

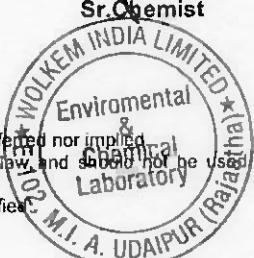

 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr.Chemist

Note

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 Page 2 of 2
 End of Report




Report No. 20240308003

Report Issue Date: - 19.03.2024

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	: 08.03.2024/10:35AM
6. Sample received on	: 08.03.2024
7. Period of Analysis	: 08.03.2024 to 18.03.2024
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	21.3
2.	Relative Humidity	%	46

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	2.182	-	-
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	1404	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	560	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	137.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	51.84	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	460	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	390	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	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)	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. 20240308003

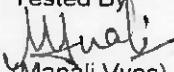
Report Issue Date: - 19.03.2024

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	: 08.03.2024/10:35AM
6. Sample received on	: 08.03.2024
7. Period of Analysis	: 08.03.2024 to 18.03.2024
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	0.78	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.15	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed , 4500 SO ₄ E	mg/L	164.8	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	18.4	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	7.0	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	60.1	-	-
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	0.25	5	15
26.	Lead	APHA 23 rd Ed 3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.16	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

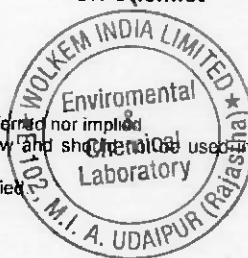

 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr. Chemist

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




Report No. 20240308004

Report Issue Date: - 19.03.2024

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	: 08.03.2024/11:10AM
6. Sample received on	: 08.03.2024
7. Period of Analysis	: 08.03.2024 to 18.03.2024
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	21.6
2.	Relative Humidity	%	48

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)	-	7.14	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.058	-	-
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	1346	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	129.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	49.92	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	404	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	298	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	6.6	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.3	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20240308004

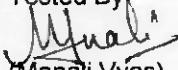
Report Issue Date: - 19.03.2024

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	08.03.2024/11:10AM
6. Sample received on	08.03.2024
7. Period of Analysis	08.03.2024 to 18.03.2024
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

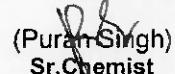
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F	APHA 23 rd Ed., 4500 FD	mg/L	0.78	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.23	-	-
20.	Sulphate as SO ₄	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	241.6	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	10.8	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	6.7	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	75.4	-	-
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	0.33	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.15	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

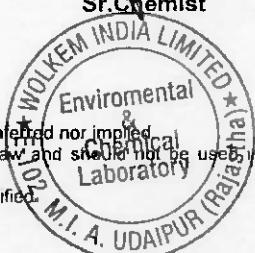

 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr.Chemist

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 Page 2 of 2
 End of Report




INDIA LIMITED

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

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



www.wolkem.com

Report No. 20240308005

Report Issue Date: - 19.03.2024

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	:	08.03.2024/11:45AM
6. Sample received on	:	08.03.2024
7. Period of Analysis	:	08.03.2024 to 18.03.2024
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	22.2
2.	Relative Humidity	%	50

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable	Permissible
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Chemical Testing – Water- Ground Water

1.	pH (at 25°C)	IS 3025(Part-11)	-	6.76	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.880	-	-
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	1820	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	568	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	179.2	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	404	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	588	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	6.2	-	-
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

[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. 20240308005

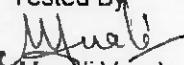
Report Issue Date: - 19.03.2024

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	:	08.03.2024/11:45AM
6. Sample received on	:	08.03.2024
7. Period of Analysis	:	08.03.2024 to 18.03.2024
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

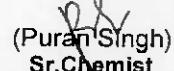
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.80	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	1.10	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	236.6	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	15.2	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	6.7	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	45.1	-	-
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	0.33	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.16	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


 (Manali Vyas)
 Asst.Chemist

Authorized Signatory

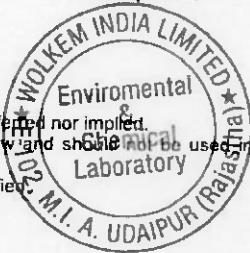

 (Puran Singh)
 Sr.Chemist

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 2494600 - 02 E-mail : info@wolkem.com
 CIN- U29299RJ1971PLC001379




Report No. 20240308006

Report Issue Date: - 19.03.2024

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	: 08.03.2024/12:10PM
6. Sample received on	: 08.03.2024
7. Period of Analysis	: 08.03.2024 to 18.03.2024
8. Name of sample & Location	: Umreda 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	20.9
2.	Relative Humidity	%	48

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)	-	6.96	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.288	-	-
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	844	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	494	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	108.8	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	53.28	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	350	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	124	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	6.0	-	-
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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Report No. 20240308006

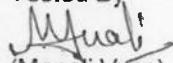
Report Issue Date: - 19.03.2024

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	:	08.03.2024/12:10PM
6. Sample received on	:	08.03.2024
7. Period of Analysis	:	08.03.2024 to 18.03.2024
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

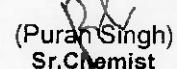
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable	Permissible
Chemical Testing – Water -- Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.80	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.20	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO4 E	mg/L	71.6	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	10.2	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	26.6	-	-
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	0.28	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

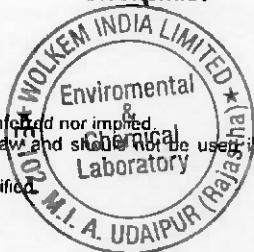

 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr.Chemist

Note

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 Page 2 of 2
 End of Report




Report No. 20240308007

Report Issue Date: - 19.03.2024

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	: 08.03.2024/12:50PM
6. Sample received on	: 08.03.2024
7. Period of Analysis	: 08.03.2024 to 18.03.2024
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	22.5
2.	Relative Humidity	%	52

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)	-	7.56	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.826	-	-
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	1196	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	108.8	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	31.68	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	370	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	358	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	6.1	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.3	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20240308007

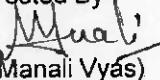
Report Issue Date: - 19.03.2024

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	:	08.03.2024/12:50PM
6. Sample received on	:	08.03.2024
7. Period of Analysis	:	08.03.2024 to 18.03.2024
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

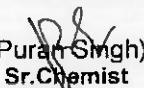
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable Permissible
Chemical Testing – Water – Ground Water					
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	- -
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.77	1.0 1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.15	- -
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	188.7	200 400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	24.7	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	28.2	- -
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	0.88	5 15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01 No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1 0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.14	0.3 No Relaxation

BDL-Below Detection Limit

Tested By


(Manali Vyas)
Asst.Chemist

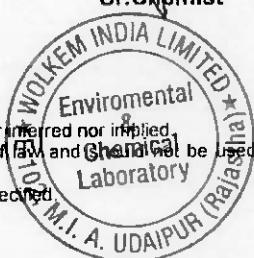
Authorized Signatory


(Puran Singh)
Sr.Chemist

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Page 2 of 2
End of Report





Report No. 20240308008

Report Issue Date: - 19.03.2024

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	: 08.03.2024/01:20PM
6. Sample received on	: 08.03.2024
7. Period of Analysis	: 08.03.2024 to 18.03.2024
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	23.2
2.	Relative Humidity	%	53

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)	-	6.94	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.176	-	-
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	780	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	376	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	103.2	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	28.32	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	302	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	230	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	7.3	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.1	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20240308008

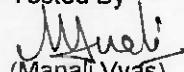
Report Issue Date: - 19.03.2024

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	:	08.03.2024/01:20PM
6. Sample received on	:	08.03.2024
7. Period of Analysis	:	08.03.2024 to 18.03.2024
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

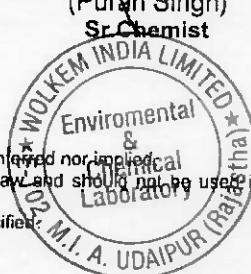
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	Acceptable	Permissible
Chemical Testing – Water – Ground Water							
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.80	1.0	1.5	
19.	Phosphate	IS:3025(Part-31)	mg/L	0.42	-	-	
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	89.6	200	400	
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	9.8	45	No Relaxation	
22.	Potassium as K	APHA 23 rd Edition, Part 3500-K (3-89 to 3-90)	mg/L	7.7	-	-	
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	46.3	-	-	
Chemical Testing – Residues – Ground water							
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5	
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.18	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	0.15	0.3	No Relaxation	

BDL-Below Detection Limit

Tested By


 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr.Chemist


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 2494600 - 02 E-mail : info@wolkem.com

CIN- U29299RJ1971PLC001379





Report No. 20240308009

Report Issue Date: - 19.03.2024

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	: 08.03.2024/01:50PM
6. Sample received on	: 08.03.2024
7. Period of Analysis	: 08.03.2024 to 18.03.2024
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	23.1	
2.	Relative Humidity		%	54	
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
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.611	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5
4.	Odour	IS:3025(Part-5)	-	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-16)	mg/L	1056	500
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	18	2000
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	434	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	97.6	75
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	45.6	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	292	200
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	326	600
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	250
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	7.1	No Relaxation
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.0	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	1

Note

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Report No. 20240308009

Report Issue Date: - 19.03.2024

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	: 08.03.2024/01:50PM
6. Sample received on	: 08.03.2024
7. Period of Analysis	: 08.03.2024 to 18.03.2024
8. Name of sample & Location	: Dhoomimata 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	0.74	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.13	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO4 E	mg/L	59.7	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	8.0	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	67.7	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.21	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	0.14	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

(Manali Vyas)
Asst.Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist



Note

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End of Report

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

CIN- U29299RJ1971PLC001379



Report No. 20240308010

Report Issue Date: - 19.03.2024

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	:	08.03.2024/02:20PM
6. Sample received on	:	08.03.2024
7. Period of Analysis	:	08.03.2024 to 18.03.2024
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	23.2
2.	Relative Humidity	%	52

S. No.	Parameters	Test Method	Unit	Results
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Chemical Testing – Water- Surface Water

1.	pH (at 25°C)	IS:3025(Part-11)	-	7.67
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.870
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	1238
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	32
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	462
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	97.6
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	52.32
10.	Alkalinity	IS:3025(Part-23)	mg/L	348
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	286
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	8.8
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.2
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	2.8

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Report No. 20240308010

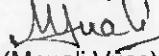
Report Issue Date: - 19.03.2024

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	: 08.03.2024/02:20PM
6. Sample received on	: 08.03.2024
7. Period of Analysis	: 08.03.2024 to 18.03.2024
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

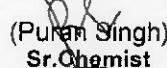
S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water – Surface Water				
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	15.68
18.	Fluoride as F	APHA 23 rd Ed., 4500 FD	mg/L	0.59
19.	Phosphate	IS:3025(Part-31)	mg/L	3.0
20.	Sulphate as SO ₄	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	264.1
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	19.2
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	10.4
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	88.7
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	1.4
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.18

BDL-Below Detection Limit

Tested By

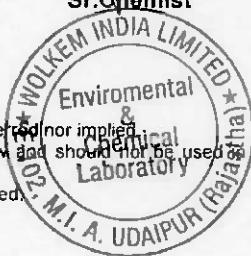

 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr.Chemist

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 Page 2 of 2
 End of Report




Report No. 20240307009

Report Issue Date: - 19.03.2024

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	: 07.03.2024/10:00AM
6. Sample received on	: 07.03.2024
7. Period of Analysis	: 07.03.2024 to 18.03.2024
8. Name of sample & Location	: Mine Lease Area (Ground water)
9. Coordinates	: N- 24° 32' 51" E- 73° 47' 25"
10. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	24.3
2.	Relative Humidity	%	39
			Limits :- IS-10500:2012
S. No.	Parameters	Test Method	Unit Results
			Acceptable Permissible

Chemical Testing – Water- Ground Water

1.	pH (at 25°C)	IS:3025(Part-11)	-	7.26	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs/cm	646.6	-	-
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	466	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	BDL(<5)	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	174	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	56	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	8.16	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	212	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	120	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<0.4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	5.8	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.2	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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~~ANNEXE~~ 12

Date: 27.1

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