

Registered AD

Ref: HZL/ Maton /MoEF/2022-23/03

Date: 24.05.2023

To,

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

Sub: Six Monthly Compliance Report of EC for October '22 to March'23.

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

Sir,

Please find enclosed Compliance Status Report of the conditions of Environmental Clearance for the period of October'22 to March'23.

Thanking you.

Yours Sincerely,

For Maton Rock Phosphate Mine



(Ravi Kumar Dave)
Mine Manager

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

Hindustan Zinc Limited

Maton Rock Phosphate Mines.

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

Tel. : (+91-294) 2342093, Fax : + (91-294) - 2342092

Registered Office - Yashad Bhawan, Udaipur (Rajasthan) - 313004

www.hzlindia.com

CIN : L27204RJ1966PLC001208

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'22 to March'23

Specific Conditions:

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

S.No.	Conditions	Compliance Status
	monsoon and maintained properly.	generated from the undisturbed slopes (hangwall) is also diverted to mine pit through peripheral garland drains which prevents water to move out of ML area. The de-siltation of mine pit takes place along with mining schedule of deepening of mine.
	Garland drain, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent runoff water and flow of sediments directly into the Ahar River, the Udaisagar pond, the Bagdara Talav and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.	The rainwater runoff is also generated on overburden dump (OB) site. The OB dump is situated in a natural valley and so far it's lower edges/ levels is situated below the top of valley level. Hence, it has not reached to it's maximum extent towards edges. Thus the runoff is diverted through natural slopes within valley into a siltation pond cum recharging pit measuring 150m x 60m x 1.5m, situated at the lowest point of dump. The accumulated silt of this pit is removed and stacked on OB dumps before commencement of every monsoon. In addition to above, a new approved dumping and its garland drain is under progress. In order to comply with the condition, HZL applied for obtaining NoC for construction of Anicuts on dt. 10.01.2011, but during discussion, officials referring WRD order dt. 26.07.2010, suggested HZL to opt for other means of recharge (copy of letter for NoC is enclosed as Annexure -4).
ix	Dimension of the retaining wall at the toe of over burden dump and OB benches within the mine to check run-off and siltation shall be based on the rain fall data.	Since, the OB dump is situated in a natural valley and so far it's lower edges/ levels is situated below the top of valley level. Hence, it has not reached to it's maximum extent towards edges. Retainer wall is constructed at strategic location along with suitable garland drain to ensure all rain water collection into recharge pit. In addition to above, a new approved dumping and its retaining wall is under progress.
x	Plantation shall be raised in an area of 122.3 ha including a 7.5 m wide green belt in safety zone around the mining lease by planting the native species around over burden dumps, along the roads etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha. Green belt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.	Out of mine lease area of 143.13 ha, only 114.44 ha. has been acquired along & an additional land of 80.25 ha acquired outside the mine lease. Plantation has been taken up in progressive manner to cover 33% area of the total land into green belt, including at least 7.5m wide greenbelt in the safety zone. About 8000 plants, including plantation on matured part of waste dump, have been planted during running FY 2022-23. Till date about 76,000 saplings have been planted with survival rates of above 90%. Further, the progressive green belt development plan has been prepared considering further plantation over OB dumps on maturity and shall be implemented over the

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

S.No.	Conditions	Compliance Status
	data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance	
xxvii	A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval	The same shall be complied prior to closure.

General Conditions

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

S.No.	Conditions	Status
xiv	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied
xv	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ Tehsildar's Office for 30 days.	Complied.
xvi	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the Regional Office of the Ministry of Environment and Forests, at Lucknow by e-mail.	Environment statement in Form V is submitted periodically as stipulated. Environmental statement for the year 2021-22 was submitted on 24.09.2022.
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).

Achtox I.

1. **Gelehrte**
Prof. Dr. med. habil. Dr. phil. Dr. h. c. Dr. h. c. Dr. h. c.
Hans-Joachim Klemm
Universitätsklinikum Regensburg
D-9304 Regensburg

Kapitel 1

Die wichtigste Voraussetzung für einen gezielten Einsatz von Röntgen- und anderen bildgebenden Verfahren ist die Kenntnis der anatomischen Strukturen des Patienten. Die Anatomie ist die Wissenschaft, die die Form und Größe, die Anordnung und die Beziehungen der Körperstrukturen untersucht. Sie ist die Grundlage für die Diagnostik und Therapie. Sie ist die Basis für die Planung und Durchführung von Operationen.

Wichtigste

Methode: Röntgen(sono)
Zeit: 10.00 - 12.00 Uhr

Methoden: Röntgen
Zeit: 10.00 - 12.00 Uhr

न्यायालय भूमि अधिकारी,

उदयपुर-सत्तूर, राजस्थान

क्रमांक :- २२/८६

ठब्बट

सम-डिविजन

दिनांक २३-२-८८ १८७

अवार्ड

(मन्त्रमंत्र घारा ३३, राजस्थान भूमि अधिकारी प्रधिनियम, संग्रह ६५३)
विषय:- हिन्दुस्तान जिले को कासी में इन वाली भूमि को अदावत गरवते हैं।

प्राचावली भवलोकन की गई। हिन्दुस्तान जिले को कासी फलाहपुर, उदयपुर की शाया जावर/मटूर/दरीवा भाईस के तिए भूमि अधिकारी बास्तु राज्य राजभारत से राजस्थान भूमि अधिकारी प्रधिनियम, संग्रह ६५३ की घास ४ की विशिष्ट बनिय विभाग द्वारा अधिये नम्बर अनुग्रह २५४-२-F) दि. १३-६-७३ को प्राप्त हो जाने से भूमि अवार्ड अधिकारी गिरवा/सत्तूर/राजस्थान को प्रोटो अधिये नं. को प्राप्त हो जाने से भूमि अवार्ड अधिकारी गिरवा/सत्तूर/राजस्थान को प्रोटो अधिये नं. को प्राप्त हो जाने से भूमि अवार्ड अधिकारी गिरवा/सत्तूर/राजस्थान को प्रोटो अधिये नं. इस दिविजन में काविजान दिनांक _____ की सांवजनिक इमारों पर प्रधानियत है जूनी है प्रोटो इस दिविजन में काविजान भूमि के प्राप्ती समझौते पर वातिली की गई जो प्राप्ती समझौते से अवार्ड होने वाली भूमि का एवजान लेने के लिए रखा गया है।

उपरोक्त प्रकरण में निम्ननियत प्राप्तियान को भूमि अदावत हो रही है। इस भूमि की सर्वों की गई जिसका विवरण निम्ननियत है:-

नाम गाँव	पास तहसील	संसरण नं.	रक्का	किलो-भूमि	जग्गान	विवरण
१	२	३	४	५	६	७
मटूर	गिरवा	१४७	४ - ८०	५५३.७	१ - ००	

माझी कागजात से इस भूमि के मालिक गोर बाविजान की बोक्क कराई गई तो पाया गया कि अवार्ड होने वाली भूमि जिसका विवरण उपर दिया गया है औ ग्राम पञ्चायत द्वारा पिता थे निवासी तहसील गिरवा के नाम पर इन्द्राज है जिसकी तस्वीर तहसीलदार सा. गिरवा/सत्तूर/रेसमनस ने की है प्रोटो चहोने यह भी प्रभारित किया है कि अवार्ड श्री गुरु पञ्चायत द्वारा किया जावे।

बूकि ग्रामान्मियान आपसी समझौते पर एवजान के लिए है पार है। ऐसी सूरत में भूमि अधिकारी प्रधिनियम, १६५३ गोपाल ६ (३) व ६ (१) के पश्चात नीटित जारी करने की गोई आवश्यकता नहीं है।

तहसीलदार सा. गिरवा/सत्तूर/रेसमनस ने मार्गेट ऐल्ब्रू शास्त्री रज्जुमुहो के शास्त्र एवजान देने के लिये स्वीकृति जाही जो काईल संतुष्ट है।

मध्यवास्ति नियमावली प्रपत्र 10 (भूमि आवर्ति नियमावली अनुच्छेद 96)

राजी नाम।

(राजीनामे पर इस्ताधर करते याले
पात्र विविष्ट) स्तं द्वारा निम्न मिस्त्रित निविष्ट भूमि की अदायगी और भूमिक्षेत्र की रकम के लिए अपनी सहमति
प्रोवित करते हैं और निम्नी तरह का द्वारा द्वारा उठाया हुआ दावा या हासारी गोई अधिक मात्र (भूमि) निम्नी
कथन पर दावर की गई, सुरक्षा रह जाएगी जावे।

विवा.	लाहौल	गाँव	जापवाड़/ हांका विवरण	मुद्रावाले का प्रधारण	
				योविक अदायगी लगत यो शूद्र होगा	नकद मुद्रावाला
उदाहरण	गिर्फ	गांव	14.22	8.00 रुपये	10.00
				इनके लिये 10/ - 7200.00	
				10.00	1025.50
				3.850.00	
					15405.80
					17. का गाँव गांव
					PROJECT MANAGER हिंदुस्तान जिक्र लिखित (गांव तालाब का उपराम) गहा दी इन्द्रियोदय नाला गालू-गुड़ा, जिला दिग्गज ताला - 213024
					उपजिला नाला 4-19/1974 बाला नाला नाला नाला
					प्रभाला नाला नाला नाला

माना जाएगा यदि उसे भूमि में या भूमि को भवान्तिको जाते हैं या जब वृक्ष किना मुद्रावाला

राजस्वान्तर भूमि अधिकारी,
उदयपुर-सलूकदर, राजस्वान्तर
क्रमांक : २२/८६

उदयपुर

संघ-चिविजन
दिनांक २५-२-१९८७ १८७

अवार्ड

(भूमि अधिकारी, उदयपुर-सलूकदर, राजस्वान्तर भूमि अधिकारी, उदयपुर-सलूकदर, राजस्वान्तर)
विषय : हिन्दुस्तान लिंक निवास में घरों में घरों दाली भूमि की भवान्ति करने हेतु ।

प्रत्येक घरों की गई । हिन्दुस्तान लिंक निवास, उदयपुर की शासा जावर/मटून/
दरोबा, माहिस के लिए भूमि अधिकारी द्वारा उदयपुर सलूकदर से राजस्वान्तर भूमि अधिकारी, उदयपुर-सलूकदर, राजस्वान्तर भूमि अधिकारी, उदयपुर-सलूकदर, राजस्वान्तर को घोर से जायेंगे ।
को, शास्त्र हो जाने से भूमि अधिकारी द्वारा उदयपुर-सलूकदर/राजस्वान्तर को घोर से जायेंगे ।
दिनांक की सावंजिक रूपानों पर प्रकाशित हो चुकी है, प्रौढ़ इस दिनांक में काविजान
भूमि रोपासी, समझीता पर वादानी नी गई जो आपसी समझीत से घरावाप्त होने यातो भूमि का एवजान
देने के लिए उदयपुर सलूकदर है ।

उपरोक्त प्रकाशण में निम्नलिखित आवासियान की भूमि अवाप्त हो रही है । इस भूमि की रावें की गई¹
विवरण विवरण निम्नलिखित है ।

नाम नंबर	नाम तहसील	स्थान नं.	रकवा		किलम भूमि	लगान	विवरण
			बीघा	बिस्ता			
१	२	३	४	५	६	७	८
मटून	गिल	१५७७	८-	८०	५३२	१-००	

माली कागजात से इस भूमि के मालिक द्वारे काविजान की जांच कराई गई हो । उदयपुर की शास्त्र
होने दाली भूमि जिसका विवरण करते दिया गया है और उग्रपचारा भूमि पिता श्री
जाति निवासी तहसील गिल के नाम पर इन्द्राज है जिसकी
तहसील दावार-सा, गिल/सलूकदर/राजस्वान्तर को है और उन्होंने यह भी प्रमाणित किया है कि अवार्ड
श्री उग्रपचारा भूमि के नाम आदी किया जावे ।

कूं कि आवासियान आपसी समझीत पर एवजाना के लिए तैयार है । ऐसी सूरत में भूमि अधिकारी अधि-
नियम, १९५३ की धारा ६ (३) व ६ (१) के अनुसार नोटिस दाटी करने की ओर आवश्यकता नहीं है ।
तहसील दावार-सा, गिल/सलूकदर/राजस्वान्तर में आवाप्त वैद्युत आपसी रज्यमुखी के प्राप्तार पर एवजाना देने
के लिए रघीकृत चाही जो काइल संस्था है ।

* * * * *

प्रैष्ठः - अनस्ति विग्रहा
व्याजेष्यान् ।

卷之三十一 - 15.2.97

ପିଲାମ୍ବା - ଖୁଣୀ କାରାନ୍ତି କାଳାଦୟମ, କାହାରେ କାରାନ୍ତି କାଳାଦୟମ ଖୁଣୀ
କେ ଶିଟ କାରାନ୍ତି କାଳାଦୟମ ଥାବୁ କାହାରେ କାରାନ୍ତି କାଳାଦୟମ ?

માર્ગોદાર,

केन्द्रीय भूमि का वापी संस्कृत भूमि वापी ने विद्या जाता है।

अब पुराने पह टट्ठों की विभिन्नता स्थान को दर्शाता
पूराजरसव अधिकारियम, १९६८ की गांवों की उन्नतीके में वह एक अद्यतनः
दृष्टि की जा रही है जिसकी विवरणों की आवश्यकता है।

उक्त ग्रन्थ में यह स्पष्ट होता है कि उसी विधि के अनुसार भूमि देन्ट्रीय भूमि अपार्टमेंट अधिकारात्मक, 1924 में अन्तर्राष्ट्रीय बासिन्दाओं के बालों और ऐसी भूमि को उपलब्ध कराने की जारी रखने की विधि अन्तर्राष्ट्रीय विधि के अनुसार एवं अन्तर्राष्ट्रीय विधि के अनुसार इसका नाम भूमि देन्ट्रीय भूमि अपार्टमेंट अधिकारात्मक विधि के अनुसार दिया जाता है, इसका विवरण निम्न विधि के अनुसार दिया जाता है:

卷之三

१० विकास की विभिन्न विधियों का विवरण इसके अनुसार है:-

173
28.2.14

ANNEX 3



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 Udaipur situated in Girwa block

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

Sir,

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

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

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

Inside the project area. As per the report, the recharge measures for 41876m³/year quantity could be implemented. The total groundwater recharge obligation is 15560m³/year which comprises the quantities of (i) abstraction of groundwater 14600 i.e. (7300*2) m³/year and (ii) abstraction of groundwater due to dewatering 960 i.e. (480*2) m³/year. The above recharge measures of 41876m³/year are 5.6 times of 7780 m³/year of the abstracted quantity.

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

With regards

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 Limited, Maton Rock Phosphate Mines Chittaur Dist. Udaipur
Letter Reference No. and Date	HZL/Maton/C/GWB/mtrnng/Recd/2019-15-42 14/7/2014
Subject	Application for grant of NOC to extract 1.31 m ³ /day Water at Khatola Tehsil, Chittaur Dist. Udaipur
Dated signatures of diarist/dispenser (CGWB, WR, 6-A, Jhalana Doongri, Jaipur 302 004)	P.D.C.
Remarks if any	<i>Ans (6) A/M</i>

ANNOX 6

ANNEXURE 2

HINDUSTAN ZINC LIMITED
Milton Rock Phosphate Mine
Tehsil- Girwa, Distt. Udaipur- 313006 (Raj)
Phone : 0294-2342693

January 10, 2011

To:

Executive Engineer
Irrigation Department
Udaipur (Raj)

Subject: NOC for construction of five Anicuts in respect of comply of EC condition.
Memt [Ref. F No. J-1161/5/169/2009-LAII (M) Dated 17.03.2010]

Sir,

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

- Anicut No. 1 near village Katherwas
- Anicut No. 2 near village Parola
- Anicut No. 3 near village Bichhri
- Anicut No. 4 near village Kanpur
- Anicut No. 5 near village Dundi

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
(Signature)
Umesh Shukla

Site Manager



Ref. 1621 Maton RSP/CTO/2015-16/ 65

Date: 18.09.2015

10.

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

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

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

Sir,

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

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

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

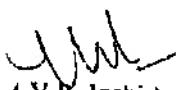
Further, HZL has entered into a tripartite agreement with Municipal Council Udaipur and Urban Improvement Trust Udaipur for laying of Sewage Trunk Line from Udaipur city to STP to divert sewage of city from entering into Ahar River and thereby avoiding pollution from entering into it. This 20 MLD STP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

Hindustan Zinc Limited

Maton Rock Phosphate Mines,
P.O - Maton, Th. Girwa, Udaipur (Rajasthan) - 313003
Tel.: (+91-294) 2342093, Fax.: +91-294-2342092
Registered Office - Yashad Bhawan, Udaipur (Rajasthan) - 313004
www.hzlindia.com
CIN - L27204RJ1966PLC00120B

Thanking you.

Yours sincerely,



(V.P. Joshi)

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

Hindustan Zinc Ltd.

Melon Rock Phosphate Mines

Encl: As above. Udaipur (Raj.)

CC : 1. The Member Secretary, Rajasthan State Pollution Control Board, 4, Institutional Area, Jhalana Doongri, Jaipur (Raj.) - 302004.

2. The Regional Officer, Rajasthan State Pollution Control Board, F-470, Near UCCI Building, Madri Industrial Area, Udaipur (Raj.) - 313003.

✓ 3. Office Copy (Env. Cell)



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

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

Dt 14.07.2014

To,

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

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

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

Sir,

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

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

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

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

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

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

With regards

ASG
(Amar Singh Gohil) Manager (Mines)
Mines Manager Hindustan Zinc Ltd.
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 (Raj.) Dist. Udaipur
Letter Reference No. and Date	AZL/Maton/C/GWB/Motony/2014-15-VB 14/7/14
Subject	Applied for Grant of NOC, to release 20m ³ /day via tube Maton Techne Minelink
Dated signature of diarist/dispatcher (CGWB, WR, G-A, Jhalana Doongri, Jaipur 302 004)	
Remarks if any	Chck 16/7/14

Annex-7



Fig : Wet Drilling

ANALYST

कायद्वितीय उप चन रखिका, उदयपुर (राजस्थान)

कमाल - पृष्ठा / राजसा / उत्तरा / ८८७५ दिनांक १४-१२-१९

गाईन्य गेमेन्ट
हिन्दूसाम लिक लिमिटेड
पट्टन माईन
उदयपुर

5477. - Issue of certificate regarding National Parks, Sanctuaries, Biosphere Reserves, Wildlife corridors Tiger/Elephant reserves (existing as well as proposed), within 10 Km of the mine lease of Maton Mines (ML No. 6889) Near village Maton, Tehsil Girwa, Dholi, Udaipur (Raj.)

प्रराग - अधिकारी प्राप्ति के लिए उपलब्ध होना।

ମୁଦ୍ରଣ ପତ୍ର.

नगरान्वत विधायकसभा ने पालाशीक प्रश्नों का प्रश्न करने में सिलसा बढ़ाया है। जिसमें जलवाया एवं ग्रामपाल द्वारा दिए गए उत्तरों को अधिक विस्तृत विवरण दिया जाना चाहिए। इसके अनुसार जलवाया एवं ग्रामपाल द्वारा दिए गए उत्तरों को अधिक विस्तृत विवरण दिया जाना चाहिए।

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四

कार्यालय उप वन संरक्षक, उदयपुर (उत्तर)

क्रमांक—प. () रावे/उवस/उत्तर/ 6095

दिनांक : १५-१२-०९

माईन्स ऐनेजर
हिन्दूस्तान जिंक लिमिटेड
मटून माईन्स
उदयपुर

विषय :— Authentication of flora and fauna in core, & Buffer zone of Matun Mines

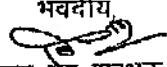
(ML. No. 6/89) near village Matun tehsil Girwa Distt. Udaipur (Raj.)

प्रसंगः— आपका प्रार्थना पत्र क्रमांक निल HZL/Matun/env/09/ दिनांक 18.11.2009

महोदय,

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

संलग्नः— उपरोक्तानुसार।

भवदीय,

उप वन संरक्षक
उदयपुर (उत्तर)



Report No. 20221004001/A

Report Issue Date: - 28.10.2022

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: - 31.12.2020
2. Purchase order Number	:	03.10.2022/09:40AM
3. Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	04.10.2022
6. Sample received on	:	04.10.2022 to 14.10.2022
7. Period of Analysis	:	Kharwaria Village
8. Name of Location	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual
9. Method of Sampling	:	

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1435.20	Minutes
2.	Average Flow rate for PM10	1.185	M ³ / Min
3.	Ambient Temperature	30.8	°C
4.	Relative Humidity	47	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	48.13	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	28.31	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	8.47	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	10.64	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

 (Leena Sharma)
 Asst.Chemist

Authorized Signatory

 (Manish Bhagora)
 Chemist

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

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


Report No. 20221004001/B

Report Issue Date: - 28.10.2022

TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016
2. Purchase order Number	: Amendment Dated: - 31.12.2020
3. Date & Time of Monitoring	: 03.10.2022/09:40AM
4. Sample Identification	: Air Sample
5. Condition of Sample	: Sealed/Ok
6. Sample received on	: 04.10.2022
7. Period of Analysis	: 04.10.2022 to 14.10.2022
8. Name of Location	: Kharwaria Village
9. Method of Sampling	: Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30.8	°C
2.	Relative Humidity	47	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.46	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.58	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.318	-

Tested by

Leena
(Leena Sharma)
Asst.Chemist

Authorized Signatory

Manish
(Manish Bhagora)

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

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 should not be used in any advertising media without our special permission in writing.
4. The samples will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified.
5. Any discrepancy in test results should be reported within 15 days.

Page 1 of 1
End of Report



Report No. 20221005001/A

Report Issue Date: - 28.10.2022

TEST REPORT	
1. Name of Customer	HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
2. Purchase order Number	P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	Amendment Dated: - 31.12.2020
4. Sample Identification	04.10.2022/10:40AM
5. Condition of Sample	Air Sample
6. Sample received on	Sealed/Ok
7. Period of Analysis	05.10.2022
8. Name of Location	05.10.2022 to 14.10.2022
9. Method of Sampling	Maton Village
	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

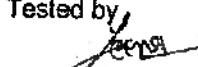
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1426.30	Minutes
2.	Average Flow rate for PM10	1.175	M ³ / Min
3.	Ambient Temperature	32	°C
4.	Relative Humidity	53	%

Results Ambient Air Quality

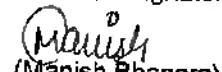
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	52.59	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	25.98	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	8.83	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	11.01	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

Note

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 Page 1 of 1
 End of Report


Report No. 20221005001/B

Report Issue Date: - 28.10.2022

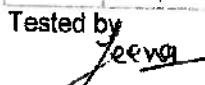
TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
2. Purchase order Number	: P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	: Amendment Dated: - 31.12.2020
4. Sample Identification	: 04.10.2022/10:40AM
5. Condition of Sample	: Air Sample
6. Sample received on	: Sealed/Ok
7. Period of Analysis	: 05.10.2022
8. Name of Location	: 05.10.2022 to 14.10.2022
9. Method of Sampling	: Maton Village
	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32	°C
2.	Relative Humidity	53	%

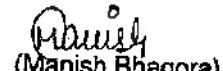
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.53	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	5.45	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.394	-

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

Environmental & Chemical Laboratory
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Page 1 of 1

End of Report



Report No. 20221006001/A

Report Issue Date: - 28.10.2022

TEST REPORT	
1. Name of Customer	:
	HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
2. Purchase order Number	:
	P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
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. Method of Sampling	:
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
	Amendment Dated: - 31.12.2020
	05.10.2022/09:45AM
	Air Sample
	Sealed/Ok
	06.10.2022
	06.10.2022 to 14.10.2022
	Lakadwas Village
	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1430.10	Minutes
2.	Average Flow rate for PM10	1.160	M ³ / Min
3.	Ambient Temperature	31.3	°C
4.	Relative Humidity	44	%

Results Ambient Air Quality

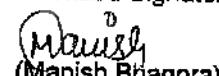
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	58.08	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	33.85	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	10.55	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	12.82	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

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 Page 1 of 1
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Report No. 20221006001/B

Report Issue Date: - 28.10.2022

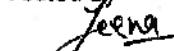
TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED
	Rockphosphate Maton Mine
2. Purchase order Number	: P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	: Amendment Dated: - 31.12.2020
4. Sample Identification	: 05.10.2022/09:45AM
5. Condition of Sample	: Air Sample
6. Sample received on	: Sealed/Ok
7. Period of Analysis	: 06.10.2022
8. Name of Location	: 06.10.2022 to 14.10.2022
7. Method of Sampling	: Lakadwas Village
	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	31.3	°C
2.	Relative Humidity	44	%

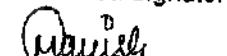
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.59	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	6.27	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.295	-

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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

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Page 1 of 1

End of Report



Report No. 20221007001/A

Report Issue Date: - 28.10.2022

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: - 31.12.2020
2. Purchase order Number	:	06.10.2022/10:45AM
3. Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	07.10.2022
6. Sample received on	:	07.10.2022 to 14.10.2022
7. Period of Analysis	:	Umarda Village
8. Name of Location	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual
9. Method of Sampling	:	

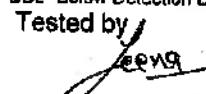
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1423.60	Minutes
2.	Average Flow rate for PM10	1.155	M ³ / Min
3.	Ambient Temperature	32	°C
4.	Relative Humidity	46	%

Results Ambient Air Quality

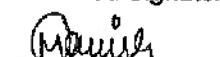
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPBC Norms) New Delhi dt. 18 th Nov. 2008
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	61.74	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	36.10	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	11.62	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	14.74	80
5.	Lead	µg/m ³	IS: 5182(Par22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

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 Page 1 of 1
End of Report


Report No. 20221007001/B

Report Issue Date: - 28.10.2022

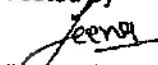
TEST REPORT	
1. Name of Customer	: HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	: PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Date & Time of Monitoring	: Amendment Dated: - 31.12.2020
4. Sample Identification	: 06.10.2022/10:45AM
5. Condition of Sample	: Air Sample
6. Sample received on	: Sealed/Ok
7. Period of Analysis	: 07.10.2022
8. Name of Location	: 07.10.2022 to 14.10.2022
9. Method of Sampling	: Umarda Village Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32	°C
2.	Relative Humidity	46	%

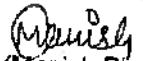
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.62	04
2.	SiO ₂	µg/m ³	SOP NO.WL/AIR/TP/ 23/25	5.67	-
3.	PO ₄	µg/m ³	SOP NO.WL/AIR/TP/ 24/25	0.428	-

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhaora)
Chemist

Environmental & Chemical Laboratory
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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- U28299RJ1971PLC001378



GHSAG
Certificate No.
0130126522

Our Commitment.. Your Trust



Report No. 20221010001/A

Report Issue Date: - 28.10.2022

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: - 31.12.2020

07.10.2022/10:35AM

Air Sample

Sealed/Ok

10.10.2022

10.10.2022 to 14.10.2022

Mine Lease Area

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

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1422.50	Minutes
2.	Average Flow rate for PM10	1.180	M ³ / Min
3.	Ambient Temperature	32.1	°C
4.	Relative Humidity	50	%

Results Ambient Air Quality

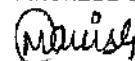
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2008
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	49.71	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	27.31	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	7.82	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2008 Reaff 2017	9.53	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

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 Phone : +91 294 2484600 - 02 E-mail : info@wolkem.com
 CIN- U29299RJ1971PLC001379

 TC-5941
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Report No. 20221010001/B

Report Issue Date: - 28.10.2022

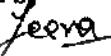
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 31.12.2020
2. Purchase order Number	:	07.10.2022/10:35AM
3. Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	10.10.2022
6. Sample received on	:	10.10.2022 to 14.10.2022
7. Period of Analysis	:	Mine Lease Area
8. Name of Location	:	Instrument Manual
9. Method of Sampling	:	

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32.1	°C
2.	Relative Humidity	50	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAQS (CPCB Norms) New Delhi dt. 18 th Nov, 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.42	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.21	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.368	-

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist
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Page 1 of 1
 End of Report

Report No. 20221018001/A

Report Issue Date: - 28.10.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	17.10.2022/10:10AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	18.10.2022
7. Period of Analysis	:	18.10.2022 to 28.10.2022
8. Name of Location	:	Mine Lease Area
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1433	Minutes
2.	Average Flow rate for PM10	1.185	M ³ / Min
3.	Ambient Temperature	30	°C
4.	Relative Humidity	47	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	54.27	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	29.58	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	8.65	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	11.85	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

 (Leena Sharma)
 Asst.Chemist

Authorized Signatory

 (Manish Bhagora)
 Chemist

 Environmental & Chemical Laboratory
Wolkem India Limited
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Report No. 20221018001/B

Report Issue Date: - 28.10.2022

TEST REPORT

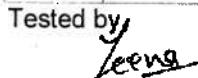
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 31.12.2020
3. Date & Time of Monitoring	:	17.10.2022/10:10AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	18.10.2022
7. Period of Analysis	:	18.10.2022 to 28.10.2022
8. Name of Location	:	Mine Lease Area
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30	°C
2.	Relative Humidity	47	%

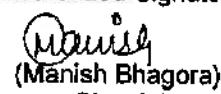
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.45	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.34	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.328	-

Tested by


 (Leena Sharma)
 Asst. Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

Note

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 Page 1 of 1
 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. 20221019001/A

Report Issue Date: - 28.10.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	18.10.2022/10:40AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	19.10.2022
7. Period of Analysis	:	19.10.2022 to 28.10.2022
8. Name of Location	:	Umarda Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1436.40	Minutes
2.	Average Flow rate for PM10	1.155	M³/ Min
3.	Ambient Temperature	32.2	°C
4.	Relative Humidity	50	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m³	IS:5182 (Part 23)2006 RA 2017	65.11	100
2.	PM _{2.5}	µg/m³	WILUSOP No. 10/25 issue date 01.05.2019	35.74	60
3.	SO ₂	µg/m³	IS:5182 (Part 2)2001 Reaff 2017	13.43	80
4.	NO ₂	µg/m³	IS:5182 (Part 6)2006 Reaff 2017	16.64	80
5.	Lead	µg/m³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Asst.Chemist

Authorized Signatory

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

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

TC-5941
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Report No. 20221019001/B

Report Issue Date: - 28.10.2022

TEST REPORT

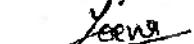
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 31.12.2020
3. Date & Time of Monitoring	:	18.10.2022/10:40AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	19.10.2022
7. Period of Analysis	:	19.10.2022 to 28.10.2022
8. Name of Location	:	Umarda Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32.2	°C
2.	Relative Humidity	50	%

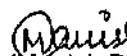
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.65	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.58	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.409	-

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


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

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CIN- U29299RJ1971PLC001379



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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.wca@wolkem.com



www.wolkem.com

Report No. 20221020001/A

Report Issue Date: - 28.10.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	19.10.2022/11:00AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	20.10.2022
7. Period of Analysis	:	20.10.2022 to 28.10.2022
8. Name of Location	:	Lakadwas Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1421.20	Minutes
2.	Average Flow rate for PM10	1.175	M ³ / Min
3.	Ambient Temperature	32	°C
4.	Relative Humidity	53	%

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)2006 RA 2017	62.43	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	31.51	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	11.32	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	13.57	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by,

 (Leepa Sharma)
 Asst.Chemist

Authorized Signatory

 (Manish Bhagora)
 Chemist

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

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CIN- U29299RJ1971PLC001379



TC-5941

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Report No. 20221020001/B

Report Issue Date: - 28.10.2022

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: - 31.12.2020
4. Sample Identification	:	19.10.2022/11:00AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	20.10.2022
8. Name of Location	:	20.10.2022 to 28.10.2022
9. Method of Sampling	:	Lakadwas Village
		Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32	°C
2.	Relative Humidity	53	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.53	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.21	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.308	-

Tested by

 (Leena Sharma)
 Asst.Chemist

Authorized Signatory

 (Manish Bhagora)
 Chemist

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

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Page 1 of 1

End of Report



Report No. 20221021001/A

Report Issue Date: - 28.10.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	20.10.2022/10:55AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	21.10.2022
7. Period of Analysis	:	21.10.2022 to 28.10.2022
8. Name of Location	:	Maton Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1436.10	Minutes
2.	Average Flow rate for PM10	1.170	M ³ / Min
3.	Ambient Temperature	32.6	°C
4.	Relative Humidity	48	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	49.78	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	28.27	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	7.75	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	9.86	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

 (Leena Sharma)
 Asst.Chemist

Authorized Signatory

 (Manish Bhagora)
 Chemist

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

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Report No. 20221021001/B

Report Issue Date: - 28.10.2022

TEST REPORT

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2. Purchase order Number	:	
3. Date & Time of Monitoring	:	20.10.2022/10:55AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	21.10.2022
7. Period of Analysis	:	21.10.2022 to 28.10.2022
8. Name of Location	:	Maton Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32.6	°C
2.	Relative Humidity	48	%

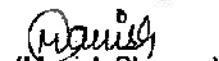
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.48	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.54	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.342	-

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

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Report No. 20221024001/A

Report Issue Date: - 28.10.2022

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: - 31.12.2020
4. Sample Identification	:	21.10.2022/11:10AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	24.10.2022
8. Name of Location	:	24.10.2022 to 28.10.2022
9. Method of Sampling	:	Kharwaria Village
	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No.	Monitoring Details	Results	Unit
1.	Duration of Survey	1421.30	Minutes
2.	Average Flow rate for PM10	1.180	M ³ / Min
3.	Ambient Temperature	33.4	°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. 2008
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	50.47	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	25.62	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	9.65	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	11.77	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Asst.Chemist

Authorized Signatory

(Manish Bhagora)
Chemist

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

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Report No. 20221024001/B

Report Issue Date: - 28.10.2022

TEST REPORT

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2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 31.12.2020
3. Date & Time of Monitoring	:	21.10.2022/11:10AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	24.10.2022
7. Period of Analysis	:	24.10.2022 to 28.10.2022
8. Name of Location	:	Kharwaria Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	33.4	°C
2.	Relative Humidity	42	%

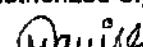
Results Ambient Air Quality

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	0.50	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.0	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.343	-

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

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Page 1 of 1

End of Report

Report No. 20221108001/A

Report Issue Date: - 16.11.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	07.11.2022/10:35AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	08.11.2022
7. Period of Analysis	:	08.11.2022 to 16.11.2022
8. Name of Location	:	Kharwaria Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1425.8	Minutes
2.	Average Flow rate for PM10	1.21	M ³ / Min
3.	Ambient Temperature	30	°C
4.	Relative Humidity	41	%

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)2006 RA 2017	64.60	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	34.80	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	8.34	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	10.30	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

Leena Sharma
(Leena Sharma)
Asst.Chemist

Authorized Signatory

Marish Bhagora
(Marish Bhagora)
Chemist

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

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Report No. 20221108001/B

Report Issue Date: - 16.11.2022

TEST REPORT

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2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 31.12.2020
3. Date & Time of Monitoring	:	07.11.2022/10:35AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	08.11.2022
7. Period of Analysis	:	08.11.2022 to 16.11.2022
8. Name of Location	:	Kharwaria Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30	°C
2.	Relative Humidity	41	%

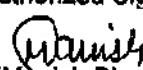
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.47	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	6.71	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.308	-

Tested by,


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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

Note

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Page 1 of 1

End of Report

Report No. 20221109001/A

Report Issue Date: - 16.11.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	08.11.2022/10:10AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	09.11.2022
7. Period of Analysis	:	09.11.2022 to 16.11.2022
8. Name of Location	:	Maton Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1432.1	Minutes
2.	Average Flow rate for PM10	1.20	M ³ / Min
3.	Ambient Temperature	30.4	°C
4.	Relative Humidity	43	%

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)2006 RA 2017	59.07	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	28.38	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	8.77	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	8.90	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

[Signature]
(Leena Sharma)
Asst.Chemist

Authorized Signatory

[Signature]
(Manish Bhagora)
Chemist

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

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Page 1 of 1

End of Report



Report No. 20221109001/B

Report Issue Date: - 16.11.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	08.11.2022/10:10AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	09.11.2022
7. Period of Analysis	:	09.11.2022 to 16.11.2022
8. Name of Location	:	Maton Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30.4	°C
2.	Relative Humidity	43	%

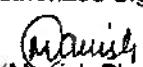
Results Ambient Air Quality

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	0.52	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	5.85	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.365	-

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report

Report No. 20221110001/A

Report Issue Date: - 16.11.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	09.11.2022/11:00AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	10.11.2022
7. Period of Analysis	:	10.11.2022 to 16.11.2022
8. Name of Location	:	Lakadwas Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1418.7	Minutes
2.	Average Flow rate for PM10	1.155	M ³ / Min
3.	Ambient Temperature	32.4	°C
4.	Relative Humidity	41	%

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)2006 RA 2017	58.43	100
2.	PM _{2.5}	µg/m ³	WIJSOP No. 10/25 issue date 01.05.2019	31.17	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	9.54	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	10.13	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

Leena
(Leena Sharma)
Asst.Chemist

Authorized Signatory

Manish
(Manish Bhagora)
Chemist

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

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Report No. 20221110001/B

Report Issue Date: - 16.11.2022

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: - 31.12.2020
3. Date & Time of Monitoring	:	09.11.2022/11:00AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	10.11.2022
7. Period of Analysis	:	10.11.2022 to 16.11.2022
8. Name of Location	:	Lakadwas Village
7. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32.4	°C
2.	Relative Humidity	41	%

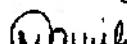
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.58	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	6.54	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.304	-

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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

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Page 1 of 1
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Report No. 20221111001/A

Report Issue Date: - 16.11.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	10.11.2022/10:40AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	11.11.2022
7. Period of Analysis	:	11.11.2022 to 16.11.2022
8. Name of Location	:	Umarda Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1428	Minutes
2.	Average Flow rate for PM10	1.135	M ³ / Min
3.	Ambient Temperature	31.6	°C
4.	Relative Humidity	39	%

Results Ambient Air Quality

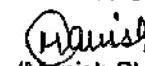
S. No.	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	62.10	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	34.74	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	9.99	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	10.86	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report





Report No. 20221111001/B

Report Issue Date: - 16.11.2022

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: - 31.12.2020
4. Sample Identification	:	10.11.2022/10:40AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	11.11.2022
8. Name of Location	:	11.11.2022 to 16.11.2022
9. Method of Sampling	:	Umarda Village
		Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	31.6	°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	0.65	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	5.86	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.424	-

Tested by

(Leena Sharma)
Asst.Chemist

Authorized Signatory

(Manish Bhaora)
Chemist

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

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Page 1 of 1
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Report No. 20221112001/A

Report Issue Date: - 16.11.2022

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: - 31.12.2020
3. Date & Time of Monitoring	:	11.11.2022/10:20AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	12.11.2022
7. Period of Analysis	:	12.11.2022 to 16.11.2022
8. Name of Location	:	Mine Lease Area
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

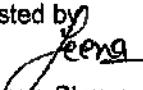
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1424	Minutes
2.	Average Flow rate for PM10	1.21	M³/ Min
3.	Ambient Temperature	30.5	°C
4.	Relative Humidity	37	%

Results Ambient Air Quality

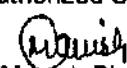
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m³	IS:5182 (Part 23)2006 RA 2017	48.83	100
2.	PM _{2.5}	µg/m³	WIL/SOP No. 10/25 issue date 01.05.2019	24.76	60
3.	SO ₂	µg/m³	IS:5182 (Part 2)2001 Reaff 2017	7.59	80
4.	NO ₂	µg/m³	IS:5182 (Part 6)2006 Reaff 2017	10.82	80
5.	Lead	µg/m³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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

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Page 1 of 1
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Report No. 20221112001/B

Report Issue Date: - 16.11.2022

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: - 31.12.2020
4. Sample Identification	:	11.11.2022/10:20AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	12.11.2022
8. Name of Location	:	12.11.2022 to 16.11.2022
9. Method of Sampling	:	Mine Lease Area
	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30.5	°C
2.	Relative Humidity	37	%

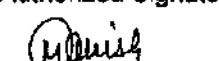
Results Ambient Air Quality

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	0.45	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.99	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.324	-

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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Page 1 of 1
End of Report

Report No. 20221122081/A

Report Issue Date: - 05.12.2022

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: - 31.12.2020
3. Date & Time of Monitoring	:	21.11.2022/09:25AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	22.11.2022
7. Period of Analysis	:	22.11.2022 to 02.12.2022
8. Name of Location	:	Mine Lease Area
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1428.30	Minutes
2.	Average Flow rate for PM10	1.170	M ³ / Min
3.	Ambient Temperature	23	°C
4.	Relative Humidity	42	%

Results Ambient Air- Quality

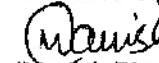
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2008 RA 2017	50.28	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	25.92	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	9.75	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2008 Reaff 2017	12.13	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Lim

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

Environmental & Chemical Laboratory
Wolkem India Limited
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Page 1 of 1
End of Report

Report No. 2022-122081/B

Report Issue Date: - 05.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	21.11.2022/09:25AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	22.11.2022
7. Period of Analysis	:	22.11.2022 to 02.12.2022
8. Name of Location	:	Mine Lease Area
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	23	°C
2.	Relative Humidity	42	%

Results Ambient Air Quality

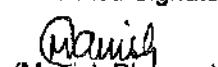
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 16 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.43	04
2.	SiO ₂	µg/m ³	SOP NO.W/L/AIR/TP/ 23/25	3.14	-
3.	PO ₄	µg/m ³	SOP NO.W/L/AIR/TP/ 24/25	0.318	-

Tested by



(Leena Sharma)
Asst.Chemist

Authorized Signatory



(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report



Report No. 2022123027/A

Report Issue Date: - 05.12.2022

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: - 31.12.2020
2. Purchase order Number	:	22.11.2022/09:30AM
3. Date & Time of Monitoring	:	Air Sample
4. Sample Identification	:	Sealed/Ok
5. Condition of Sample	:	23.11.2022
6. Sample received on	:	23.11.2022 to 02.12.2022
7. Period of Analysis	:	Umarda Village
8. Name of Location	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual
9. Method of Sampling	:	

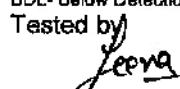
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1431.50	Minutes
2.	Average Flow rate for PM10	1.185	M ³ / Min
3.	Ambient Temperature	22	°C
4.	Relative Humidity	46	%

Results Ambient Air Quality

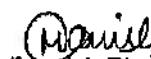
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	67.53	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	38.79	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	11.76	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	14.63	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

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



TC-5941

Our Commitment.. Your Trust

Report No. 20221123027/B

Report Issue Date: - 05.12.2022

TEST REPORT

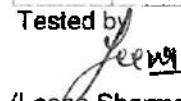
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	22.11.2022/09:30AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	23.11.2022
7. Period of Analysis	:	23.11.2022 to 02.12.2022
8. Name of Location	:	Umarda Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	22	°C
2.	Relative Humidity	46	%

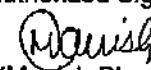
Results Ambient Ai- Quality

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	0.60	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.76	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.329	-

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

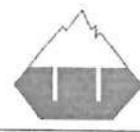
Environmental & Chemical Laboratory
Wolkem India Limited
E-102, M.I.A., UDAIPUR (Rajasthan)

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Page 1 of 1

End of Report



Report No. 2022-124002/A

Report Issue Date: - 05.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	23.11.2022/09:45AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	24.11.2022
7. Period of Analysis	:	24.11.2022 to 02.12.2022
8. Name of Location	:	Lakadwas Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1430.70	Minutes
2.	Average Flow rate for PM10	1.155	M³/ Min
3.	Ambient Temperature	23.3	°C
4.	Relative Humidity	43	%

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)2006 RA 2017	61.33	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	34.22	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	12.31	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	16.65	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

Leena
(Leena Sharma)
Asst.Chemist

Authorized Signatory

Manish
(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report



Report No. 20221124002/B

Report Issue Date: - 05.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	23.11.2022/09:45AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	24.11.2022
7. Period of Analysis	:	24.11.2022 to 02.12.2022
8. Name of Location	:	Lakadwas Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	23.3	°C
2.	Relative Humidity	43	%

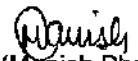
Results Ambient Air - Quality

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	0.56	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	5.02	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.38	-

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report

Report No. 20221125001/A

Report Issue Date: - 05.12.2022

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: - 31.12.2020
4. Sample Identification	:	24.11.2022/09:35AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	25.11.2022
8. Name of Location	:	25.11.2022 to 02.12.2022
9. Method of Sampling	:	Maton Village
	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1425	Minutes
2.	Average Flow rate for PM10	1.175	M ³ / Min
3.	Ambient Temperature	22	°C
4.	Relative Humidity	49	%

Results Ambient Air Quality

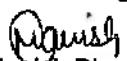
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	53.36	100
2.	PM _{2.5}	µg/m ³	WIUSOP No. 10/25 issue date 01.05.2019	26.39	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	9.39	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	11.37	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report



Report No. 20221125001/B

Report Issue Date: - 05.12.2022

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: - 31.12.2020

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. Method of Sampling

:
 24.11.2022/09:35AM
 Air Sample
 Sealed/Ok
 25.11.2022
 25.11.2022 to 02.12.2022
 Maton Village
 Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	22	°C
2.	Relative Humidity	49	%

Results Ambient Ai - 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	0.52	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.20	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.415	-

Tested by

(Leena Sharma)
 Asst.Chemist

Authorized Signatory

(Manish Bhagora)
 Chemist

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

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Page 1 of 1
 End of Report.....

Report No. 20221126001/A

Report Issue Date: - 05.12.2022

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: - 31.12.2020
3. Date & Time of Monitoring	:	25.11.2022/09:40AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	26.11.2022
7. Period of Analysis	:	26.11.2022 to 02.12.2022
8. Name of Location	:	Kharwaria Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1421.30	Minutes
2.	Average Flow rate for PM10	1.155	M³/ Min
3.	Ambient Temperature	24	°C
4.	Relative Humidity	50	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2008 RA 2017	57.61	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	30.66	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	10.18	80
4.	NO ₂	µg/m ³	IS:5182 (Part 8)2008 Reaff 2017	12.13	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

Leena
(Leena Sharma)
Asst.Chemist

Authorized Signatory

Manish
(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report

Report No. 20221126001/B

Report Issue Date: - 05.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	25.11.2022/09:40AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	26.11.2022
7. Period of Analysis	:	26.11.2022 to 02.12.2022
8. Name of Location	:	Kharwaria Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	24	°C
2.	Relative Humidity	50	%

Results Ambient Ai - 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	0.51	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	2.95	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.376	-

Tested by

Leena Sharma
(Leena Sharma)
Asst.Chemist

Authorized Signatory

Manish
(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report



Report No. 20221206001/A

Report Issue Date: - 13.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	05.12.2022/09:40AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	06.12.2022
7. Period of Analysis	:	06.12.2022 to 12.12.2022
8. Name of Location	:	Kharwaria Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1432	Minutes
2.	Average Flow rate for PM10	1.185	M ³ / Min
3.	Ambient Temperature	24	°C
4.	Relative Humidity	46	%

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)2006 RA 2017	58.65	100
2.	PM _{2.5}	µg/m ³	WIUSOP No. 10/25 issue date 01.05.2019	30.05	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	9.86	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	12.53	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Asst.Chemist

Authorized Signatory

(Manish Bhagora)
Chemist

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

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Page 1 of 1

End of Report





Report No. 20221206001/B

Report Issue Date: - 13.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	05.12.2022/09:40AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	06.12.2022
7. Period of Analysis	:	06.12.2022 to 12.12.2022
8. Name of Location	:	Kharwaria Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	24	°C
2.	Relative Humidity	46	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (GCPB Norms) New Delhi dt. 18 th Nov. 2008
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.56	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.60	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.344	-

Tested by

(Leena Sharma)
Asst.Chemist

Authorized Signatory

(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report





Report No. 20221207001/A

Report Issue Date: - 13.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	06.12.2022/10:00AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	07.12.2022
7. Period of Analysis	:	07.12.2022 to 12.12.2022
8. Name of Location	:	Maton Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

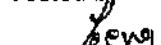
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1425	Minutes
2.	Average Flow rate for PM10	1.175	M ³ / Min
3.	Ambient Temperature	23	°C
4.	Relative Humidity	50	%

Results Ambient Air Quality

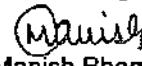
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	59.97	100
2.	PM _{2.5}	µg/m ³	WIUSOP No. 10/25 issue date 01.05.2019	31.45	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	8.91	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	9.55	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

Note

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 Page 1 of 1
 End of Report


TC-5941

Our Commitment.. Your Trust

Registered & Corporate Office :

 "Wolkem House", E-101, Mewar Industrial Area, Madri, Udaipur - 313003, Rajasthan-India
 Phone : +91 294 2494800 - 02 E-mail : info@wolkem.com
 CIN- U29299RJ1971PLC001379



Report No. 20221207001/B

Report Issue Date: - 13.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	06.12.2022/10:00AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	07.12.2022
7. Period of Analysis	:	07.12.2022 to 12.12.2022
8. Name of Location	:	Maton Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	23	°C
2.	Relative Humidity	50	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.50	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/26	5.04	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.287	-

Tested by

 (Keena Sharma)
 Asst.Chemist

Authorized Signatory

 (Manish Bhagora)
 Chemist

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

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 Page 1 of 1
 End of Report



Report No. 20221208001/A

Report Issue Date: - 13.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	07.12.2022/10:10AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	08.12.2022
7. Period of Analysis	:	08.12.2022 to 12.12.2022
8. Name of Location	:	Lakadwas Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

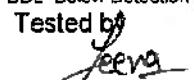
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1430	Minutes
2.	Average Flow rate for PM10	1.165	M ³ / Min
3.	Ambient Temperature	24	°C
4.	Relative Humidity	49	%

Results Ambient Air Quality

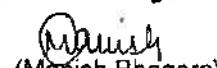
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	66.77	100
2.	PM _{2.5}	µg/m ³	WIUSOP No. 10/25 issue date 01.05.2019	35.10	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	10.59	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	12.97	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

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 Page 1 of 1
 End of Report



Report No. 20221208001/B

Report Issue Date: - 13.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	07.12.2022/10:10AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	08.12.2022
7. Period of Analysis	:	08.12.2022 to 12.12.2022
8. Name of Location	:	Lakadwas Village
7. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	24	°C
2.	Relative Humidity	49	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.63	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	5.65	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.386	-

Tested by

Leepa Sharma
Asst.Chemist

Authorized Signatory

Manish
(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report





Report No. 20221209001/A

Report Issue Date: - 13.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	08.12.2022/09:40AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	09.12.2022
7. Period of Analysis	:	09.12.2022 to 12.12.2022
8. Name of Location	:	Umarda Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1429	Minutes
2.	Average Flow rate for PM10	1.17	M ³ / Min
3.	Ambient Temperature	22	°C
4.	Relative Humidity	43	%

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)2006 RA 2017	69.59	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	38.06	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	9.53	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	10.89	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Asst.Chemist

Authorized Signatory

(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report



Report No. 20221209001/B

Report Issue Date: - 13.12.2022

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: - 31.12.2020 08.12.2022/09:40AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	09.12.2022
7. Period of Analysis	:	09.12.2022 to 12.12.2022
8. Name of Location	:	Umarda Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	22	°C
2.	Relative Humidity	43	%

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	0.65	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	6.07	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.416	-

Tested by

Leena Sharma
(Leena Sharma)
Asst.Chemist

Authorized Signatory

Manish
(Manish Bhaora)
Chemist

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

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Page 1 of 1
End of Report



Certificate No.
01130126322



Report No. 20221212001/A

Report Issue Date: - 14.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	09.12.2022/10:05AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	12.12.2022
7. Period of Analysis	:	12.12.2022 to 14.12.2022
8. Name of Location	:	Mine Lease Area
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1426	Minutes
2.	Average Flow rate for PM10	1.19	M ³ / Min
3.	Ambient Temperature	24	°C
4.	Relative Humidity	53	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	53.24	100
2.	PM _{2.5}	µg/m ³	WIU/SOP No. 10/25 issue date 01.05.2019	27.24	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	10.18	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	11.21	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

 (Leena Sharma)
 Asst.Chemist

Authorized Signatory

 (Manish Bhagora)
 Chemist

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

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 Page 1 of 1
 End of Report



Report No. 20221212001/B

Report Issue Date: - 14.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	09.12.2022/10:05AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/OK
6. Sample received on	:	12.12.2022
7. Period of Analysis	:	12.12.2022 to 14.12.2022
8. Name of Location	:	Mine Lease Area
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	24	°C
2.	Relative Humidity	53	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.49	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.61	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.314	-

Tested by

Leena Sharma
Asst.Chemist

Authorized Signatory

Manish Bhagora
Chemist

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

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Page 1 of 1
End of Report

Report No. 20221220001/A

Report Issue Date: - 24.12.2022

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: - 31.12.2020

: 19.12.2022/10:45AM
 Air Sample

: Sealed/Ok

: 20.12.2022

: 20.12.2022 to 24.12.2022

: Mine Lease Area

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

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1433.20	Minutes
2.	Average Flow rate for PM10	1.145	M ³ / Min
3.	Ambient Temperature	30	°C
4.	Relative Humidity	45	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	51.20	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	25.83	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	8.90	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	9.45	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

 (Leena Sharma)
 Asst.Chemist

Authorized Signatory

 (Manish Bhagora)
 Chemist

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

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 Page 1 of 1
 End of Report

Report No. 20221220001/B

Report Issue Date: - 24.12.2022

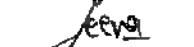
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 31.12.2020
3. Date & Time of Monitoring	:	19.12.2022/10:45AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	20.12.2022
7. Period of Analysis	:	20.12.2022 to 24.12.2022
8. Name of Location	:	Mine Lease Area
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30	°C
2.	Relative Humidity	45	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.44	04
2.	SO ₂	µg/m ³	SOP NO.WL/AIR/TP/ 23/25	2.92	-
3.	PO ₄	µg/m ³	SOP NO.WL/AIR/TP/ 24/25	0.298	-

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

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 Page 1 of 1
 End of Report

Report No. 20221221001/A

Report Issue Date: - 24.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	20.12.2022/10:50AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	21.12.2022
7. Period of Analysis	:	21.12.2022 to 24.12.2022
8. Name of Location	:	Umarda Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

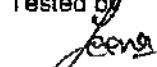
S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1424.7	Minutes
2.	Average Flow rate for PM10	1.135	M ³ / Min
3.	Ambient Temperature	31.6	°C
4.	Relative Humidity	43	%

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)2006 RA 2017	68.71	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	36.88	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	9.79	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	10.66	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Mahish Bhagora)
Chemist

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

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Page 1 of 1
End of Report

Report No. 20221221001/B

Report Issue Date: - 24.12.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	20.12.2022/10:50AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	21.12.2022
7. Period of Analysis	:	21.12.2022 to 24.12.2022
8. Name of Location	:	Umarda Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	31.6	°C
2.	Relative Humidity	43	%

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	3.99	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.350	-

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

Note

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

 Page 1 of 1
 End of Report

Report No. 20221222001/A

Report Issue Date: - 24.12.2022

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: - 31.12.2020
3. Date & Time of Monitoring	:	21.12.2022/10:55AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	22.12.2022
7. Period of Analysis	:	22.12.2022 to 24.12.2022
8. Name of Location	:	Lakadwas Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1417.2	Minutes
2.	Average Flow rate for PM10	1.19	M ³ / Min
3.	Ambient Temperature	33.5	°C
4.	Relative Humidity	45	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	63.65	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	34.12	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	10.13	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	12.13	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

 (Leena Sharma)
 Asst.Chemist

Authorized Signatory

 (Manish Bhagora)
 Chemist

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

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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


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Report No. 20221222001/B

Report Issue Date: - 24.12.2022

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: - 31.12.2020
21.12.2022/10:55AM		
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	22.12.2022
7. Period of Analysis	:	22.12.2022 to 24.12.2022
8. Name of Location	:	Lakadwas Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	33.5	°C
2.	Relative Humidity	45	%

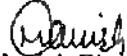
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.57	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	5.28	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.366	-

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report

Report No. 20221223001/A

Report Issue Date: - 24.12.2022

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: - 31.12.2020
3. Date & Time of Monitoring	:	22.12.2022/11:05AM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	23.12.2022
7. Period of Analysis	:	23.12.2022 to 24.12.2022
8. Name of Location	:	Maton Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1428.5	Minutes
2.	Average Flow rate for PM10	1.2	M ³ / Min
3.	Ambient Temperature	32	°C
4.	Relative Humidity	42	%

Results Ambient Air Quality

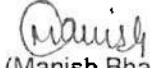
S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part 23)2006 RA 2017	53.87	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	26.33	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	9.11	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	10.63	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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

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Page 1 of 1

End of Report

Report No. 20221223001/B

Report Issue Date: - 24.12.2022

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: - 31.12.2020

: 22.12.2022/11:05AM

: Air Sample

: Sealed/Ok

: 23.12.2022

: 23.12.2022 to 24.12.2022

: Maton Village

: Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32	°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	0.47	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.61	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.305	-

Tested by

(Leena Sharma)
 Asst.Chemist

Authorized Signatory

(Manish Bhagora)
 Chemist

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

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Page 1 of 1
 End of Report

Report No. 20221224001/A

Report Issue Date: - 24.12.2022

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: - 31.12.2020
4. Sample Identification	:	23.12.2022/11:00AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	24.12.2022
8. Name of Location	:	24.12.2022 to 24.12.2022
9. Method of Sampling	:	Kharwaria Village
	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1418	Minutes
2.	Average Flow rate for PM10	1.175	M ³ / Min
3.	Ambient Temperature	32.3	°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)2006 RA 2017	56.17	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 issue date 01.05.2019	30.31	60
3.	SO ₂	µg/m ³	IS:5182 (Part 2)2001 Reaff 2017	9.12	80
4.	NO ₂	µg/m ³	IS:5182 (Part 6)2006 Reaff 2017	9.80	80
5.	Lead	µg/m ³	IS: 5182(Part22) 2004 Reaff 2014	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Manish Bhagora)
Chemist

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

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Page 1 of 1

End of Report

Report No. 20221224001/B

Report Issue Date: - 24.12.2022

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: - 31.12.2020
4. Sample Identification	:	23.12.2022/11:00AM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	24.12.2022
8. Name of Location	:	24.12.2022 to 24.12.2022
9. Method of Sampling	:	Kharwaria Village
		Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32.3	°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	0.50	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.64	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.376	-

Tested by

Jeeva
(Jeeva Sharma)
Asst.Chemist

Authorized Signatory

Manish
(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report



Report No. 20230302002/A

Report Issue Date: - 15.03.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	01.03.2023/12:10PM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	02.03.2023
7. Period of Analysis	:	02.03.2023 to 13.03.2023
8. Name of Location	:	Mine Lease Area
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1425	Minutes
2.	Average Flow rate for PM10	1.190	M ³ / Min
3.	Ambient Temperature	30	°C
4.	Relative Humidity	48	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	54.34	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	26.42	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	10.04	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	11.29	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

Leena
(Leena Sharma)
Asst.Chemist

Authorized Signatory

Manish
(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report





Report No. 20230302002/B

Report Issue Date: - 15.03.2023

TEST REPORT

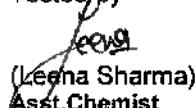
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
3. Date & Time of Monitoring	:	01.03.2023/12:10PM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	02.03.2023
7. Period of Analysis	:	02.03.2023 to 13.03.2023
8. Name of Location	:	Mine Lease Area
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	30	°C
2.	Relative Humidity	48	%

Results Ambient Air Quality

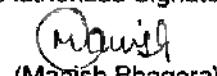
S. No	Parameters	Unit	Test Method	Results	NAQS (CPCB Norms) New Delhi dt, 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.47	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.99	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.278	-

Tested by



(Leena Sharma)
Asst.Chemist

Authorized Signatory



(Manish Bhagora)

Chemist

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

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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.wcs@wolkem.com

CIN- U29299RJ1971PLC001379


 Certificate No
01130128322

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Report No. 20230303010/A

Report Issue Date: - 15.03.2023

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	:	02.03.2023/12:30PM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	03.03.2023
7. Period of Analysis	:	03.03.2023 to 13.03.2023
8. Name of Location	:	Umarda Village
9. Method of Sampling	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1433	Minutes
2.	Average Flow rate for PM10	1.165	M ³ / Min
3.	Ambient Temperature	32	°C
4.	Relative Humidity	45	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	69.09	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	33.36	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	14.42	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	16.33	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Asst.Chemist

Authorized Signatory

(Manish Bhagora)
Chemist

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

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"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. 20230303010/B

Report Issue Date: - 15.03.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	02.03.2023/12:30PM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	03.03.2023
7. Period of Analysis	:	03.03.2023 to 13.03.2023
8. Name of Location	:	Umarda Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32	°C
2.	Relative Humidity	45	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.65	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.17	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.324	-

Tested by

 (Leena Sharma)
 Asst.Chemist

Authorized Signatory

 (Manish Bhagora)
 Chemist

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

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 Page 1 of 1
End of Report



Report No. 20230304002/A

Report Issue Date: - 15.03.2023

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	:	03.03.2023/12:45PM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	04.03.2023
8. Name of Location	:	04.03.2023 to 13.03.2023
9. Method of Sampling	:	Lakadwas Village
	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1420	Minutes
2.	Average Flow rate for PM10	1.180	M ³ / Min
3.	Ambient Temperature	31	°C
4.	Relative Humidity	46	%

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)	66.38	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	29.46	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	13.11	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	14.07	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

(Leena Sharma)
Asst.Chemist

Authorized Signatory

(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report



Report No. 20230304002/B

Report Issue Date: - 15.03.2023

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

03.03.2023/12:45PM

Air Sample

Sealed/Ok

04.03.2023

04.03.2023 to 13.03.2023

Lakadwas Village

Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	31	°C
2.	Relative Humidity	46	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) Now Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.63	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.21	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.348	-

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

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 Page 1 of 1
 End of Report



Report No. 20230306002/A

Report Issue Date: - 15.03.2023

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	:	04.03.2023/12:20PM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	06.03.2023
8. Name of Location	:	06.03.2023 to 14.03.2023
9. Method of Sampling	:	Maton Village
	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1430	Minutes
2.	Average Flow rate for PM10	1.170	M ³ / Min
3.	Ambient Temperature	32	°C
4.	Relative Humidity	49	%

Results Ambient Air Quality

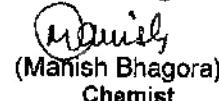
S. No	Parameters	Unit	Test Method	Results	NAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	57.59	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	28.84	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	9.47	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	12.97	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by


 (Leena Sharma)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

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

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 Page 1 of 1
 End of Report


Report No. 20230306002/B

Report Issue Date: - 15.03.2023

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
 04.03.2023/12:20PM
 Air Sample
 Sealed/Ok
 06.03.2023
 06.03.2023 to 14.03.2023
 Maton Village
 Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	32	°C
2.	Relative Humidity	49	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) Now Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.54	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	4.60	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.292	-

Tested by

(Leena Sharma)
 Asst. Chemist

Authorized Signatory

(Manish Bhagora)
 Chemist

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

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Page 1 of 1
 End of Report



Report No. 20230306003/A

Report Issue Date: - 15.03.2023

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	:	05.03.2023/12:40PM
5. Condition of Sample	:	Air Sample
6. Sample received on	:	Sealed/Ok
7. Period of Analysis	:	06.03.2023
8. Name of Location	:	06.03.2023 to 14.03.2023
9. Method of Sampling	:	Kharwaria Village
	:	IS: 5182(Part 2, Part 6, Part23,Part22) & Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Duration of Survey	1425	Minutes
2.	Average Flow rate for PM10	1.190	M ³ / Min
3.	Ambient Temperature	31	°C
4.	Relative Humidity	47	%

Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	PM ₁₀	µg/m ³	IS:5182 (Part-23)	56.41	100
2.	PM _{2.5}	µg/m ³	WIL/SOP No. 10/25 Issue date 01.05.2019	27.68	60
3.	SO ₂	µg/m ³	IS:5182 (Part-2)	11.11	80
4.	NO ₂	µg/m ³	IS:5182 (Part-6)	13.47	80
5.	Lead	µg/m ³	IS: 5182(Part-22)	BDL(<0.05)	1.0

BDL- Below Detection Limit

Tested by

Leela
(Leela Sharma)
Asst.Chemist

Authorized Signatory

Manish
(Manish Bhagora)
Chemist

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

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Page 1 of 1
End of Report



Report No. 20230306003/B

Report Issue Date: - 15.03.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/ 5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	
3. Date & Time of Monitoring	:	05.03.2023/12:40PM
4. Sample Identification	:	Air Sample
5. Condition of Sample	:	Sealed/Ok
6. Sample received on	:	06.03.2023
7. Period of Analysis	:	06.03.2023 to 14.03.2023
8. Name of Location	:	Kharwaria Village
9. Method of Sampling	:	Instrument Manual

S. No	Monitoring Details	Results	Unit
1.	Ambient Temperature	31	°C
2.	Relative Humidity	47	%

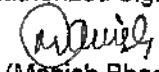
Results Ambient Air Quality

S. No	Parameters	Unit	Test Method	Results	NAAQS (CPCB Norms) New Delhi dt. 18 th Nov. 2009
Chemical Atmospheric Pollution- Ambient Air					
1.	CO	mg/m ³	By CO meter	0.48	04
2.	SiO ₂	µg/m ³	SOP NO.WIL/AIR/TP/ 23/25	3.78	-
3.	PO ₄	µg/m ³	SOP NO.WIL/AIR/TP/ 24/25	0.243	-

Tested by


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Mahish Bhagora)
Chemist

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

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Page 1 of 1

End of Report



Report No. 20221 14026

Report Issue Date: 28.11.2022

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: - 31.12.2020
2. Purchase crder Number	:	
3. Date of Monitoring	:	07.11.2022
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	14.11.2022
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.	6-7 AM	48.5	54.1	45.8	54.2
2.	7-8 AM	42.7	46.2	41.3	46.2
3.	8-9 AM	44.6	52.3	38.5	52.9
4.	9-10 AM	41.7	43.2	40.5	43.2
5.	10-11 AM	41.3	44.3	38.9	44.4
6.	11-12 AM	56.1	62.2	46.2	63.8
7.	12-13 PM	57.8	63.2	50.3	64.1
8.	13-14 PM	52.6	55.2	50.2	55.3
9.	14-15 PM	51.2	53.2	49.5	53.2
10.	15-16 PM	54.1	55.6	52.6	55.6
11.	16-17 PM	53.7	60.2	48.5	60.7
12.	17-18 PM	51.4	60.2	45.5	60.8
13.	18-19 PM	56.5	61.2	52.2	61.5
14.	19-20 PM	53.5	58.6	51.2	58.7
15.	20-21 PM	46.7	50.2	44.2	50.3
16.	21-22 PM	47.0	53.5	40.2	54.3
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					55.0

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Page 1 of 2

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Registered & Corporate Office :

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 CIN- U29299RJ1971PLC001379


 TC-5941
 Our Commitment.. Your Trust

Report No. 20221 14027

Report Issue Date: 28.11.2022

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: - 31.12.2020
2. Purchase crder Number	:	08.11.2022
3. Date of Monitoring	:	NA
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	14.11.2022
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	40.2	42.0	38.4	42.1
2.	7-8 AM	42.6	45.2	40.0	45.3
3.	8-9 AM	43.7	46.2	42.5	46.2
4.	9-10 AM	45.8	48.6	42.2	48.8
5.	10-11 AM	47.7	52.2	41.2	52.9
6.	11-12 PM	53.2	55.2	52.1	55.2
7.	12-13 PM	53.6	55.6	51.2	55.7
8.	13-14 PM	53.3	55.8	51.2	55.9
9.	14-15 PM	55.4	58.2	52.5	58.3
10.	15-16 PM	57.9	61.2	50.6	62.1
11.	16-17 PM	55.2	56.6	52.6	56.7
12.	17-18 PM	53.5	56.2	48.6	56.6
13.	18-19 PM	52.4	56.2	48.6	56.4
14.	19-20 PM	50.0	59.0	46.2	59.2
15.	20-21 PM	46.3	50.2	43.2	50.4
16.	21-22 PM	43.4	50.6	38.6	51.0
Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					53.3

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 CIN- U29299RJ1971PLC001379


 TC-5941
 Our Commitment. Your Trust

Report No. 20221-14028

Report Issue Date: 28.11.2022

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: - 31.12.2020
2. Purchase crder Number	:	
3. Date of Monitoring	:	09.11.2022
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	14.11.2022
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
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	38.5	41.3	34.2	41.6
2.	7-8 AM	43.2	45.6	41.8	45.6
3.	8-9 AM	47.0	49.2	44.8	49.3
4.	9-10 AM	48.2	53.5	42.5	54.0
5.	10-11 AM	52.3	54.5	50.2	54.6
6.	11-12 PM	54.6	56.3	52.8	56.4
7.	12-13 PM	53.1	55.2	50.2	55.3
8.	13-14 PM	49.1	51.6	46.7	51.7
9.	14-15 PM	52.0	56.2	48.2	56.4
10.	15-16 PM	53.8	55.2	52.3	55.2
11.	16-17 PM	52.3	55.3	48.9	55.5
12.	17-18 PM	51.6	55.2	48.6	55.4
13.	18-19 PM	51.7	54.7	48.6	54.9
14.	19-20 PM	39.2	45.2	32.6	45.9
15.	20-21 PM	36.0	37.2	34.5	37.2
16.	21-22 PM	39.4	43.6	35.0	43.9
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60]))					50.8

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CIN- U29299RJ1971PLC001379


 TC-6841
 Our Commitment.. Your Trust

Report No. 20221 14029

Report Issue Date: 28.11.2022

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: - 31.12.2020
2. Purchase crder Number	:	
3. Date of Monitoring	:	10.11.2022
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	14.11.2022
7. Period of Analysis	:	NA
8. Test Methods Reference	:	IS: 9989– 1981 (Reaffirmed 2008)
9. Name of location	:	Umarda Village

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	49.1	51.8	47.6	51.8
2.	7-8 AM	52.6	55.3	51.2	55.3
3.	8-9 AM	55.1	56.6	54.2	56.6
4.	9-10 AM	54.2	55.8	51.6	55.9
5.	10-11 AM	59.1	61.3	57.6	61.3
6.	11-12 PM	64.8	66.3	63.1	66.3
7.	12-13 PM	65.9	68.2	64.8	68.2
8.	13-14 PM	63.5	65.6	60.2	65.8
9.	14-15 PM	62.6	64.5	61.0	64.5
10.	15-16 PM	57.6	60.1	55.8	60.2
11.	16-17 PM	59.1	62.2	56.0	62.4
12.	17-18 PM	59.4	61.3	55.8	61.5
13.	18-19 PM	56.9	58.2	55.8	58.2
14.	19-20 PM	55.0	58.2	53.7	58.2
15.	20-21 PM	50.5	53.1	48.3	53.2
16.	21-22 PM	48.8	51.3	45.6	51.5
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					59.4

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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. 20221114030

Report Issue Date: 28.11.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date of Monitoring	:	11.11.2022
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	14.11.2022
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) Day Time			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	39.3	42.5	35.6	42.7
2.	7-8 AM	43.0	44.5	41.5	44.5
3.	8-9 AM	44.6	47.2	41.5	47.4
4.	9-10 AM	44.0	45.2	42.5	45.2
5.	10-11 AM	45.9	48.9	44.2	49.0
6.	11-12 PM	53.0	56.1	47.6	56.6
7.	12-13 PM	53.4	55.1	48.8	55.5
8.	13-14 PM	55.1	58.6	50.4	59.0
9.	14-15 PM	50.4	56.4	42.5	57.4
10.	15-16 PM	52.4	58.2	47.6	58.6
11.	16-17 PM	54.0	60.1	45.9	61.2
12.	17-18 PM	42.3	47.2	37.0	47.7
13.	18-19 PM	43.9	55.5	36.1	56.5
14.	19-20 PM	40.6	51.2	34.6	51.8
15.	20-21 PM	36.4	40.0	33.6	40.1
16.	21-22 PM	34.7	38.1	31.2	38.3
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					50.7

Note

1. Complaint Register is available in lab / Email ID : lab.office@wolkem.com
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CIN- U29299RJ1971PLC001379


 TC-5941
 Our Commitment.. Your Trust

Report No. 20221114031

Report Issue Date: 28.11.2022

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: - 31.12.2020
2. Purchase order Number	:	
3. Date of Monitoring	:	12.11.2022
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	14.11.2022
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	40.5	46.5	35.2	47.0
2.	7-8 AM	52.9	55.6	50.2	55.7
3.	8-9 AM	58.2	61.2	51.2	62.0
4.	9-10 AM	61.6	64.5	59.6	64.6
5.	10-11 AM	61.2	66.2	56.8	66.5
6.	11-12 AM	63.6	68.2	61.2	68.3
7.	12-13 PM	55.1	59.6	50.2	60.0
8.	13-14 PM	63.9	65.2	60.2	65.4
9.	14-15 PM	53.1	56.2	50.2	56.3
10.	15-16 PM	55.2	59.6	51.2	59.9
11.	16-17 PM	62.1	64.2	59.6	64.3
12.	17-18 PM	57.0	60.2	53.5	60.4
13.	18-19 PM	47.6	52.2	43.5	52.5
14.	19-20 PM	44.8	46.2	43.1	46.2
15.	20-21 PM	39.9	43.2	35.5	43.5
16.	21-22 PM	40.0	43.2	35.2	43.6
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					57.3

Note

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CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust



Report No. 20230308002

Report Issue Date: 15.03.2023

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	:	01.03.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	08.03.2023
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	40.4	42.6	38.0	42.7
2.	7-8 AM	42.5	43.6	40.2	43.7
3.	8-9 AM	45.8	48.2	43.5	48.3
4.	9-10 AM	45.8	46.2	44.7	46.2
5.	10-11 AM	49.7	53.2	43.5	53.8
6.	11-12 AM	53.5	56.2	50.2	56.4
7.	12-13 PM	54.5	56.2	53.2	56.2
8.	13-14 PM	55.9	56.8	54.2	56.8
9.	14-15 PM	52.3	54.2	50.1	54.3
10.	15-16 PM	52.0	56.3	48.6	56.5
11.	16-17 PM	61.0	64.2	56.9	64.5
12.	17-18 PM	45.2	48.6	40.8	48.9
13.	18-19 PM	40.9	43.8	38.5	43.9
14.	19-20 PM	39.5	46.2	34.6	46.6
15.	20-21 PM	43.1	44.7	40.8	44.8
16.	21-22 PM	37.0	39.2	35.1	39.3
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					50.2

Note

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Page 1 of 2

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 CIN- U29299RJ1971PLC001379


 TC-5941
 Our Commitment.. Your Trust



Report No. 20230308002

Report Issue Date: 15.03.2023

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	:	01.03.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	08.03.2023
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	33.5	35.2	31.2	35.3
2.	23-24PM	34.4	35.2	33.6	35.2
3.	0-1 AM	34.3	35.2	33.2	35.2
4.	1-2 AM	33.2	35.2	30.9	35.3
5.	2-3 AM	32.5	34.2	30.6	34.3
6.	3-4 AM	33.4	34.5	32.5	34.5
7.	4-5 AM	34.1	36.4	31.3	36.5
8.	5-6 AM	36.7	38.9	33.6	39.1
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60]))					35.7
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					49.1

CPCB Norms

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

Tested By

(Leena Sharma)
Asst.Chemist

Authorized Signatory

(Manish Bhagora)
Chemist

Note

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Page 2 of 2

End of Report

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CIN- U29299RJ1971PLC001378



TC-5941
Our Commitment.. Your Trust



Report No. 20230308003

Report Issue Date: 15.03.2023

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	:	02.03.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	08.03.2023
7. Period of Analysis	:	NA
8. Test Methods Reference	:	IS: 9989– 1981 (Reaffirmed 2008)
9. Name of location	:	Umarda Village

S.No.	Time hours	Sound Pressure Level dB(A)			Leq
		Day	L ₁₀	L ₅₀	
1.	6-7 AM		45.0	50.2	41.8
2.	7-8 AM		42.8	44.7	41.2
3.	8-9 AM		50.7	56.8	43.6
4.	9-10 AM		55.2	56.9	53.2
5.	10-11 AM		53.7	60.2	50.6
6.	11-12 AM		55.3	65.2	49.8
7.	12-13 PM		53.9	56.6	51.4
8.	13-14 PM		52.1	55.2	49.8
9.	14-15 PM		51.5	57.1	48.7
10.	15-16 PM		50.6	54.7	47.8
11.	16-17 PM		49.9	51.4	47.9
12.	17-18 PM		49.5	53.3	46.6
13.	18-19 PM		50.2	52.3	48.7
14.	19-20 PM		47.5	50.3	42.6
15.	20-21 PM		44.4	52.3	40.6
16.	21-22 PM		43.4	46.3	41.7
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					54.2

Note

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Continue





Report No. 20230308003

Report Issue Date: 15.03.2023

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	:	02.03.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	08.03.2023
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	43.7	46.3	40.1	46.5
2.	23-24PM	37.1	40.1	34.0	40.3
3.	0-1 AM	34.5	36.5	33.0	36.5
4.	1-2 AM	33.2	35.2	31.5	35.2
5.	2-3 AM	32.6	34.2	31.2	34.2
6.	3-4 AM	32.9	35.6	30.5	35.7
7.	4-5 AM	39.6	43.2	36.5	43.4
8.	5-6 AM	44.6	46.9	41.2	47.1
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60]))					39.9
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10))]}					53.1

CPCB Norms

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

Tested By

(Leena Sharma)
Asst.Chemist

Authorized Signatory

(Manish Bhagora)
Chemist

Environmental & Chemical Laboratory
Wolkem India Limited

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

Note

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End of Report





Report No. 20230308004

Report Issue Date: 15.03.2023

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	:	03.03.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	08.03.2023
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) Day Time			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	44.1	46.5	41.6	46.6
2.	7-8 AM	44.6	48.6	42.8	48.7
3.	8-9 AM	52.8	56.2	50.2	56.3
4.	9-10 AM	53.6	56.2	51.2	56.3
5.	10-11 AM	56.2	58.2	54.2	58.3
6.	11-12 AM	56.2	58.6	54.8	58.6
7.	12-13 PM	60.1	66.5	55.8	66.8
8.	13-14 PM	58.4	60.2	56.0	60.3
9.	14-15 PM	60.7	62.2	59.6	62.2
10.	15-16 PM	61.6	63.2	60.5	63.2
11.	16-17 PM	58.9	60.2	56.5	60.3
12.	17-18 PM	56.2	61.0	46.6	62.5
13.	18-19 PM	42.9	44.8	41.5	44.8
14.	19-20 PM	44.6	48.6	40.2	48.9
15.	20-21 PM	41.5	43.2	40.2	43.2
16.	21-22 PM	38.1	40.2	35.2	40.3
Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					54.8

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Report No. 20230308004

Report Issue Date: 15.03.2023

TEST REPORT

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Malon 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	:	03.03.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	08.03.2023
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
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	36.2	38.1	35.2	38.1
2.	23-24PM	36.1	38.2	34.2	38.3
3.	0-1 AM	33.6	36.2	31.2	36.3
4.	1-2 AM	32.3	35.2	31.2	35.2
5.	2-3 AM	32.9	35.2	31.2	35.2
6.	3-4 AM	32.6	34.2	31.2	34.2
7.	4-5 AM	35.2	36.3	34.3	36.3
8.	5-6 AM	44.0	46.8	40.2	47.0
Leq Night (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					37.6
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					53.5

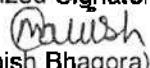
CPCB Norms

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)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

Environmental & Chemical Laboratory

Wolkem India Limited

E-102, MJA, UDAIPUR (Rajasthan)

Note

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 End of Report

Registered & Corporate Office :

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 TC-5941
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Report No. 20230308005

Report Issue Date: 15.03.2023

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	:	04.03.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	08.03.2023
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) Day Time			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	42.2	46.2	38.9	46.4
2.	7-8 AM	45.2	48.2	42.0	48.4
3.	8-9 AM	48.1	50.2	45.9	50.3
4.	9-10 AM	51.0	54.2	48.6	54.3
5.	10-11 AM	52.0	53.2	50.2	53.3
6.	11-12 AM	54.3	56.3	51.2	56.4
7.	12-13 PM	57.4	60.2	55.0	60.3
8.	13-14 PM	60.2	63.2	56.8	63.4
9.	14-15 PM	58.9	65.3	56.4	65.4
10.	15-16 PM	51.1	53.3	48.8	53.4
11.	16-17 PM	52.9	56.9	50.3	57.0
12.	17-18 PM	58.2	59.3	56.7	59.3
13.	18-19 PM	44.9	50.3	41.2	50.5
14.	19-20 PM	42.2	43.6	40.6	43.6
15.	20-21 PM	46.7	48.3	44.5	48.4
16.	21-22 PM	43.1	45.3	40.7	45.4
Leq Day (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					53.5

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. 20230308005

Report Issue Date: 15.03.2023

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	:	04.03.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	08.03.2023
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) Night Time			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	37.8	40.3	36.6	40.3
2.	23-24PM	35.0	36.5	33.6	36.5
3.	0-1 AM	33.6	34.2	32.6	34.2
4.	1-2 AM	32.8	34.2	31.2	34.2
5.	2-3 AM	32.2	33.2	31.5	33.2
6.	3-4 AM	32.0	34.2	30.5	34.2
7.	4-5 AM	35.4	38.2	33.2	38.3
8.	5-6 AM	42.2	45.3	40.1	45.4
Leq Night (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60]))					37.1
Day-Night Sound Level (L _{dn}) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
L _{dn}					52.2

CPCB Norms

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

Tested By

(Leena Sharma)
Asst.Chemist

Authorized Signatory

(Manish Bhagora)
Chemist

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

Note

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Page 2 of 2

End of Report





Report No. 20230308006

Report Issue Date: 15.03.2023

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	:	05.03.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	08.03.2023
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) Day Time			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	6-7 AM	45.8	47.5	44.6	47.5
2.	7-8 AM	45.8	48.2	42.6	48.4
3.	8-9 AM	48.2	51.6	44.8	51.8
4.	9-10 AM	51.7	53.2	50.2	53.2
5.	10-11 AM	53.7	58.2	51.2	58.3
6.	11-12 AM	58.1	60.2	56.0	60.3
7.	12-13 PM	61.4	63.5	56.2	64.0
8.	13-14 PM	62.5	64.8	58.2	65.1
9.	14-15 PM	52.8	56.6	49.2	56.8
10.	15-16 PM	50.6	52.3	48.6	52.4
11.	16-17 PM	51.4	55.3	47.5	55.5
12.	17-18 PM	52.9	58.2	50.4	58.3
13.	18-19 PM	51.6	55.2	49.8	55.3
14.	19-20 PM	44.8	50.5	42.5	50.6
15.	20-21 PM	40.4	42.3	37.6	42.4
16.	21-22 PM	38.2	40.3	33.6	40.7
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60]))					53.8

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CIN- U29299RJ1971PLC001379



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Report No. 20230308006

Report Issue Date: 15.03.2023

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	:	05.03.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	08.03.2023
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) Night Time			Leq
		L ₁₀	L ₅₀	L ₉₀	
1.	22-23PM	40.8	43.2	38.6	43.3
2.	23-24PM	36.6	38.6	33.6	38.7
3.	0-1 AM	34.9	37.2	33.8	37.2
4.	1-2 AM	33.1	34.2	31.5	34.2
5.	2-3 AM	33.3	35.2	31.2	35.3
6.	3-4 AM	32.8	34.2	31.2	34.2
7.	4-5 AM	34.5	36.2	33.5	36.2
8.	5-6 AM	45.4	48.6	40.3	49.0
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					38.5
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					
Ldn					52.6

CPCB Norms

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

Tested By

Leena Sharma
(Leena Sharma)
Asst.Chemist

Authorized Signatory

Manish Bhagora
(Manish Bhagora)
Chemist

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

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Page 2 of 2
End of Report





Report No. 20230308007

Report Issue Date: 15.03.2023

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 : 06.03.2023
4. Sample Identification : NA
5. Condition of Sample : NA
6. Sample Received On : 08.03.2023
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	43.3	46.5	39.8	46.7
2.	7-8 AM	43.7	50.3	39.9	50.5
3.	8-9 AM	43.3	50.6	38.6	51.0
4.	9-10 AM	52.7	55.8	48.9	56.0
5.	10-11 AM	50.5	53.6	46.9	53.8
6.	11-12 AM	52.0	54.2	49.8	54.3
7.	12-13 PM	63.7	66.5	60.0	66.7
8.	13-14 PM	63.2	66.4	61.3	66.5
9.	14-15 PM	59.3	61.3	57.6	61.3
10.	15-16 PM	62.4	64.2	59.6	64.3
11.	16-17 PM	56.9	58.6	53.5	58.8
12.	17-18 PM	53.9	56.6	51.4	56.7
13.	18-19 PM	44.3	50.3	39.9	50.6
14.	19-20 PM	43.0	44.2	41.2	44.3
15.	20-21 PM	41.0	43.2	38.5	43.3
16.	21-22 PM	34.5	38.2	32.4	38.3
Leq Day (Leq = L ₅₀ + [(L ₁₀ – L ₉₀) ² /60])					53.9

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Continue





Report No. 20230308007

Report Issue Date: 15.03.2023

TEST REPORT

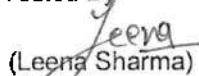
1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA PO No. 2016.1201/5100019025 Date 13.01.2016 Amendment Dated: - 27.02.2023
2. Purchase order Number	:	
3. Date of Monitoring	:	06.03.2023
4. Sample Identification	:	NA
5. Condition of Sample	:	NA
6. Sample Received On	:	08.03.2023
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	43.2	46.3	40.1	46.5
2.	23-24PM	41.9	46.3	38.9	46.4
3.	0-1 AM	39.7	43.3	35.6	43.6
4.	1-2 AM	35.7	37.3	33.6	37.4
5.	2-3 AM	33.5	35.2	31.6	35.3
6.	3-4 AM	32.4	34.2	30.5	34.3
7.	4-5 AM	36.5	40.6	32.6	40.9
8.	5-6 AM	45.6	46.4	43.3	46.5
Leq Night (Leq = L ₅₀ + [(L ₁₀ - L ₉₀) ² /60])					41.3
Day-Night Sound Level (Ldn) = 10 log {1/24 [16 (10Lday/10) + 8 (10(Lnight + 10)/10)]}					53.2
Ldn					

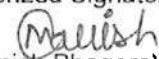
CPCB Norms

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)
 Asst.Chemist

Authorized Signatory


 (Manish Bhagora)
 Chemist

 Environmental & Chemical Laboratory
Wolkem India Limited
Note

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 End of Report





Report No. 20221-14007

Report Issue Date: - 28.11.2022

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: - 31.12.2020
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 14.11.2022/12:35PM
6. Sample received on	: 14.11.2022
7. Period of Analysis	: 14.11.2022 to 25.11.2022
8. Name of sample & Location	: Mine Lease Area (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	32.8
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 27°C)	IS:3025(Pt11)1983, Reaff.2017	-	7.36	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025-1964(Pt14) Reaff.2019	µs	634.6	-	-
3.	Color	IS:3025(Pt4)1983, Reaff.2017	Hazen	<5	5	15
4.	Odour	IS 3025 (Part- 5)198 Reaff.2018	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Pt16)1984, Reaff.2017	mg/L	410	500	2000
6.	Total Suspended Solid	IS:3025(Pt17)1984, Reaff.2017	mg/L	BDL(<5)	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Pt21)2009 Reaff 2019	mg/L	154	200	600
8.	Calcium as Ca ²⁺	IS:3025(Pt40)1991, Reaff.2019	mg/L	53.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Pt46)1994 Reaff.2019	mg/L	4.8	30	100
10.	Alkalinity	IS:3025(Pt23)1986, Reaff.2019	mg/L	200	200	600
11.	Chlorides as Cl ⁻	IS:3025(Pt32)1988, Reaff.2019	mg/L	114	250	1000
12.	Oil & Grease	IS:3025(Pt39)1991, Reaff.2019	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	4.8	-	-
14.	Dissolve Oxygen	IS:3025(Pt38)1989, Reaff.2019	mg/L	6.0	-	-
15.	Residual Chlorine	IS:3025(Pt26)1986 Reaff 2019	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Pt44)1993, Reaff.2019	mg/L	BDL(<1)	-	-

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Report No. 2022114007

Report Issue Date: - 28.11.2022

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: - 31.12.2020
3. Sample Identification : Ground Water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 14.11.2022/12:35PM
6. Sample received on : 14.11.2022
7. Period of Analysis : 14.11.2022 to 25.11.2022
8. Name of sample & Location : Mine Lease Area (Ground water)
9. Method of Sampling : IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water- Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Pt58)2006 Reaff 2017	mg/L	BDL(<5)	-	-
18.	Copper as Cu	IS:3025(Pt42)1992, Reaff.2019	mg/L	BDL(<0.1)	0.05	1.5
19.	Fluoride as F ⁻	IS:3025(Pt60)2008 Reaff 2019	mg/L	0.50	1.0	1.5
20.	Phosphate	IS:3025 1988(Pt31) Reprint & Reaff 2019	mg/L	0.10	-	-
21.	Sulphate as SO ₄ ²⁻	IS:3025(Pt24)1986, Reaff.2019	mg/L	36.2	200	400
22.	Nitrate as NO ₃ ⁻	IS:3025(Pt34-3-B)1988 Reaff 2019	mg/L	6.1	45	No Relaxation
23.	Zinc	IS 3025(P49)1994 RA 2019(a) AAS	mg/L	0.26	5	15
24.	Lead	IS 3025(P47)1994 RA 2019(a) AAS	mg/L	BDL(<0.01)	0.01	No Relaxation
25.	Potassium as K	APHA 23 rd Edition,2017 Part 3500-k (3-89 to 3-90)	mg/L	4.0	-	-
26.	Sodium as Na	APHA 23 rd Edition2017 Part 3500-Na(3-99 to 3-90)	mg/L	58.2	-	-
27.	Manganese as Mn	IS 3025 (P-59) 2006 Reaff.2017 /AAS	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	IS:3025(Pt53)2003, Reaff.2019	mg/L	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

[Signature]

(Leena Sharma)
Asst.Chemist

Authorized Signatory

[Signature]
(Purah Singh)
Sr. Chemist

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

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

CIN- U29299RJ1971PLC001379



TC-5941
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Report No. 20221-14012

Report Issue Date: - 28.11.2022

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. Sample Identification	AMENDMENT Dated: - 31.12.2020
4. Condition of Sample	Ground Water
5. Date & Time of Sampling	Sealed/Ok
6. Sample received on	14.11.2022.2022/09:25AM
7. Period of Analysis	14.11.2022
8. Name of sample & Location	14.11.2022 to 25.11.2022 Kharwaria village (Ground water)
9. Method of Sampling	IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	22
2.	Relative Humidity	%	40

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

Chemical Testing – Water- Ground Water

1.	pH (at 27°C)	IS:3025(Pt11)1983, Reaff.2017	-	6.78	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025-1954(Pt14) Reaff.2019	ms	2.276	-	-
3.	Color	IS:3025(Pt4)1983, Reaff.2017	Hazen	<5	5	15
4.	Odour	IS 3025 (Part- 5)198 Reaff.2018	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Pt16)1984, Reaff.2017	mg/L	1460	500	2000
6.	Total Suspended Solid	IS:3025(Pt17)1984, Reaff.2017	mg/L	18	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Pt21)2009 Reaff 2018	mg/L	558	200	600
8.	Calcium as Ca ²⁺	IS:3025(Pt40)1991, Reaff.2019	mg/L	136	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Pt46)1994 Reaff.2019	mg/L	49.5	30	100
10.	Alkalinity	IS:3025(Pt23)1986, Reaff.2019	mg/L	440	200	600
11.	Chlorides as Cl ⁻	IS:3025(Pt32)1988, Reaff.2019	mg/L	382	250	1000
12.	Oil & Grease	IS:3025(Pt39)1991, Reaff.2019	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	8.0	-	-
14.	Dissolve Oxygen	IS:3025(Pt38)1989, Reaff.2019	mg/L	6.2	-	-
15.	Residual Chlorine	IS:3025(Pt26)1986 Reaff 2019	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Pt44)1993, Reaff.2019	mg/L	BDL(<1)	-	-

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Report No. 20221-14012

Report Issue Date: - 28.11.2022

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. Sample Identification	: AMENDMENT Dated: - 31.12.2020
4. Condition of Sample	: Ground Water
5. Date & Time of Sampling	: Sealed/Ok
6. Sample received on	: 14.11.2022.2022/09:25AM
7. Period of Analysis	: 14.11.2022 to 25.11.2022
8. Name of sample & Location	: Kharwaria village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012
					Acceptable Permissible
Chemical Testing – Water- Ground Water					
17.	Chemical Oxygen Demand	IS:3025(Pt58)2006 Reaff 2017	mg/L	BDL(<5)	- -
18.	Copper as Cu	IS:3025(Pt42)1992, Reaff.2019	mg/L	BDL(<0.1)	0.05 1.5
19.	Fluoride as F ⁻	IS:3025(Pt60)2008 Reaff 2019	mg/L	0.50	1.0 1.5
20.	Phosphate	IS:3025 1988(Pt31) Reprint & Reaff 2019	mg/L	0.14	- -
21.	Sulphate as SO ₄ ²⁻	IS:3025(Pt24)1986, Reaff.2019	mg/L	146.8	200 400
22.	Nitrate as NO ₃ ⁻	IS:3025(Pt34-3-B)1988 Reaff 2019	mg/L	12.8	45 No Relaxation
23.	Zinc	IS 3025(P49)1994 RA 2019(a) AAS	mg/L	0.22	5 15
24.	Lead	IS 3025(P47)1994 RA 2019(a) AAS	mg/L	BDL(<0.01)	0.01 No Relaxation
25.	Potassium as K	APHA 23 rd Edition,2017 Part 3500-k (3-89 to 3-90)	mg/L	7.2	- -
26.	Sodium as Na	APHA 23 rd Edition2017 Part 3500-Na(3-89 to 3-90)	mg/L	62.8	- -
27.	Manganese as Mn	IS 3025 (P-59) 2006 Reaff.2017 /AAS	mg/L	BDL(<0.01)	0.1 0.3
28.	Iron as Fe	IS:3025(Pt53)2003, Reaff.2019	mg/L	0.10	0.3 No Relaxation

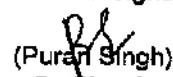
BDL-Below Detection Limit

Tested By



(Keena Sharma)
Asst.Chemist

Authorized Signatory



(Puran Singh)
Sr. Chemist

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

Note

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End of Report

Registered & Corporate Office :

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CIN- U29299RJ1971PLC001379



TC-5941
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Report No. 20221114013

Report Issue Date: - 28.11.2022

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: - 31.12.2020
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 14.11.2022/10:05AM
6. Sample received on	: 14.11.2022
7. Period of Analysis	: 14.11.2022 to 25.11.2022
8. Name of sample & Location	: Maton village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	23
2.	Relative Humidity	%	38

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

Chemical Testing – Water- Ground Water

1.	pH (at 27°C)	IS:3025(Pt11)1983, Reaff.2017	-	7.45	6.5 to 8.5	No Relaxation
2.	Conductivity ($\pm 25^{\circ}\text{C}$)	IS:3025-1964(Pt14) Reaff.2019	ms	1.976	-	-
3.	Color	IS:3025(Pt4)1983, Reaff.2017	Hazen	<5	5	15
4.	Odour	IS 3025 (Part- 5)198 Reaff.2018	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Pt16)1984, Reaff.2017	mg/L	1300	500	2000
6.	Total Suspended Solid	IS:3025(Pt17)1984, Reaff.2017	mg/L	18	-	-
7.	Total Hardness as CaCO_3	IS:3025(Pt21)2009 Reaff.2019	mg/L	518	200	600
8.	Calcium as Ca^{2+}	IS:3025(Pt40)1991, Reaff.2019	mg/L	104.8	75	200
9.	Magnesium as Mg^{2+}	IS:3025(Pt46)1994 Reaff.2019	mg/L	61.5	30	100
10.	Alkalinity	IS:3025(Pt23)1986, Reaff.2019	mg/L	376	200	600
11.	Chlorides as Cl^-	IS:3025(Pt32)1988, Reaff.2019	mg/L	294	250	1000
12.	Oil & Grease	IS:3025(Pt39)1991, Reaff.2019	mg/L	BDL(<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(Pt38)1989, Reaff.2019	mg/L	6.2	-	-
15.	Residual Chlorine	IS:3025(Pt26)1986 Reaff 2019	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Pt44)1983, Reaff.2019	mg/L	BDL(<1)	-	-

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CIN- U29299RJ1971PLC001379


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Report No. 20221 14013

Report Issue Date: - 28.11.2022

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: - 31.12.2020

3. Sample Identification : Ground Water

4. Condition of Sample : Sealed/Ok

5. Date & Time of Sampling : 14.11.2022/10:05AM

6. Sample received on : 14.11.2022

7. Period of Analysis : 14.11.2022 to 25.11.2022

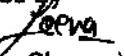
8. Name of sample & Location : Maton village (Ground water)

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

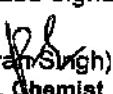
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water- Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Pt58)2006 Reaff 2017	mg/L	BDL(<5)	-	-
18.	Copper as Cu	IS:3025(Pt42)1992, Reaff.2019	mg/L	BDL(<0.1)	0.05	1.5
19.	Fluoride as F	IS:3025(Pt60)2008 Reaff 2019	mg/L	0.60	1.0	1.5
20.	Phosphate	IS:3025 1988(Pt31) Reprint & Reaff 2019	mg/L	0.32	-	-
21.	Sulphate as SO ₄ ²⁻	IS:3025(Pt24)1986, Reaff.2019	mg/L	228	200	400
22.	Nitrate as NO ₃ ⁻	IS:3025(Pt34-3-B)1988 Reaff 2019	mg/L	8.8	45	No Relaxation
23.	Zinc	IS 3025(P49)1994 RA 2019(a) AAS	mg/L	0.40	5	15
24.	Lead	IS 3025(P47)1994 RA 2019(a) AAS	mg/L	BDL(<0.01)	0.01	No Relaxation
25.	Potassium as K	APHA 23 rd Edition, 2017 Part 3500-k (3-89 to 3-90)	mg/L	5.1	-	-
26.	Sodium as Na	APHA 23 rd Edition 2017 Part 3500-Na(3-89 to 3-90)	mg/L	67.2	-	-
27.	Manganese as Mn	IS 3025 (P-59) 2006 Reaff.2017 /AAS	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	IS:3025(Pt53)2003, Reaff.2019	mg/L	0.10	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


(Leena Sharma)
Asst.Chemist

Authorized Signatory


(Puram Singh)
Sr. Chemist

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

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CIN- U29299RJ1971PLC001378



TC-5941
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Report No. 20221114014

Report Issue Date: - 28.11.2022

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: - 31.12.2020
4. Condition of Sample	: Ground Water
5. Date & Time of Sampling	: Sealed/Ok
6. Sample received on	: 14.11.2022/10:25AM
7. Period of Analysis	: 14.11.2022
8. Name of sample & Location	: 14.11.2022 to 25.11.2022
9. Method of Sampling	: Lakanwas village (Ground water)
	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Test Method	Unit	Results	
				Limits :- IS-10500:2012	Acceptable
1.	Ambient Temperature		°C	23.4	
2.	Relative Humidity		%	40	

Chemical Testing – Water- Ground Water

1.	pH (at 27°C)	IS:3025(Pt11)1983, Reaff.2017	-	6.85	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025-1964(Pt14) Reaff.2019	ms	2.851	-	-
3.	Color	IS:3025(Pt4)1983, Reaff.2017	Hazen	<5	5	15
4.	Odour	IS 3025 (Part- 5)198 Reaff.2018	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Pt16)1984, Reaff.2017	mg/L	1768	500	2000
6.	Total Suspended Solid	IS:3025(Pt17)1984, Reaff.2017	mg/L	18	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Pt21)2009 Reaff 2019	mg/L	556	200	600
8.	Calcium as Ca ²⁺	IS:3025(Pt40)1991, Reaff.2019	mg/L	172.8	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Pt46)1994 Reaff.2019	mg/L	29.76	30	100
10.	Alkalinity	IS:3025(Pt23)1986, Reaff.2019	mg/L	396	200	600
11.	Chlorides as Cl ⁻	IS:3025(Pt32)1988, Reaff.2019	mg/L	588	250	1000
12.	Oil & Grease	IS:3025(Pt39)1991, Reaff.2019	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SIO2 Page 4-175 to 177	mg/L	6.2	-	-
14.	Dissolve Oxygen	IS:3025(Pt38)1989, Reaff.2019	mg/L	6.0	-	-
15.	Residual Chlorine	IS:3025(Pt26)1986 Reaff 2019	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Pt44)1993, Reaff.2019	mg/L	BDL(<1)	-	-

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Report No. 20221114014

Report Issue Date: - 28.11.2022

1. Name of Customer	:	TEST REPORT HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Sample Identification	:	AMENDMENT Dated: - 31.12.2020
4. Condition of Sample	:	Ground Water
5. Date & Time of Sampling	:	Sealed/Ok
6. Sample received on	:	14.11.2022/10:25AM
7. Period of Analysis	:	14.11.2022
8. Name of sample & Location	:	14.11.2022 to 25.11.2022
9. Method of Sampling	:	Lakarwas village (Ground water)
	:	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(Pt58)2006 Reaff 2017	mg/L	BDL(<5)	-	-
18.	Copper as Cu	IS:3025(Pt42)1992, Reaff.2019	mg/L	BDL(<0.1)	0.06	1.5
19.	Fluoride as F ⁻	IS:3025(Pt60)2008 Reaff 2019	mg/L	0.70	1.0	1.5
20.	Phosphate	IS:3025 1988(Pt31) Reprint & Reaff 2019	mg/L	1.02	-	-
21.	Sulphate as SO ₄ ²⁻	IS:3025(Pt24)1986, Reaff.2019	mg/L	213.8	200	400
22.	Nitrate as NO ₃ ⁻	IS:3025(Pt34-3-B)1988 Reaff 2019	mg/L	12.9	45	No Relaxation
23.	Zinc	IS 3025(P49)1994 RA 2019(a) AAS	mg/L	0.82	5	15
24.	Lead	IS 3025(P47)1994 RA 2019(a) AAS	mg/L	BDL(<0.01)	0.01	No Relaxation
25.	Potassium as K	APHA 23 rd Edition,2017 Part 3500-k (3-89 to 3-90)	mg/L	6.2	-	-
26.	Sodium as Na	APHA 23 rd Edition2017 Part 3500-Na(3-99 to 3-90)	mg/L	57.2	-	-
27.	Manganese as Mn	IS 3025 (P-59) 2006 Reaff.2017 /AAS	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	IS:3025(Pt53)2003, Reaff.2019	mg/L	0.12	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Asst.Chemist

Authorized Signatory

(Puran Singh)
Sr. Chemist

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

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Page 2 of 2
End of Report





Report No. 20221114015

Report Issue Date: - 28.11.2022

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: - 31.12.2020
3. Sample Identification	Ground Water
4. Condition of Sample	Sealed/Ok
5. Date & Time of Sampling	14.11.2022/10:45AM
6. Sample received on	14.11.2022
7. Period of Analysis	14.11.2022 to 25.11.2022
8. Name of sample & Location	Umrada village (Ground water)
9. Method of Sampling	IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	24
2.	Relative Humidity	%	40

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

Chemical Testing – Water- Ground Water

1.	pH (at 27°C)	IS:3025(Pt11)1983, Reaff.2017	-	6.71	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025-1984(Pt14) Reaff.2019	ms	1.240	-	-
3.	Color	IS:3025(Pt4)1983, Reaff.2017	Hazen	<5	5	15
4.	Odour	IS 3025 (Part- 5)198 Reaff.2018	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Pt16)1984, Reaff.2017	mg/L	784	500	2000
6.	Total Suspended Solid	IS:3025(Pt17)1984, Reaff.2017	mg/L	18	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Pt21)2009 Reaff 2019	mg/L	468	200	600
8.	Calcium as Ca ²⁺	IS:3025(Pt40)1991, Reaff.2019	mg/L	105.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Pt46)1994 Reaff.2019	mg/L	48.9	30	100
10.	Alkalinity	IS:3025(Pt23)1988, Reaff.2019	mg/L	330	200	600
11.	Chlorides as Cl ⁻	IS:3025(Pt32)1988, Reaff.2019	mg/L	99	250	1000
12.	Oil & Grease	IS:3025(Pt39)1991, Reaff.2019	mg/L	BDL(<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(Pt38)1989, Reaff.2019	mg/L	6.5	-	-
15.	Residual Chlorine	IS:3025(Pt26)1986 Reaff 2019	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Pt44)1993, Reaff.2019	mg/L	BDL(<1)	-	-

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Report No. 20221114015

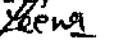
Report Issue Date: - 28.11.2022

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: - 31.12.2020
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 14.11.2022/10:45AM
6. Sample received on	: 14.11.2022
7. Period of Analysis	: 14.11.2022 to 25.11.2022
8. Name of sample & Location	: Umarda village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

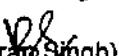
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water- Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Pt58)2006 Reaff 2017	mg/L	BDL(<5)	-	-
18.	Copper as Cu	IS:3025(Pt42)1992, Reaff.2019	mg/L	BDL(<0.1)	0.05	1.5
19.	Fluoride as F ⁻	IS:3025(Pt60)2008 Reaff 2019	mg/L	0.70	1.0	1.5
20.	Phosphate	IS:3025 1988(Pt31) Reprint & Reaff 2019	mg/L	0.11	-	-
21.	Sulphate as SO ₄ ²⁻	IS:3025(PI24)1986, Reaff.2019	mg/L	61	200	400
22.	Nitrate as NO ₃ ⁻	IS:3025(PI34-3-B)1988 Reaff 2019	mg/L	9.6	45	No Relaxation
23.	Zinc	IS 3025(P49)1994 RA 2019(a) AAS	mg/L	0.19	5	15
24.	Lead	IS 3025(P47)1994 RA 2019(a) AAS	mg/L	BDL(<0.01)	0.01	No Relaxation
25.	Potassium as K	APHA 23 rd Edition,2017 Part 3500-k (3-89 to 3-90)	mg/L	6.1	-	-
26.	Sodium as Na	APHA 23 rd Edition2017 Part 3500-Na(3-99 to 3-90)	mg/L	19.6	-	-
27.	Manganese as Mn	IS 3025 (P-59) 2006 Reaff.2017 /AAS	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	IS:3025(Pt53)2003, Reaff.2019	mg/L	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


(Leena Sharma)
Asst.Chemist

Authorized Signatory


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

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Report No. 20221114016

Report Issue Date: - 28.11.2022

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: - 31.12.2020
3. Sample Identification	Ground Water
4. Condition of Sample	Sealed/Ok
5. Date & Time of Sampling	14.11.2022/10:55AM
6. Sample received on	14.11.2022
7. Period of Analysis	14.11.2022 to 25.11.2022
8. Name of sample & Location	Kanpur village (Ground water)
9. Method of Sampling	IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	24.6
2.	Relative Humidity	%	41

Chemical Testing – Water- Ground Water

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	Acceptable	Permissible
1.	pH (at 27°C)	IS:3025(Pt11)1983, Reaff.2017	-	7.62	6.5 to 8.5	No Relaxation	
2.	Conductivity (at 25°C)	IS:3025-1964(Pt14) Reaff.2019	ms	1.778	-	-	
3.	Color	IS:3025(Pt4)1983, Reaff.2017	Hazen	<5	5	15	
4.	Odour	IS 3025 (Part- 5)198 Agreeable	-	Agreeable	Agreeable	Agreeable	
5.	Total Dissolve Solid	IS:3025(Pt16)1984, Reaff.2017	mg/L	1149	500	2000	
6.	Total Suspended Solid	IS:3025(Pt17)1984, Reaff.2017	mg/L	14	-	-	
7.	Total Hardness as CaCO ₃	IS:3025(Pt21)2009 Reaff 2019	mg/L	378	200	600	
8.	Calcium as Ca ²⁺	IS:3025(Pt40)1991, Reaff.2019	mg/L	107.2	75	200	
9.	Magnesium as Mg ²⁺	IS:3025(Pt46)1994 Reaff.2019	mg/L	26.4	30	100	
10.	Alkalinity	IS:3025(Pt23)1986, Reaff.2019	mg/L	346	200	600	
11.	Chlorides as Cl ⁻	IS:3025(Pt32)1988, Reaff.2019	mg/L	348	250	1000	
12.	Oil & Grease	IS:3025(Pt39)1991, Reaff.2019	mg/L	BDL(<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(Pt38)1989, Reaff.2019	mg/L	6.2	-	-	
15.	Residual Chlorine	IS:3025(Pt26)1986 Reaff 2019	mg/L	BDL(<0.01)	0.2	1	
16.	B.O.D. 3 days @ 27°C	IS:3025(Pt44)1993, Reaff.2019	mg/L	BDL(<1)	-	-	

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Report No. 20221114016

Report Issue Date: - 28.11.2022

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: - 31.12.2020
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 14.11.2022/10:55AM
6. Sample received on	: 14.11.2022
7. Period of Analysis	: 14.11.2022 to 25.11.2022
8. Name of sample & Location	: Kanpur village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water- Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Pt58)2006 Reaff 2017	mg/L	BDL(<5)	-	-
18.	Copper as Cu	IS:3025(Pt42)1992, Reaff.2019	mg/L	BDL(<0.1)	0.05	1.5
19.	Fluoride as F ⁻	IS:3025(Pt60)2008 Reaff 2019	mg/L	0.70	1.0	1.5
20.	Phosphate	IS:3025 1988(Pt31) Reprint & Reaff 2019	mg/L	0.21	-	-
21.	Sulphate as SO ₄ ²⁻	IS:3025(Pt24)1988, Reaff.2019	mg/L	197.4	200	400
22.	Nitrate as NO ₃ ⁻	IS:3025(Pt34-3-B)1988 Reaff 2019	mg/L	16.8	45	No Relaxation
23.	Zinc	IS:3025(Pt49)1994 RA 2019(a) AAS	mg/L	0.90	5	15
24.	Lead	IS:3025(Pt47)1994 RA 2019(a) AAS	mg/L	BDL(<0.01)	0.01	No Relaxation
25.	Potassium as K	APHA 23 rd Edition,2017 Part 3500-k (3-89 to 3-90)	mg/L	5.2	-	-
26.	Sodium as Na	APHA 23 rd Edition 2017 Part 3500-Na(3-99 to 3-90)	mg/L	26.8	-	-
27.	Manganese as Mn	IS:3025 (P-59) 2006 Reaff.2017 /AAS	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	IS:3025(Pt53)2003, Reaff.2019	mg/L	0.15	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

(Leena Sharma)

Asst.Chemist

Authorized Signatory

(Puran Singh)
Sr. Chemist

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

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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. 20221114017

Report Issue Date: - 28.11.2022

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: - 31.12.2020
4. Condition of Sample	: Ground Water
5. Date & Time of Sampling	: Sealed/Ok
6. Sample received on	: 14.11.2022/11:15AM
7. Period of Analysis	: 14.11.2022 to 25.11.2022
8. Name of sample & Location	: Nakoli village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	25.4
2.	Relative Humidity	%	42

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

Chemical Testing – Water- Ground Water

1.	pH (at 27°C)	IS:3025(Pt11)1983, Reaff.2017	-	6.75	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025-1964(Pt14) Reaff.2019	ms	1.098	-	-
3.	Color	IS:3025(Pt4)1983, Reaff.2017	Hazen	<5	5	15
4.	Odour	IS 3025 (Part- 5)198 Reaff.2018	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Pt16)1984, Reaff.2017	mg/L	709	500	2000
6.	Total Suspended Solid	IS:3025(Pt17)1984, Reaff.2017	mg/L	14	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Pt21)2009 Reaff.2019	mg/L	344	200	600
8.	Calcium as Ca ²⁺	IS:3025(Pt40)1991, Reaff.2019	mg/L	95.2	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Pt46)1994 Reaff.2019	mg/L	25.4	30	100
10.	Alkalinity	IS:3025(Pt23)1985, Reaff.2019	mg/L	282	200	600
11.	Chlorides as Cl ⁻	IS:3025(Pt32)1988, Reaff.2019	mg/L	210	250	1000
12.	Oil & Grease	IS:3025(Pt39)1991, Reaff.2019	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	5.4	-	-
14.	Dissolve Oxygen	IS:3025(Pt38)1989, Reaff.2019	mg/L	6.1	-	-
15.	Residual Chlorine	IS:3025(Pt26)1986 Reaff.2019	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Pt44)1993, Reaff.2019	mg/L	BDL(<1)	-	-

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Report No. 20221114017

Report Issue Date: - 28.11.2022

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: - 31.12.2020
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 14.11.2022/11:15AM
6. Sample received on	: 14.11.2022
7. Period of Analysis	: 14.11.2022 to 25.11.2022
8. Name of sample & Location	: Nakoli village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results		Limits :- IS-10500:2012 Acceptable Permissible
				Acceptable	Permissible	
Chemical Testing – Water- Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Pt58)2006 Reaff 2017	mg/L	BDL(<5)	-	-
18.	Copper as Cu	IS:3025(Pt42)1992, Reaff.2019	mg/L	BDL(<0.1)	0.05	1.5
19.	Fluoride as F	IS:3025(Pt60)2008 Reaff 2019	mg/L	0.70	1.0	1.5
20.	Phosphate	IS:3025 1988(Pt31) Reprint & Reaff 2019	mg/L	0.32	-	-
21.	Sulphate as SO ₄ ²⁻	IS:3025(Pt24)1986, Reaff.2019	mg/L	71.0	200	400
22.	Nitrate as NO ₃ ⁻	IS:3025(Pt34-3-B)1988 Reaff 2019	mg/L	7.0	45	No Relaxation
23.	Zinc	IS 3025(P49)1994 RA 2019(a) AAS	mg/L	0.18	5	15
24.	Lead	IS 3025(P47)1994 RA 2019(a) AAS	mg/L	BDL(<0.01)	0.01	No Relaxation
25.	Potassium as K	APHA 23 rd Edition,2017 Part 3500-k (3-89 to 3-90)	mg/L	4.1	-	-
26.	Sodium as Na	APHA 23 rd Edition2017 Part 3500-Na(3-99 to 3-90)	mg/L	38.2	-	-
27.	Manganese as Mn	IS 3025 (P-59) 2006 Reaff.2017 /AAS	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	IS:3025(Pt53)2003, Reaff.2019	mg/L	0.10	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

(Leena Sharma)

Asst.Chemist

Authorized Signatory

Sr. Chemist

Environmental & Chemical Laboratory

Wolkem India Limited

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

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Report No. 20221114018

Report Issue Date: - 28.11.2022

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: - 31.12.2020
3. Sample Identification	Ground Water
4. Condition of Sample	Sealed/Ok
5. Date & Time of Sampling	14.11.2022/11:55AM
6. Sample received on	14.11.2022
7. Period of Analysis	14.11.2022 to 25.11.2022
8. Name of sample & Location	Dhoonimata village (Ground water)
9. Method of Sampling	IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results		
			%	Acceptable	Permissible
1.	Ambient Temperature	°C	27.5		
2.	Relative Humidity	%	43		

Chemical Testing – Water- Ground Water

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
1.	pH (at 27°C)	IS:3025(Pt11)1983, Reaff.2017	-	6.81	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025-1964(Pt14) Reaff.2019	ms	1.536	-	-
3.	Color	IS:3025(Pt4)1983, Reaff.2017	Hazen	<5	5	15
4.	Odour	IS 3025 (Part- 5)198 Reaff.2018	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Pt16)1984, Reaff.2017	mg/L	990	500	2000
6.	Total Suspended Solid	IS:3025(Pt17)1984, Reaff.2017	mg/L	12	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Pt21)2009 Reaff. 2019	mg/L	396	200	600
8.	Calcium as Ca ²⁺	IS:3025(Pt40)1991, Reaff.2019	mg/L	83.2	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Pt46)1994 Reaff.2019	mg/L	45.2	30	100
10.	Alkalinity	IS:3025(Pt23)1986, Reaff.2019	mg/L	280	200	600
11.	Chlorides as Cl ⁻	IS:3025(Pt32)1988, Reaff.2019	mg/L	310	250	1000
12.	Oil & Grease	IS:3025(Pt39)1991, Reaff.2019	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SIO2 Page 4-175 to 177	mg/L	6.1	-	-
14.	Dissolve Oxygen	IS:3025(Pt38)1989, Reaff.2019	mg/L	6.2	-	-
15.	Residual Chlorine	IS:3025(Pt26)1986 Reaff 2019	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Pt44)1993, Reaff.2019	mg/L	BDL(<1)	-	-

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Report No. 20221114018

Report Issue Date: - 28.11.2022

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: - 31.12.2020
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 14.11.2022/11:55AM
6. Sample received on	: 14.11.2022
7. Period of Analysis	: 14.11.2022 to 25.11.2022
8. Name of sample & Location	: Dhoomimata village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

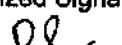
S. No.	Parameters	Test Method	Unit	Limits :- IS:10500:2012	
				Acceptable	Permissible
Chemical Testing – Water- Ground Water					
17.	Chemical Oxygen Demand	IS:3025(Pt58)2006 Reaff 2017	mg/L	BDL(<5)	-
18.	Copper as Cu	IS:3025(Pt42)1992, Reaff.2019	mg/L	BDL(<0.1)	0.05 1.5
19.	Fluoride as F ⁻	IS:3025(Pt60)2008 Reaff 2019	mg/L	0.50	1.0 1.5
20.	Phosphate	IS:3025 1988(Pt31) Reprint & Reaff 2019	mg/L	0.12	-
21.	Sulphate as SO ₄ ²⁻	IS:3025(Pt24)1988, Reaff.2019	mg/L	40.2	200 400
22.	Nitrate as NO ₃ ⁻	IS:3025(Pt34-3-B)1988 Reaff 2019	mg/L	10.6	45 No Relaxation
23.	Zinc	IS 3025(P49)1994 RA 2019(a) AAS	mg/L	0.30	5 15
24.	Lead	IS 3025(P47)1994 RA 2019(a) AAS	mg/L	BDL(<0.01)	0.01 No Relaxation
25.	Potassium as K	APHA 23 rd Edition,2017 Part 3500-k (3-89 to 3-80)	mg/L	7.1	-
26.	Sodium as Na	APHA 23 rd Edition2017 Part 3500-Na(3-99 to 3-90)	mg/L	56.1	-
27.	Manganese as Mn	IS 3025 (P-59) 2006 Reaff.2017 /AAS	mg/L	BDL(<0.01)	0.1 0.3
28.	Iron as Fe	IS:3025(Pt53)2003, Reaff.2019	mg/L	0.10	0.3 No Relaxation

BDL-Below Detection Limit

Tested by

(Keena Sharma)
Asst.Chemist

Authorized Signatory


(Puran Singh)
Sr. Chemist

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

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Report No. 20221114019/A

Report Issue Date: - 28.11.2022

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: - 31.12.2020
2. Purchase order Number :
3. Sample Identification : Surface Water
4. Condition of Sample : Sealed/Ok
5. Date & Time of Sampling : 14.11.2022/12:20PM
6. Sample received on : 14.11.2022
7. Period of Analysis : 14.11.2022 to 25.11.2022
8. Name of sample & Location : Bagdara Talav (Surface water)
9. Method of Sampling : IS: 3025 (Pt 1) 1987

S. No	Environment Condition		Unit	Results
1.	Ambient Temperature	°C	27.2	
2.	Relative Humidity	%	45	
S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water- Surface Water				
1.	pH (at 27°C)	IS:3025(Pt11)1983, Reaff.2017	-	7.51
2.	Total Dissolve Solid	IS:3025(Pt16)1984, Reaff.2017	mg/L	1238
3.	Total Suspended Solid	IS:3025(Pt17)1984, Reaff.2017	mg/L	18
4.	Total Hardness as CaCO ₃	IS:3025(Pt21)2009 Reaff 2019	mg/L	432
5.	Calcium as Ca ²⁺	IS:3025(Pt40)1991, Reaff.2019	mg/L	94.4
6.	Magnesium as Mg ²⁺	IS:3025(Pt46)1994 Reaff.2019	mg/L	47.0
7.	Alkalinity	IS:3025(Pt23)1986, Reaff.2019	mg/L	324
8.	B.O.D. 3 days @ 27°C	IS:3025(Pt44)1993, Reaff.2019	mg/L	3.0
9.	Phosphate	IS:3025 1988(Pt31) Reprint & Reaff 2019	mg/L	4.0
10.	Nitrate as NO ₃	IS:3025(Pt34-3-B)1988 Reaff 2019	mg/L	14.6
11.	Iron as Fe	IS:3025(Pt53)2003, Reaff.2019	mg/L	0.10

BDL-Below Detection Limit

Tested By

(Leena Sharma)
Asst.Chemist

Authorized Signatory

P.S.
(Puran Singh)
Sr. Chemist

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

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Page 1 of 1
End of Report



Report No. 20221114019/B

Report Issue Date: - 28.11.2022

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: - 31.12.2020
3. Sample Identification	:	Surface Water
4. Condition of Sample	:	Sealed/Ok
5. Date & Time of Sampling	:	14.11.2022/12:20PM
6. Sample received on	:	14.11.2022
7. Period of Analysis	:	14.11.2022 to 25.11.2022
8. Name of sample & Location	:	Bagdara Talav (Surface water)
9. Method of Sampling	:	IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	27.2
2.	Relative Humidity	%	45

S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water- Surface Water				
1.	Conductivity (at 25°C)	IS:3025-1964(Pt14) Reaff.2019	ms	1.832
2.	Color	IS:3025(Pt4)1983, Reaff.2017	Hazen	<5
3.	Odour	IS 3025 (Part- 5)198 Reaff.2018	-	Agreeable
4.	Taste	IS:3025-2012(Pt 7&8) Reaff.2015	-	Agreeable
5.	Chlorides as Cl ⁻	IS:3025(Pt32)1988, Reaff.2019	mg/L	270
6.	Oil & Grease	IS:3025(Pt39)1991, Reaff.2019	mg/L	BDL(<4)
7.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	8.4
8.	Dissolve Oxygen	IS:3025(Pt38)1989, Reaff.2019	mg/L	6.0
9.	Residual Chlorine	IS:3025(Pt26)1986 Reaff 2019	mg/L	BDL(<0.01)
10.	Chemical Oxygen Demand	IS:3025(Pt58)2006 Reaff 2017	mg/L	15.8
11.	Copper as Cu	IS:3025(Pt42)1992, Reaff.2019	mg/L	BDL(<0.1)
12.	Fluoride as F ⁻	IS:3025(Pt60)2008 Reaff 2019	mg/L	0.38
13.	Sulphate as SO ₄ ²⁻	IS:3025(Pt24)1986, Reaff.2019	mg/L	248.4
14.	Zinc	IS 3025(P49)1994 RA 2019(a) AAS	mg/L	1.4
15.	Lead	IS 3025(P47)1994 RA 2019(a) AAS	mg/L	BDL(<0.01)
16.	Potassium as K	APHA 23 rd Edition,2017 Part 3500-k (3-89 to 3-90)	mg/L	8.1
17.	Sodium as Na	APHA 23 rd Edition2017 Part 3500-Na(3-99 to 3-90)	mg/L	79.6
18.	Manganese as Mn	IS 3025 (P-59) 2006 Reaff.2017 /AAS	mg/L	BDL(<0.01)

BDL-Below Detection Limit

Tested By

(Leena Sharma)

Asst.Chemist

Authorized Signatory

 (Puran Singh)
 Sr. Chemist

Environmental & Chemical Laboratory

Wolkem India Limited

 Complaint Register is available in lab / Email ID lab.office@wolkem.com

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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


 Certificate No.
 01130126322

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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. 20230302009

Report Issue Date: - 14.03.2023

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 : 02.03.2023/12:15PM
6. Sample received on : 02.03.2023
7. Period of Analysis : 02.03.2023 to 13.03.2023
8. Name of sample & Location : Mine Lease Area (Ground water)
9. Method of Sampling : IS: 3025 (Pt 1) 1987

S. No	Environment Condition		Unit	Results	
				°C	31.1
1.	Ambient Temperature		%	45	
2.	Relative Humidity				

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)	-	7.28	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	µs	661.8	-	-
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	440	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	160	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	55.2	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	5.28	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	210	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(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	5.7	-	-
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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CIN- U29299RJ1971PLC001379



TC-5941

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Report No. 20230302009

Report Issue Date: - 14.03.2023

1. Name of Customer	:	HINDUSTAN ZINC LIMITED Rockphosphate Maton Mine P.O. Maton, Distt. Udaipur (Rajasthan), INDIA
2. Purchase order Number	:	PO No. 2016.1201/ 5100019025 Date 13.01.2016
3. Sample Identification	:	AMENDMENT Dated: - 27.02.2023
4. Condition of Sample	:	Ground Water
5. Date & Time of Sampling	:	Sealed/Ok
6. Sample received on	:	02.03.2023/12:15PM
7. Period of Analysis	:	02.03.2023
8. Name of sample & Location	:	02.03.2023 to 13.03.2023
9. Method of Sampling	:	Mine Lease Area (Ground water)
	:	IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
				Acceptable	Permissible	
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.64	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.13	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	44.2	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	7.6	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-K (3-89 to 3-90)	mg/L	5.9	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	63.3	-	-
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	0.32	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

(Manali Vyas)
Asst.Chemist

Authorized Signatory

(Pulah Singh)
Sr. Chemist

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

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Page 2 of 2
End of Report





Report No. 20230303011

Report Issue Date: - 14.03.2023

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	: 03.03.2023/11:25AM
7. Period of Analysis	: 03.03.2023 to 13.03.2023
8. Name of sample & Location	: Kharwaria village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	26.5
2.	Relative Humidity	%	35

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)	-	6.76	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.294	-	-
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	1494	500	2000
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	24	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	570	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	140.8	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	52.32	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	452	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	398	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SI02 Page 4-175 to 177	mg/L	9.8	-	-
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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TC-5941

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Report No. 20230303011

Report Issue Date: - 14.03.2023

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	: 03.03.2023/11:25AM
7. Period of Analysis	: 03.03.2023 to 13.03.2023
8. Name of sample & Location	: Kharwaria village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :-IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-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	0.11	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	168.8	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	19.2	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-K (3-89 to 3-90)	mg/L	9.6	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	79.9	-	-
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	0.26	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

(Marali Vyasa)
Asst.Chemist

Authorized Signatory

(Puran Singh)
Sk. Chemist

Environmental & Chemical Laboratory
Wolkem India Limited

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

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Page 2 of 2

End of Report



TC-5941

Our Commitment.. Your Trust



Report No. 20230303012

Report Issue Date: - 14.03.2023

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	: 03.03.2023/11:45AM
7. Period of Analysis	: 03.03.2023
8. Name of sample & Location	: 03.03.2023 to 13.03.2023
9. Method of Sampling	: Maton village (Ground water)
	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	27.6
2.	Relative Humidity	%	39

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

Chemical Testing – Water- Ground Water

1.	pH (at 25°C)	IS:3025(Part-11)	-	7.56	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.064	-	-
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	1334	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	530	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	110.4	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	60.96	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	382	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	306	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	6.6	-	-
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. 20230303012

Report Issue Date: - 14.03.2023

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 : 03.03.2023/11:45AM
6. Sample received on : 03.03.2023
7. Period of Analysis : 03.03.2023 to 13.03.2023
8. Name of sample & Location : Maton village (Ground water)
9. Method of Sampling : IS: 3025 (Pt 1) 1987

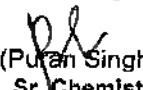
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.80	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.22	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	239.2	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	14.6	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	6.7	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-89 to 3-100)	mg/L	74.6	-	-
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	0.38	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.11	0.3	No Relaxation

BDL-Below Detection Limit

Tested By


 (Manali Vyas)
 Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr. Chemist

 Environmental & Chemical Laboratory
Wolkem India Limited

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

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 Page 2 of 2
 End of Report




Report No. 20230303013

Report Issue Date: - 14.03.2023

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	03.03.2023/12:15PM
6. Sample received on	03.03.2023
7. Period of Analysis	03.03.2023 to 13.03.2023
8. Name of sample & Location	Lakanwas village (Ground water)
9. Method of Sampling	IS: 3025 (Pt 1) 1987

S. No	Environment Condition		Unit	Results	
				°C	30.1
1.	Ambient Temperature		%	46	
2.	Relative Humidity				

Chemical Testing – Water- Ground Water

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
1.	pH (at 25°C)	IS:3025(Part-11)	-	6.74	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	2.826	-	-
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	1792	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	574	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	175.2	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	32.64	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	410	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	602	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	7.1	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.2	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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Report No. 20230303013

Report Issue Date: - 14.03.2023

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	: 03.03.2023/12:15PM
6. Sample received on	: 03.03.2023
7. Period of Analysis	: 03.03.2023 to 13.03.2023
8. Name of sample & Location	: Lakanwas village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.60	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.98	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	236.9	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	15.1	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-K (3-89 to 3-90)	mg/L	8.3	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	66.0	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.93	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

 Environmental & Chemical Laboratory
Wolkem India Limited

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

Note

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_____End of Report_____





Report No. 20230303014

Report Issue Date: - 14.03.2023

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. Sample Identification	: AMENDMENT Dated: - 27.02.2023
4. Condition of Sample	: Ground Water
5. Date & Time of Sampling	: Sealed/Ok
6. Sample received on	: 03.03.2023/12:40PM
7. Period of Analysis	: 03.03.2023 to 13.03.2023
8. Name of sample & Location	: Umarda village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	32.8
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)	-	6.65	6.5 to 8.5
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.253	-
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	802	500
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	18	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	478	200
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	110.4	75
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	48.48	30
10.	Alkalinity	IS:3025(Part-23)	mg/L	342	200
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	111	250
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<4)	0.5
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	6.3	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-

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Report No. 20230303014

Report Issue Date: - 14.03.2023

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	: 03.03.2023/12:40PM
6. Sample received on	: 03.03.2023
7. Period of Analysis	: 03.03.2023 to 13.03.2023
8. Name of sample & Location	: Umrada village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012 Acceptable Permissible
Chemical Testing – Water – Ground Water					
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	- -
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.60	1.0 1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.10	- -
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	69.8	200 400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	13.3	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	22.5	- -
Chemical Testing – Residues – Ground water					
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05 1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.22	5 15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01 No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1 0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.3 No Relaxation

BDL-Below Detection Limit

Tested By

(Manali Vyas)
Asst.Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

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

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End of Report





Report No. 20230303015

Report Issue Date: - 14.03.2023

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	: 03.03.2023/01:10PM
6. Sample received on	: 03.03.2023
7. Period of Analysis	: 03.03.2023 to 13.03.2023
8. Name of sample & Location	: Kanpur village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition		Unit	Results		
				°C	32.5	48
S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10600:2012	Acceptable Permissible
Chemical Testing – Water- Ground Water						
1.	pH (at 25°C)	IS:3025(Part-11)	-	7.78	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.810	-	-
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	1172	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	392	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	110.4	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	352	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	360	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	7.3	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.4	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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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. 20230303015

Report Issue Date: - 14.03.2023

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	: 03.03.2023/01:10PM
6. Sample received on	: 03.03.2023
7. Period of Analysis	: 03.03.2023 to 13.03.2023
8. Name of sample & Location	: Kanpur village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results	Limits :- IS-10500:2012	
					Acceptable	Permissible
Chemical Testing – Water – Ground Water						
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.82	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.26	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	218.6	200	400
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	24.3	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	6.3	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-89 to 3-100)	mg/L	36.4	-	-
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	0.87	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

(Minali Vyas)
Asst.Chemist

Authorized Signatory

(Puran Singh)
Sr.Chemist

Environmental & Chemical Laboratory
Wolkem India Limited

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

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Page 2 of 2

End of Report

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CIN- U29299RJ1971PLC001379



TC-5941
Our Commitment.. Your Trust

Report No. 20230303016

Report Issue Date: - 14.03.2023

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
	AMENDMENT Dated: - 27.02.2023
3. Sample Identification	: Ground Water
4. Condition of Sample	: Sealed/Ok
5. Date & Time of Sampling	: 03.03.2023/01:45PM
6. Sample received on	: 03.03.2023
7. Period of Analysis	: 03.03.2023 to 13.03.2023
8. Name of sample & Location	: Nakoli village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	32.4
2.	Relative Humidity	%	49

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)	-	6.78	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.244	-	-
3.	Color	IS:3025(Part-4)	Hazen	<5	5	15
4.	Odour	IS 3025 (Part-5)	-	Agreeable	Agreeable	Agreeable
5.	Total Dissolve Solid	IS:3025(Part-18)	mg/L	744	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	358	200	600
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	97.6	75	200
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	27.36	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	294	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	224	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition 2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	6.4	-	-
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.2	-	-
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)	0.2	1
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	BDL(<1)	-	-

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TC-5941

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Report No. 20230303016

Report Issue Date: - 14.03.2023

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	: 03.03.2023/01:45PM
7. Period of Analysis	: 03.03.2023
8. Name of sample & Location	: Nakoli village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No.	Parameters	Test Method	Unit	Results		Limits :- IS-10500:2012 Acceptable	Permissible
Chemical Testing – Water – Ground Water							
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	BDL(<5)	-	-	-
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.88	1.0	1.5	
19.	Phosphate	IS:3025(Part-31)	mg/L	0.44	-	-	
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	80.6	200	400	
21.	Nitrate as NO ₃	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	8.9	45	No Relaxation	
22.	Potassium as K	APHA 23 rd Edition, Part 3500-K (3-89 to 3-90)	mg/L	5.6	-	-	
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-89 to 3-100)	mg/L	45.6	-	-	
Chemical Testing – Residues – Ground water							
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5	
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.22	5	15	
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation	
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3	
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.12	0.3	No Relaxation	

BDL-Below Detection Limit

Tested By


 (Manali Vyas)

Asst.Chemist

Authorized Signatory


 (Puran Singh)
 Sr. Chemist

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

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 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. 20230303017

Report Issue Date: - 14.03.2023

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	: 03.03.2023/02:40PM
6. Sample received on	: 03.03.2023
7. Period of Analysis	: 03.03.2023 to 13.03.2023
8. Name of sample & Location	: Dhoonimata village (Ground water)
9. Method of Sampling	: IS: 3025 (Pt 1) 1987

S. No	Environment Condition	Unit	Results
1.	Ambient Temperature	°C	31.4
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)	-	7.22	6.5 to 8.5	No Relaxation
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.564	-	-
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	14	-	-
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	408	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	46.08	30	100
10.	Alkalinity	IS:3025(Part-23)	mg/L	290	200	600
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	322	250	1000
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<4)	0.5	No Relaxation
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SI02 Page 4-175 to 177	mg/L	6.8	-	-
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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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. 20230303017

Report Issue Date: - 14.03.2023

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. Sample Identification	: AMENDMENT Dated: - 27.02.2023
4. Condition of Sample	: Ground Water
5. Date & Time of Sampling	: Sealed/Ok
6. Sample received on	: 03.03.2023/02:40PM
7. Period of Analysis	: 03.03.2023
8. Name of sample & Location	: 03.03.2023 to 13.03.2023
9. Method of Sampling	: Dhoonimata village (Ground water)
	: 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	0.68	1.0	1.5
19.	Phosphate	IS:3025(Part-31)	mg/L	0.10	-	-
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	58.4	200	400
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	14.5	45	No Relaxation
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	8.7	-	-
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-98 to 3-100)	mg/L	75.2	-	-
Chemical Testing – Residues – Ground water						
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)	0.05	1.5
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	0.24	5	15
26.	Lead	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.01	No Relaxation
27.	Manganese as Mn	APHA 23 rd Ed.3111B	mg/L	BDL(<0.01)	0.1	0.3
28.	Iron as Fe	APHA 23 rd Ed.3111B	mg/L	0.12	0.3	No Relaxation

BDL-Below Detection Limit

Tested By

 (Manali Vyes)
 Asst.Chemist

Authorized Signatory

 (Puran Singh)
 Sr. Chemist

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

Note

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End of Report

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 TC-5941
 Our Commitment.. Your Trust



Report No. 20230303018

Report Issue Date: - 14.03.2023

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	:	03.03.2023/03:10PM
6. Sample received on	:	03.03.2023
7. Period of Analysis	:	03.03.2023 to 13.03.2023
8. Name of sample & Location	:	Bagdara Talav (Surface water)
9. Method of Sampling	:	IS: 3025 (Pt 1) 198

S. No	Environment Condition		Unit	Results
1.	Ambient Temperature		°C	31.4
2.	Relative Humidity		%	45
S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water- Surface Water				
1.	pH (at 25°C)	IS:3025(Part-11)	-	7.65
2.	Conductivity (at 25°C)	IS:3025(Part-14)	ms	1.952
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	1262
6.	Total Suspended Solid	IS:3025(Part-17)	mg/L	24
7.	Total Hardness as CaCO ₃	IS:3025(Part-21)	mg/L	440
8.	Calcium as Ca ²⁺	IS:3025(Part-40)	mg/L	97.6
9.	Magnesium as Mg ²⁺	IS:3025(Part-46)	mg/L	47.04
10.	Alkalinity	IS:3025(Part-23)	mg/L	334
11.	Chlorides as Cl ⁻	IS:3025(Part-32)	mg/L	282
12.	Oil & Grease	IS:3025(Part-39)	mg/L	BDL(<4)
13.	Silica as SiO ₂	APHA 23 rd Edition2017, 4500-SiO ₂ Page 4-175 to 177	mg/L	7.8
14.	Dissolve Oxygen	IS:3025(Part-38)	mg/L	6.1
15.	Residual Chlorine	IS:3025(Part-26)	mg/L	BDL(<0.01)
16.	B.O.D. 3 days @ 27°C	IS:3025(Part-44)	mg/L	4.2

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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. 20230303018

Report Issue Date: - 14.03.2023

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	:	03.03.2023/03:10PM
6. Sample received on	:	03.03.2023
7. Period of Analysis	:	03.03.2023 to 13.03.2023
8. Name of sample & Location	:	Bagdara Talav (Surface water)
9. Method of Sampling	:	IS: 3025 (Pt 1) 198

S. No.	Parameters	Test Method	Unit	Results
Chemical Testing – Water – Surface Water				
17.	Chemical Oxygen Demand	IS:3025(Part-58)	mg/L	16.08
18.	Fluoride as F ⁻	APHA 23 rd Ed., 4500 FD	mg/L	0.46
19.	Phosphate	IS:3025(Part-31)	mg/L	3.6
20.	Sulphate as SO ₄ ²⁻	APHA 23 rd Ed., 4500 SO ₄ E	mg/L	269.6
21.	Nitrate as NO ₃ ⁻	APHA 23 rd Ed., 4500 NO ₃ B	mg/L	18.1
22.	Potassium as K	APHA 23 rd Edition, Part 3500-k (3-89 to 3-90)	mg/L	9.9
23.	Sodium as Na	APHA 23 rd Edition Part 3500-Na (3-99 to 3-100)	mg/L	86.2
Chemical Testing – Residues – Surface water				
24.	Copper as Cu	APHA 23 rd Ed.3111B	mg/L	BDL(<0.1)
25.	Zinc	APHA 23 rd Ed.3111B	mg/L	2.0
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	0.16

BDL-Below Detection Limit

Tested By

(Manali Vyas)
Asst. Chemist

Authorized Signatory

(Puran Singh)
Sr. Chemist

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

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TC-5941

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जस्थान परिवहन

उत्तर प्रदेश, भारत, 2010

अमृत संचयनी

संस्कारण

शहर में झुक

Date: 27.11

खतरे परिवहन

जल, जलां उत्तरप्रदेश
गोदावरी

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FLORAL REPORT OF TREE

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

S No		Local Name	Buffer Zone 10 KM
1	TREES	BONJH	ACACIA LEUCOPHLOEA
2		BABUL	ACACIA SENEGAL
3		ARDUSA	AILANTHUS EXCELSA HORN
4		DHOKADA	ANOGEISSUS PENDULIA EDG
5		NEEM	AZADIRACHTA INDICA
6		KHAKHRA	BUTEA MONOSPERMA
7		BORDI	ZIPHUS MAINTIANA
8		VILAYATI BABUL	PROSOPIS JULIFLORA
9		PEEPAL	FICUS RELIGIOSA
10		BARGAD	FICUS BENGALENSIS
11		BEL	AEGLE MARMELOS
12		GONDA	CORDIA MIXA
13		KABITA	DISPYROS MONTANA
14		KACHNAR	BAUHINIA RACEMOSA
15		IMLI	TAMARANDUS INDICA
16		KIKAR	PITHECOLOBIUM DULCI
17		AAM	MANGIFERA INDICA
18		DESI BABUL	ACACIA NILOTICA
19		BANSE	DENDROCALAMUS STRICTUS
20		SISAM	DALBERGIA SISSO
21		CHAMPA	PLUMARIA RUBRA
22		KHAJUR	PHOENIX ACULIS
1	SHRUBS	AKDO	CALOTROPIS PROCERA
2		ANDHUAHARA	ACHYRANTHES ASPERIA
3		AWAL	CASSIA ALBICULATA
4		DHATURA	DHATURA METAL
5		CHANIBOR	ZEYPHUS NUMMULARIA
6		THOR	EUPHORBIA NIVULIS
1	GRASSES	BHARUT	CENCHRUS CATIANITIOUS
2		MUNJ	SACCHARUM MUNJA
3		BUHARI	EREMOPOGO FORESTATUS
4		LAMPLA	ARISTIDA SP
5		LATNA	LATNA CAMABA
6		DHATURA	DHATURA METAL
7		JHAD BERA	ZIPHUS NUMMALARIS



कृष्ण राम सिंह
संस्कृत (प्राची)

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

REPTILES :

1	Common garden lizard	<i>Calotes versicolor</i>	IV
2	Indian chameleon	<i>Chamaleon zeylanicus</i>	IV
3	Indian cobra	<i>Naja naja</i>	II
4	Russel viper	<i>Vipera spp.</i>	II
5	Krait	<i>Bandarus Spp.</i>	III
6	Cat snake	<i>Boiga spp.</i>	III



वनप्रस्थ विभाग
कर्मचारी (अधिकारी)