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Riddhi Siddhi - KSM Resources JV

Khatoni No. 1049, Behind Hotel Mejban, Loharu Road
Charkhi Dadri (Haryana)

To

Date: 12.05.2022

Ref. No..... Date.....

The Advisor, Ministry of Environment & Forests,
Northern Regional Office,
Sector-31, Dakshin Marg,
Chandigarh-160030

Sub:Submission of Six Monthly Compliance Report of Stipulated Conditions of Environmental Clearance for Mining of Stone along with associated minor minerals at Kalali and Kalyana, Tehsil- Charkhi Dadri, District- Bhiwani, Haryana Having area of 64.40 ha. For submission period of JUNE-2022.

Ref. No.SEIAA/HR/2020/122 dated 17.02.2020

Sir,

In accordance to the EC letter as above stated received from State Environment Impact Assessment Authority (SEIAA) vide letter**SEIAA/HR/2020/122 dated 17.02.2020.**We are submitting herewith six monthly compliance report of stipulated conditions of Environment Clearance (Soft only) along with laboratory analysis results the specific and general conditions and relevant annexure.

We fully assure you that we will comply with all conditions as specified in the Environment clearance granted us.

For **M/s Ridhi Sidhi KSM Resources JV**

Authorised Signatory

Riddhi Siddhi-KSM Resources

VKar

Authorised Signatory

Name Vikas Sharma
Designation- Director
E-mail - accounts@rsksmjv.com
Contact No.- 8814027600

Copy to:

1. State Environment Impact Assessment Authority (SEIAA), Bay No. 55-58, Paryatan Bhavan, Sector-2, Panchkula, Haryana.
2. The Member Secretary, Haryana State Pollution Control Board(HSPCB), Sector-6, Panchkula
3. Ministry of Environment, Forests & Climate Change (IA Division), Indira ParyavaranBhavan, JorBagh Road, New Delhi.

SIX MONTHLY ENVIRONMENTAL COMPLIANCE MONITORING REPORT OF STIPULATED CONDITIONS OF ENVIRONMENTAL CLEARANCE
(Period- October 2021 to March 2022)

FOR

"Stone Mine" (Associated Minor Mineral), Village- Kalali & Kalyana, Tehsil- Charkhi Dadri, District- Bhiwani, Haryana.

SUBMITTED BY:

M/s Ridhi Sidhi KSM Resources

Khatoni Number 1049, Behind Hotel Mejban,

Loharu Road, Charkhi Dadri, Haryana.

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1 INTRODUCTION

1.1 Introduction

M/s Ridhi Sidhi KSM Resources has obtained the Environmental Clearance Letter State Environment Impact Assessment Authority, Haryana for the Mining of Stone along with Associated Minor Minerals of production capacity- 5.8 MTPA, Village- Kalali & Kalyana, Tehsil- Charkhi Dadri, District- Bhiwani (Haryana). Vide Ref. No. **SEIAA/HR/2020/122 on dated: 17-02-2020.**

Total area of the mining site is 64.40 hectares. An approval for the mining scheme and progressive mine closure plan was obtained from the Department of Mines & Geology, Haryana vide Letter no. **DMG/HY /MP /Kalali & Kalyana/3341 to 44** on dated **02.07.2018**.

1.2 Purpose of the Report

As per the "Sub Para (i)" of "Para 10" of EIA Notification 2006, it is stated that "It shall be mandatory for the project management to submit six monthly compliance reports in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year" and as per compliance of condition mentioned in Environment Clearance Letter (i.e. Part B General Condition, point number- 38), Six monthly compliance reports should be submitted to the Regulatory Authority of Central and State Government.
It is mandatory to submit a Six Monthly Compliance Report to show the status & compliance of all the Conditions mentioned in Environment clearance Letter, along with monitoring of various Environmental Parameters (as per CPCB Norms).
The regulatory authorities in this case are MoEF& CC, Delhi, MoEF& CC, Chandigarh and HSPCB, Panchkula and State Environment Impact Assessment Authority, Haryana. Various scheduled Site Visits were conducted by a team of Experts to Monitor Pollution related parameters as defined by CPCB / HSPCB. Samples for water and soil were also collected for further analysis.

Based on the Specific and General Conditions mentioned in the EC Letter, a Compliance Report was prepared on behalf of Project Proponent; details of which are present in Chapter – 2 entitled "**Adherence of specific and general conditions**".

This report is supposed to submit after every six month as per the conditions stipulated in Environment Clearance Letter. The Environmental assessment has been carried out to verify:

1) That the proposed project has not any adverse effect on the project site as well as its surrounding.
2) That there is compliance with the conditions stipulated in the Environmental Clearance Letter.
3) That the Project proponent is implementing the environmental safeguards and environmental pollution mitigative measures as suggested in approved Mining Plan and Form-1, Environmental Management Plan with true spirit.
4) The non-conformity in the project with respect to the environmental implication.

1.3Methodology for Preparation of Report is as follows:

1) Study of EC Letter & Related Documents,
2) Site Visits by a Team of Experts,
3) Monitoring of Environment Parameters, viz. Ambient Air, Water, Noise, Soil & DG stack emissions,
4) Analysis of Samples collected during Monitoring,
5) Interpretation of Monitoring Results,
6) Preparation of six monthly Environmental Compliance Report.

1.4 Generic Structure of Report:

1. Purpose of the Report, explaining the need of a Compliance Report and Methodology Adopted for preparation of Report.
2. Compliance Report, explaining the entire specific & general conditions given in the EC Letter and providing details w.r.t. each condition/ guideline.
3. Monitoring Reports & Analysis, showing the level of pollution/emission within the project site for various Environment Parameters.
4. Photographs showing status of the project and sampling/monitoring of environmental parameters.
5. Supporting Documents related mandatory for the project.

2 ADHERENCE OF SPECIFIC AND GENERAL CONDITIONS

Part A: Specific Conditions

A	Specific conditions:-	
1.	The PP shall construct the three pucca link roads connected to the SH-17 at the mining site before the start of mining.	**PP has constructed one kachha road before the start of mining work. Rest two roads will be constructed in due course of time.**
2.	The PP shall construct the Haul roads of the 10-meter wide as proposed in EIA.	Haul roads of adequate size are being developed by the project proponent. **Photographs of the same are attached as Annexure -1**
3.	Traffic management plan as submitted shall be implemented in letter and spirit. Apart, a detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of the service roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project.	Traffic movement plan has been presented in the EIA report; the same is being complied. We ensure that there is no adverse effect on service road due to our project.
4.	No tree cutting has been proposed in the project 2500 Plants per hectare should be planted and maintained. The Existing tree will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed the plantation in 30.40 hectare area will be carried out including statutory boundary barrier.	Green area development has been done at the mine site. Different species of tress are planted at the site favourable to the climate condition and preferable condition of the area. No of trees planted at the site 3345 **Photographs of the same are attached as Annexure -2**
5.	The Project Proponent shall obtain all necessary clearance/permission from all relevant agencies before commencement of work.	Necessary clearance/permission from all relevant agencies (competent authorities) has been obtained.
6.	Consent to establish/operate for the project shall be obtained from the state pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of pollution) Act, 1974.	CTE & CTO have been obtained from HSPCB. Copies collectively enclosed as **Annexure 3.**
7.	The PP shall deposit the half of CER fund in the C.M. Fund and rest shall be used as per the schedule and also to develop 2 ponds in the village Kuleri near Agroha with technical support from the Haryana Pond and Waste Water Authority.	2 Lakhs Rs has been deposited in CM fund 11,11,990 is spent for CSR .

8.	The PP shall take precautions to suppress the dust in and around the mining site. The PP shall use mixed cannon water sprinkle for dust suppression instead of conventional sprinkles for efficient dust suppression.	Adequate dust suppression measures are being implanted in and around the mine site. Regular water sprinkling is being done by the water tankers on the mine site. **Photographs of Water sprinkling at the mine site is attached as Annexure 4**
9.	The PP shall manage the overburden at the mining site.	NA
10.	The PP shall create environment division unit in the project for implementing the conditions of Environment clearance.	Environment division unit has been created for implementing the EC conditions PP has appointed Engineers for it.
11.	The PP shall obtain the permission regarding withdrawal of ground water from CGWA before the start of the project and also obtained the CTO from HSPCB after the approval from CGWA	The PP has obtain the NOC regarding withdrawal of ground water from Competent Authority (HWRA) regarding withdrawal of ground water from is enclosed as **Annexure-5.** CTO has been obtained from HSPCB. Copy for the same is enclosed as **Annexure-3.**
12.	Any change in stipulations of EC of the approved mining plan will lead to Environment Clearance void-ab-initio and PP will have to seek fresh Environment Clearance.	Noted
13.	The PP shall adhere to the approved mining plan and approved closure plan by the competent authority.	Noted
14.	Action plan for the public hearing issues shall be compiled in the letter and spirit.	Public hearing issues has been addressed and respective measures are being taken care of.
15.	The proponent will provide adequate sanitary facility in the form of mobile toilets to the labours engaged for the project work.	Adequate sanitary facilities have been provided for labours. **Photographs of Labour shelters are being attached as Annexure-6**
16.	Project proponents shall comply all the measures, conditions suggested in the approved mining plan with post closure mine plan, Environmental Management Plan (EMP) in a letter and spirit.	Project proponent is complying with measures and has spent **Rs 50,57,312** on EMP as follows- **1. Plantation-50,000/-** **2. Water Sprinkling-3422117/-** **3. Road Maintenance-1385195/-** **4. EC Compliance and Monitoring of Air, Noise, Soil and Ground water (Twice a Year) -200000/-**
5.	PP shall make channels to divert rain water run-off from surrounding catchment area to enroute water in the excavated pit to ensure water collection for sustained ground water recharge.	Rain water harvesting pits for ground water recharge has been constructed to ensure water collection for sustained ground water recharge.
6.	The PP shall restrict maximum mining depth 4meters above the Ground Water Table i.e. up to 214mrl.	Noted, mining will be done as per approved mining plan.
7.	The PP shall divert the first order stream in post mining to save the natural drainage system.	Adequate measures to save natural drainage system has been implemented such as rain water harvesting pits have been constructed.

B:	**Statutory compliance:-**	
1.	This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable	Noted and Agreed.
2.	The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Others before commencing the mining operations.	We are compiling with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Others.
3.	The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.	There is no illegal mining operation as this is a green field mining project.
4.	This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.	Not applicable.
5.	This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.	Not applicable as no forest land is involved in the project area.
6.	Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish/Consent to Operate from the concerned State Pollution Control Board/Committee.	CTE & CTO have been obtained from HSPCB. Copies collectively enclosed as **Annexure 3.**
7.	The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS), Mines & Geology Department, Haryana and Indian Bureau of Mines from time to time. Also adhere to Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules. 2012.	Project Proponent has complied with the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. It has adhered to various circulars issued by Directorate General Mines Safety (DGMS), Mines & Geology Department, Haryana and Indian Bureau of Mines from time to time. Also adhere to Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules. 2012.
8.	The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.	The Project Proponent has obtained consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.

9.	The Project Proponent shall follow the mitigation measures provided in MoEF & CC Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".	There is no habitation within 500 meter and due mitigations measures will be implemented as per the Om No. Z-11013/ 57/2014-IA.II (M), dated 29th October, 2014.
10.	The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.	The PP has obtain the NOC regarding withdrawal of ground water from Competent Authority (HWRA) regarding withdrawal of ground water from is enclosed as **Annexure-5.**
11.	A copy of EC letter will be marked to concerned Panchayat/ local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.	Noted and complied.
12.	State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.	Noted and complied.
13.	The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEF & CC Regional Office for compliance and record.	Public notice regarding grant of EC has been published in local newspapers, copy attached as **Annexure 7.**
14.	The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease of is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.	Noted and agreed.

I.	**Air Quality monitoring and preservation**	
i.	The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatologically data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM25, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and Use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.	Ambient air quality monitoring is being carried out by NABL & MOEF approved lab. Reports attached as **Annexure 8.** AAQ sampling machines for monitoring of air pollutants has been installed in due course of time as dust is the only source of air pollution.
ii.	Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM25 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipment/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEF & CC/Central Pollution Control Board.	Adequate dust suppression measures are being implanted to ensure that air pollution level conform to the standards prescribed by the MoEF & CC/Central Pollution Control Board.

II.	**Water quality monitoring and preservation**	
i.	In case, immediate mining scheme envisages intersection of the ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF & CC is in place before such mining operations, The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.	Ground water table will not be intersected during the plan period and no dewatering will be required. The PP has obtain the NOC regarding withdrawal of ground water from Competent Authority (HWRA) regarding withdrawal of ground water from is enclosed as **Annexure-5.**

ii.	Regular monitoring of the flow rate of the springs and perennial Nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be Incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.	Ground water quality as well as ground water level is being monitored in and around mine area. Reports of water quality attached as **Annexure 8.**
iii.	Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezometer installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.	Ground water quality as well as ground water level is being monitored in and around mine area. Reports of the same are attached as **Annexure 8.** Ground water Level monitoring data in and around the mine area for **Post monsoon (November)** and **Winter (January**) are given **in Table 3.11 of the chapter-3.**
.iv	The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post- monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.	Surface water quality is being monitored in and around mine area. Reports of the same are attached as **Annexure 8.**

v.	Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No.J-20012/1/2006- IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.	Not applicable since very insignificant quantity of water is required for mining operations. As such there is no acid mine drainage and metal contamination since our mining operation is for stone along with associated minor minerals.
vi.	Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consulting with Central Groundwater Department. A report on amount of water reached needs to be submitted to Regional Office MoEF &CC annually.	Garland drainage has been made all round the pit as well as around the mining lease area to prevent the entry of surface/ rain water inside the pits. **Photographs of the same are attached as Annexure -9**
vii.	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to confirm to the notified standards prescribed from time to time. The standard shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.	There is no significant quantity of industrial waste water generation during mining operation. Water will be used mainly for dust suppression.
viii.	The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/committee.	Water audit will get conducted in due course of time.

III.	**Noise and vibration monitoring and prevention**	
i.	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.	**Noted**
ii.	The illumination and sound at night at project site disturb the villages in respect of both human and animal population. Consequent sleeping disorder and stress may affect the health in the village located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/mask away from the villagers and keeping the noise level well within the prescribed limits for day/night hours.	The mining will be carried out from 6:00 AM to 6:00 PM only so the biological clock of the villagers will not be disturbed at night. During operation time we will controlled the noise level as per the guidelines. Therefore, we ensured that the noise level well within the prescribed limits for day/night hours.

iii.	The Project Proponent shall take measures for control of noise level below 85 dB(A) in the work environment. The worker engaged in operations of HEMM, etc. should be provided with earplugs / muffs. All personnel including labourers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that worker/ personals/ labourers are working without personal protective equipment.	The Project Proponent has taken measures for control of noise level below 85 dB(A) in the work environment. The worker engaged in operations of HEMM, etc. has been provided with earplugs / muffs. All personnel including labourers working in dusty areas have been provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects.

IV.	**Mining Plan**	
	The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, Which entail adverse environmental impact, even if it is a part of approved mining plan modified after grant of EC granted by State Govt. in the form to short Term Permit (STP), Query license or any other name.	Noted for compliance. Mining will be carried out as per approved mining plan submitted at the time of EC appraisal. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) will be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, Which entail adverse environmental impact
ii.	The project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved form Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approved of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and climate Change and SEIAA for record and verification.	Approved mining plan along with mine closer plan has already been submitted to SEIAA during EIA appraisal.

iii.	The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation become self-sustaining. The compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office.	Mine reclamation will be carried out as per approved mining plan and progressive mine closure plan.

V.	**Land Reclamation**	
i.	The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only. The physical parameters of the OB dump like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintained the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.	Not applicable as there is no OB Dump
ii.	The reject/waste generated during the mining operation shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhere to maintain the stability of waste dumps.	Not applicable as there is no OB Dump
iii.	The reclamation of waste dump sites shall be done in scientific manners as per the Approved Mining Plan cum progressive Mine Closure Plan.	Not applicable as there is no OB Dump
iv.	The slope of dump shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climate parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidates with the help of dozer/ compactors thereby ensuring proper filling/ levelling of dump mass. In critical areas, use of geo textiles/geo-membranes/clay linear/Bentonite etc. shall be undertaken for stabilization of the dump.	Not applicable as there is no OB Dump

v.	The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional officer of MoEF&CC/SEIAA.	Not applicable as there is no OB Dump
vi.	Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, minerals yards and Top Soil/OB/Waste dumps to prevent run off of water of sediments directly into the water bodies (Nallah/ River/ Pond etc.). the collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. the drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.	Noted
vii.	Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sedimentation flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structure over and above peak rainfall (based on 50 years data) and maximum discharged in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/silt material. The sedimentation pits/ sumps shall be constructed at the corner of the garland drains.	Noted
viii.	The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhere to maintained the stability of dumps. The topsoil shall be used land reclamation and plantation purpose.	The top soil, if any, is being temporarily stored at earmarked site(s) within the mine lease only and will not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope is talked as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations will be strictly adhere to maintained the stability of dumps. The topsoil will be used land reclamation and plantation purpose.

VI.	**Transportation**	
i.	No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after requires strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution under Control (PUC) certified for all the vehicles from authorized pollution testing centres.	Road infrastructure for smooth movement of traffic has been developed by the project proponent. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling is being carrying out regularly. Vehicular emissions will be kept under control and regularly monitored. **PUC Certificates of the vehicles are attached as Annexure -10**
ii.	The main haulage road within the mine lease should be provided with a permanent water sprinkler arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipment like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other ares prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.	Adequate measures for control of dust through various dust suppression techniques will be implemented during mine operation. Roads within the mine lease are wetted regularly with tanker-mounted water sprinkling system. **Photographs of the same are attached as Annexure -4**

VII.	**Green Belt**	
i.	The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.	Project Proponent has developed greenbelt in 7.5m wide safety zone all along the mine lease boundary and the development of greenbelt is being done as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan . **Photographs of the same are attached as Annexure -2**

ii.	The Project Proponent shall carryout plantation/afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also adhered. The density of the tree should be around 2500 sapling per Hectare. Adequate budgetary provision shall be made for protection and care of trees.	Green belt development has been started as per the approved mining plan and EIA report in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/Gram Panchayat. **Photographs of the same are attached as Annexure -2**
iii.	The Project Proponent shall make necessary alternative arrangement for livestock feed developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implemented the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/protected against felling and plantation of such trees should be promoted.	The proposed mine lease area is in Kalali village, which bears negligible density and species in the area, which are coming within the mine lease. However PP make necessary alternative arrangement for livestock feed developing grazing land with a view to compensate those areas which are coming within the mine lease.
iv.	The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt. and implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.	The Project Proponent has prepared and submitted the conservation plan in considering of precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. The Plan is approved by Chief Wild Life Warden of the State Govt. and implemented in consultation with the State Forest and Wildlife Department. **Copy of same is attached as Annexure – 5.**

VIII.	Public Hearing and Human Health Issues	
i.	The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the worker engaged in the mining activities, as per the DGMS guidelines. The record shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. the check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same way may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.	Occupational Health Specialist has been appointed for periodical medical examination of the workers engaged in the project and will maintain records accordingly and necessary remedial /preventive measures will be taken accordingly in due course of time. **Occupational Health Report of the workers are attached as Annexure-11**
ii.	The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risk to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighbourhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, and Diarrhoea in children under five, respiratory infection due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.	We are demonstrating commitment to work towards 'Zero Harm' from our mining activities and doing Health Risk Assessment (HRA) for identification workplace hazards and assess the potential risk to health and determining the appropriate control measures to protect the health and wellbeing of workers and nearby community. We maintain accurate and systematic records of the HRA. We will create awareness and educate the nearby community and workers for sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. We will carry out base line HRA for all the category of workers and thereafter every five years.

ii.	The Proponent shall carryout Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigation relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric: for lead exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) estimation in Blood; for Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine test all test would be carried out in a Lab accredited by NABH. Record of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would ne obligatory for the State Mines Department to make arrangements for the safe and secure storage of the records including X-Rays. Only conventional X-Ray must meet ILO criteria (17 x 14 inches and of god quality).	We will carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigation relevant to the exposure by a responsible person. Except routine test all test will be carried out in a Lab accredited by NABL.
iv.	The Proponent shall maintained a record of performance indicators for workers which includes: (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 – 24.9, (b) the final Chest X-Ray compared with the base line X-Ray should not show any capacities, (c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one (FEV1), Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and effect of age, (d) Their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) They should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) They should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.	Records will be maintained as per EC conditions.

v.	The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should be provided with adequate training and information on safety and health aspects.	We are periodically providing protective respiratory devices and adequate training and information to the personnel working in dusty areas on safety and health aspects.
vi.	Project Proponent shall make provision for the housing for workers/labours or shall construct labour campus within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structure, which can be removed after the completion of the project related infrastructure. The domestic wastewater should be treated with STP in order to avoid contamination of underground water.	We are making provision for the housing for workers/labours or construct labour campus locally. However most of the labour comes from nearby villages and does not require housing.
vii.	The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.	The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing will be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame.

IX.	**Corporate Environment Responsibility (CER)**	
i.	The activity and budget earmarked for Corporate Environment Responsibility (CER) as per Ministry O.M No 22-65/2017-I1. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photo graphs, purchase document latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.	The activities proposed for CER will be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photo graphs, purchase document latitude & longitude of infrastructure developed & road constructed will be submitted to Regional Office MoEF&CC annually.
ii.	Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purpose. Year wise expenditure of such funds should be reported to the MoEF&CC and its Concerned Regional Office.	Project Proponent will take care of the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purpose. Year wise expenditure of such funds will be reported to the MoEF&CC and its Concerned Regional Office.
X.	**Miscellaneous**	
1.	The mining lease holders shall, after ceasing mining operation, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.	Re-grassing and mine reclamation will be carried out at as per approved mining plan.

2.	The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.	Project Proponent will prepare digital map (land use & land cover) of the entire lease area purpose of monitoring land use pattern and will submit a report to concerned Regional Office of the MoEF&CC in the end of the 5th year.
3.	The Project Authorities should inform to the Regional Office regarding date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	Noted
4.	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environment safeguard to the MoEF&CC & its concerned Regional Office, Central Pollution Board and State Pollution Control Board.	We are submitting six monthly compliance reports on the status of the implementation of the stipulated environment safeguard to the MoEF&CC & its concerned Regional Office, Central Pollution Board and State Pollution Control Board.
5.	A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environment Scientists and Mining Engineering shall be appointed and submit a report to RO, MoEF & CC.	A separate 'Environmental Management Cell' with suitable qualified manpower is being setting-up under the control of our senior Executives and directly report to Head of the Organization. Adequate number of qualified Environment Scientists and Mining Engineering has been appointed.
6.	The concerned Regional Office of the MoEF & CC including other authorized organization shall randomly monitor compliance of the stipulated conditions. The project authorities should extent full cooperation to the MoEFF & CC officer(s) including other authorized officer by furnishing the requisite data/information.	We ensure our full cooperation to the MoEFF & CC officer(s) including other authorized officer by furnishing the requisite data/information.
7.	The SEIAA, Haryana reserve the right to add new conditions, modify/annual any of the stipulated conditions and/or revoke the clearance if implementation of any of the condition stipulated by SEIAA, Haryana or any other competent authorities is not satisfactory.	We are abide with the SEIAA, Haryana rights to add new conditions, modify/annual any of the stipulated conditions and/or revoke the clearance if implementation of any of the condition stipulated by SEIAA, Haryana or any other competent authorities is not satisfactory.
8.	Failure to comply with any of the conditions mentioned above may result in withdrawal of the clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted.
9.	All the other statutory clearance such as the approvals for storage of diesel from the Chief Controller of Explosives, Fire department, Civil Aviation Department, Forest Conservation Act, 1980 and wildlife (protection) Act, 1972 etc. shall be obtained, as may be applicable, by Project Proponent from the competent authority before the start of mining operation.	All the other statutory clearance has been taken or will be taken as and when required.

10.	That the grant of this EC is issued from the environment angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or nay other instrument in force. The sole and complete responsibility, to comply with the conditions laid down in all other laws for the time being in force with the industry/unit/project proponent. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 National Green Tribunal Act, 2010.	Noted

3 DETAILS OF ENVIRONMENTAL MONITORING

3.0 Monitoring Portfolio:

This report is prepared for the period of October 2021 to March 2022 as per EC conditions. Post Environmental Clearance Monitoring was carried out during March 2020. The samples were analyzed at NABL approved Environmental laboratory. Following environmental components has been monitored and analyzed.

1. Ambient Air Quality
2. Noise Quality
3. Water Quality
4. Soil Quality

3.1 AMBIENT AIR QUALITY MONITORING

3.1.1 Ambient Air Quality Monitoring Stations

Ambient air quality monitoring has been carried out at 3 locations as mentioned below. This will enable to have a comparative analytical understanding about air quality and the changes in the air environment in the study area with respect to the condition prevailing. The locations of the ambient air quality monitoring stations are given in **Table 3.1**.

Table 3.1 Details of Ambient Air Quality Monitoring Stations

S. No.	Location Code	Location Name
1.	**AAQ-1**	Up Wind Direction (Near Mine Site)
2.	**AAQ-2**	Down Wind Direction (500 mtr from Mine Site)
3.	**AAQ-3**	Down Wind Direction (Kalyana Village)

AAQ-1: Up Wind Direction (Near Mine Site)
The sampler was placed near mine site and was free from any obstructions. Mine site is selected because due to mining activity pollution should be increase in the nearby area.

AAQ-2: Down Wind Direction (500 mtr from Mine Site)
The sampler was placed 500 mtr from mine site and was free from any obstructions. Surroundings of the sampling site represent Industrial environmental setting.

AAQ-3: Down Wind Direction (Kalyana Village)
The sampler was placed at village- Kalyana, was free from any obstructions. Surroundings of the sampling site represent residential environmental setting.

3.1.2 Ambient Air Quality Monitoring Methodology

Monitoring was conducted in respect of the following parameters:

- Particulate Matter 2.5 (PM 2.5)
- Particulate Matter 10 (PM 10)
- Sulphur Dioxide (SO_2)
- Oxides of Nitrogen (NO_x)

The duration of sampling of PM $_{2.5}$, PM_{10}, SO_2 and NOx was 24 hourly continuous sampling per day. The monitoring was conducted for one day at each location. This is to allow a comparison with the National Ambient Air Quality Standards.

The air samples were analyzed as per standard methods specified by Central Pollution Control Board (CPCB) and IS: 5182. The techniques used for ambient air quality monitoring and minimum detectable levels are given in **Table 3.2**.

Fine Particulate Sampler instruments have been used for monitoring Particulate Matter 2.5 ($PM_{2.5}$ i.e. <2.5 microns), and Respirable Dust Sampler was used for sampling Respirable fraction (<10 microns), gaseous pollutants like SO_2andNO_x.

Table 3.2 Techniques used for Ambient Air Quality Monitoring

S. No.	Parameter	Technique	Technical Protocol
1	**Particulate Matter ($PM_{2.5}$)**	Fine Particulate Sampler, Gravimetric Method	#SOP No. VEL/SOP/01, Section No. SP 63
2	**Particulate Matter (PM_{10})**	Respirable Dust Sampler, with cyclone separator, Gravimetric Method	IS: 5182 (P-23)
3	**Sulphur dioxide (SO_2)**	Modified West and Gaeke	IS: 5182 (P-2)
4	**Oxides of Nitrogen (NO_X)**	Jacob & Hochheiser	IS: 5182 (P-6)

#SOP-Laboratory Standard Operating Procedure

3.1.3 Ambient Air Quality Monitoring Results

The detailed on-site monitoring results of PM $_{2.5}$, PM $_{10}$, SO_2, NO_x are presented as **Table 3.3**

Table 3.3 Ambient Air Quality Monitoring Results

S. No.	Parameter	AAQ1	AAQ2	AAQ3	NAAQS*
1	**Particulate Matter ($PM_{2.5}$), µg/m³**	**84.46**	**89.52**	**70.76**	60
2	**Particulate Matter (PM_{10}), µg/m³**	**166.41**	**171.45**	**156.21**	100
3	**Nitrogen Dioxide (NO_2), µg/m³**	**22.71**	**25.61**	**19.24**	80
4	**Sulphur Dioxide (SO_2), µg/m³**	**6.47**	**5.86**	**5.49**	80
5.	**Carbon Monoxide (CO)**	**0.76**	**0.80**	**0.72**	4

*NAAQS – National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)]16.11.2009

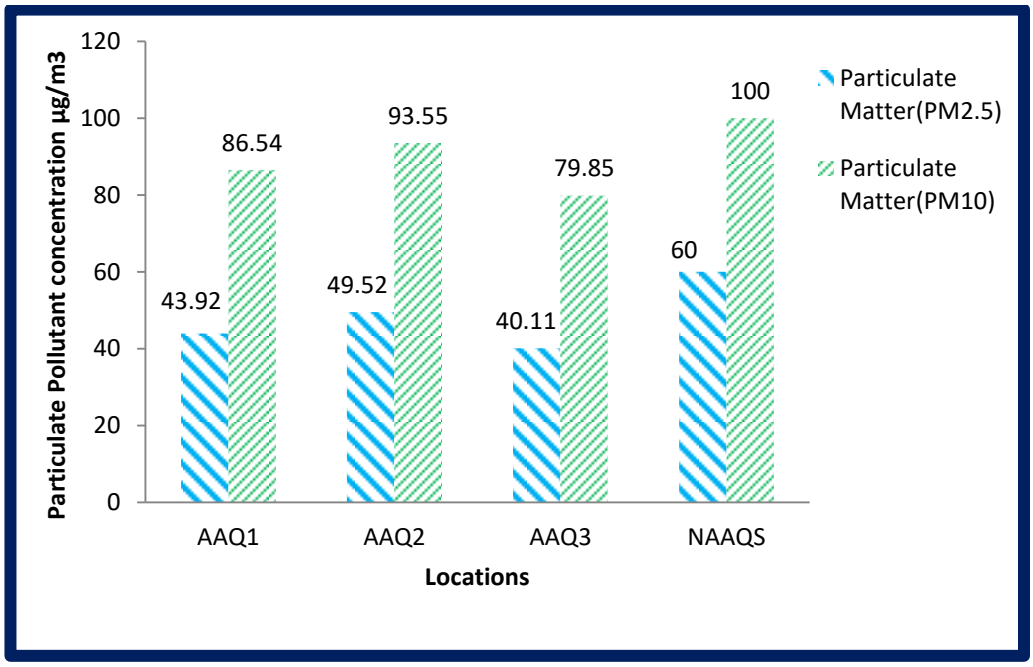


Figure 3.1 Graphical Presentation of Particulate pollutants

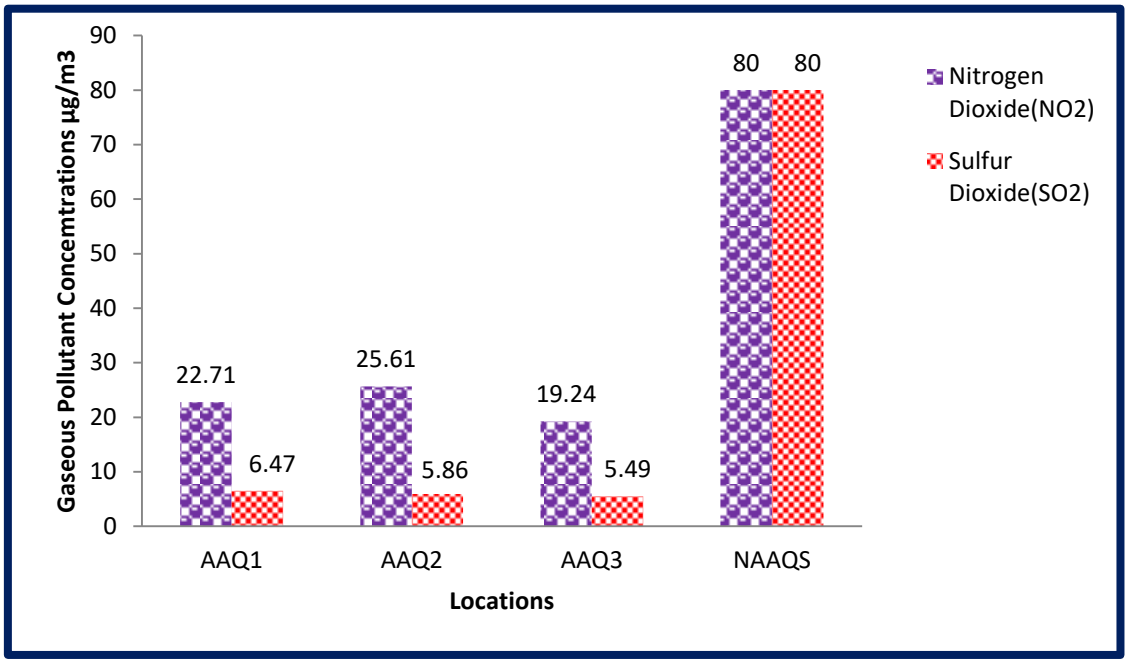


Figure 3.2 Graphical Presentation of Gaseous pollutants

3.1.4 Discussion on Ambient Air Quality in the Study Area

The level of $PM_{2.5}$ and PM_{10} at all locations was found to be in range of 70.76 to 89.52 µg/m^3 and 156.21 to 171.45 µg/m^3 respectively. The level of NO_x and SO_2 at all locations were found to be in range of 19.24 to 25.61 µg/m^3 and 5.49 to 6.47 µg/m^3 respectively. All the results were found to be well within the prescribed NAAQS limits.

3.2 AMBIENT NOISE MONITORING

3.2.1 Ambient Noise Monitoring Locations

The main objective of noise monitoring in the study area is to assess the present ambient noise levels due to various mining allied activities and increased vehicular movement. A preliminary reconnaissance survey has been undertaken to identify the major noise generating sources in the area. Ambient noise monitoring was conducted at 3 locations near the mining area as given in **Table 3.4**.

Table 3.4 Details of Ambient Noise Monitoring Stations

S. No.	Location Code	Location Name
1	**N1**	Up Wind Direction (Near Mine Site)
2	**N2**	Down Wind Direction (500 mtr from Mine Site)
3	**N3**	Down Wind Direction (Kalyana Village)

3.2.2 Methodology of Noise Monitoring

Noise levels were measured using sound level meter. Noise level monitoring was carried out continuously for 24-hours. The noise levels were monitored on working days only. During each hour Leq were directly computed by the instrument based on the sound pressure levels. Monitoring was carried out at 'A' response and fast mode.

3.2.3 Ambient Noise Monitoring Results

The location wise ambient noise monitoring results is summarized in **Table 3.5.** Graphical presentation of location wise variation of ambient noise level is shown in **Figure 3.3.**

Table 3.5 Location Wise variation of ambient Noise Level

Parameter	N1		N2		N3	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
Lmax	**77.6**	**69.7**	**79.6**	**72.6**	**61.5**	**44.5**
Lmin	**50.7**	**37.5**	**52.9**	**39.7**	**45.7**	**36.6**
Leq	**67.58**	**60.67**	**70.11**	**63.76**	**51.88**	**43.14**
DGMS Limits in dB(A) Leq	75.0	70.0	75.0	70.0	55.0	45.0

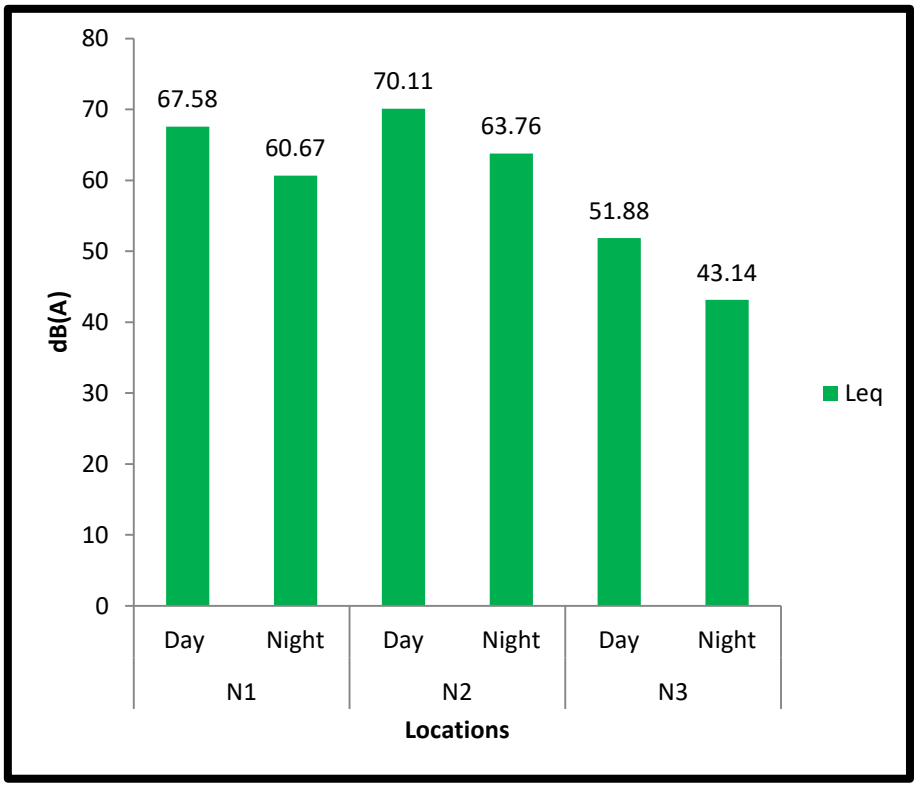


Figure 3.2 Graphical presentation of location wise variation of Ambient Noise Level

3.2.4 Discussion on Ambient Noise Levels in the Study Area

The Equivalent noise levels for day and night was found to be in range of 45.7 to 79.6 dB (A) and 36.6 to 72.6 dB (A) respectively. The noise levels were well within the permissible limits of NAAQS w.r.t Noise.

3.3 WATER QUALITY MONITORING

3.3.1 Ground Water Quality Monitoring Locations

Keeping in view the importance of water as important source to the local population, sample of water were collected from the mine site for the assessment of impacts of the project on the water quality.

Water sample were collected from the Near Mine Site and Village - Kaliyana. The samples were analyzed for various parameters to compare with the standards for water as per IS: 10500-2012. The details of water sampling locations are given in **Table 3.6**.

Table3.6 Details of Ground Water Quality Monitoring Station

S. No.	Location Code	Location Name/ Description
1.	**GW1**	Near Mine Site (**November-2021 and January 2022 Winter**)
2.	**GW2**	Village- Kaliyana (**November-2021 and January 2022 Winter**)

3.3.2 Methodology of Ground Water Quality Monitoring

Sampling of ground water was carried out on November-2021 and January 2022 Samples were collected as grab sample and sampling forms are filled in as per the sampling plan. The preservative sample were properly added to preserve as per standard operating procedures (SOP) and stored immediately in ice boxes, which were ensured for appropriate temperatures. Sample for chemical analysis was collected in polyethylene carboys. Samples collected for metal content were acidified to <2 pH with 1 ml HNO_3. Samples for bacteriological analysis were collected in sterilized glass bottles.

Soon after the completion of sampling, chain of custody sheets for the samples are filled in and then they were transported by road for further analysis. Proper care was taken during packing and transportation of samples. All the samples reached the central laboratory within the holding times for different parameters. After ensuring the same the samples were forwarded immediately for analysis.

The samples were analyzed as per the standard procedures specified in 'Standard Methods for the Examination of Water and Wastewater' published by American Public Health Association (APHA) and CPCB. The analytical techniques and the test methods adopted for testing of water are given in **Table 3.7, 3.8, 3.9 &3.10.**

3.3.3 Ground Water Quality Monitoring Results

The detailed ground water quality monitoring results are presented in **Table 3.7, 3.8, 3.9 &3.10.**

Table 3.7 Ground Water Quality Monitoring Results
(November-2021 Post Monsoon) Near Mine site

S. No.	Parameter	Unit	Test-Method	Limits of IS:10500 -2012	
				Requirement (Acceptable Limits)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 ^{0}C)	--	**7.57**	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	***BDL (**DL 1.0 Hazen)**	5	15
3.	Turbidity	NTU	***BDL (**DL 1.0 NTU)**	1	5
4.	Odour	--	**Agreeable**	Agreeable	Agreeable
5.	Taste	--	**Agreeable**	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	mg/l	**456.00**	200	600
7.	Calcium as Ca	mg/l	**135.47**	75	200
8.	Total Alkalinity as $CaCO_3$	mg/l	**486.00**	200	600
9.	Chloride as Cl	mg/l	**97.63**	250	1000
10.	Cyanide as CN	mg/l	***BDL(**DL 0.02 mg/l)**	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	**28.67**	30	100
12.	Total Dissolved Solids	mg/l	**745.00**	500	2000
13.	Sulphate as SO_4	mg/l	**56.78**	200	400
14.	Fluoride as F	mg/l	**0.46**	1.0	1.5
15.	Nitrate as NO_3	mg/l	**23.45**	45	No Relaxation
16.	Iron as Fe	mg/l	**0.14**	1.0#	No relaxation
17.	Aluminium as Al	mg/l	***BDL(**DL 0.002 mg/l)**	0.03	0.2
18.	Boron	mg/l	***BDL(**DL 0.01 mg/l)**	0.5	2.4#
19.	Chromium as Cr	mg/l	***BDL(**DL 0.002 mg/l)**	0.05	No Relaxation
20.	Phenolic Compounds	mg/l	***BDL(**DL 0.0004 mg/l)**	0.001	0.002
21.	Mineral Oil	mg/l	***BDL(**DL 0.05 mg/l)**	1.0	No Relaxation
22.	Anionic Detergents as	mg/l	***BDL(**DL 0.05 mg/l)**	0.2	1.0
23.	Zinc as Zn	mg/l	**1.24**	5	15
24.	Copper as Cu	mg/l	**0.10**	0.05	1.5
25.	Manganese as Mn	mg/l	***BDL(**DL 0.01 mg/l)**	0.1	0.3
26.	Cadmium as Cd	mg/l	***BDL(**DL 0.002 mg/l)**	0.003	No Relaxation
27.	Lead as Pb	mg/l	***BDL(**DL 0.002 mg/l)**	0.01	No Relaxation
28.	Selenium as Se	mg/l	***BDL(**DL 0.001 mg/l)**	0.01	No Relaxation
29.	Arsenic as As	mg/l	***BDL(**DL 0.002 mg/l)**	0.01	0.05
30.	Mercury as Hg	mg/l	***BDL (**DL 0.0005 mg/l)**	0.001	No Relaxation
31.	Total Coliform	MPN/100ml	**Absent**	Shall not be detectable in any 100 ml sample	
32.	E. Coli	MPN/100ml	**Absent**	Shall not be detectable in any 100 ml sample	

Note: - *BDL-Below Detection Limit, **DL- Detection Limit #These parameter are not covered in our NABL scope.

Table 3.8 Ground Water Ground Water Quality Monitoring Results (November-2021 Post Monsoon) Vill- Kaliyana

S. No.	Parameter	Unit	Test-Method	Limits of IS:10500 -2012	
				Requirement (Acceptable Limits)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 ^{0}C)	--	**7.63**	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	***BDL (**DL 1.0 Hazen)**	5	15
3.	Turbidity	NTU	***BDL (**DL 1.0 NTU)**	1	5
4.	Odour	--	**Agreeable**	Agreeable	Agreeable
5.	Taste	--	**Agreeable**	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	mg/l	**461.00**	200	600
7.	Calcium as Ca	mg/l	**146.78**	75	200
8.	Total Alkalinity as $CaCO_3$	mg/l	**497.00**	200	600
9.	Chloride as Cl	mg/l	**98.75**	250	1000
10.	Cyanide as CN	mg/l	***BDL(**DL 0.02 mg/l)**	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	**23.03**	30	100
12.	Total Dissolved Solids	mg/l	**768.00**	500	2000
13.	Sulphate as SO_4	mg/l	**59.74**	200	400
14.	Fluoride as F	mg/l	**0.40**	1.0	1.5
15.	Nitrate as NO_3	mg/l	**25.48**	45	No Relaxation
16.	Iron as Fe	mg/l	**0.16**	1.0#	No relaxation
17.	Aluminium as Al	mg/l	***BDL(**DL 0.002 mg/l)**	0.03	0.2
18.	Boron	mg/l	***BDL(**DL 0.01 mg/l)**	0.5	2.4#
19.	Chromium as Cr	mg/l	***BDL(**DL 0.002 mg/l)**	0.05	No Relaxation
20.	Phenolic Compounds	mg/l	***BDL(**DL 0.0004 mg/l)**	0.001	0.002
21.	Mineral Oil	mg/l	***BDL(**DL 0.05 mg/l)**	1.0	No Relaxation
22.	Anionic Detergents as MBAS	mg/l	***BDL(**DL 0.05 mg/l)**	0.2	1.0
23.	Zinc as Zn	mg/l	**1.25**	5	15
24.	Copper as Cu	mg/l	**0.11**	0.05	1.5
25.	Manganese as Mn	mg/l	***BDL(**DL 0.01 mg/l)**	0.1	0.3
26.	Cadmium as Cd	mg/l	***BDL(**DL 0.002 mg/l)**	0.003	No Relaxation
27.	Lead as Pb	mg/l	***BDL(**DL 0.002 mg/l)**	0.01	No Relaxation
28.	Selenium as Se	mg/l	***BDL(**DL 0.001 mg/l)**	0.01	No Relaxation
29.	Arsenic as As	mg/l	***BDL(**DL 0.002 mg/l)**	0.01	0.05
30.	Mercury as Hg	mg/l	***BDL (**DL 0.0005 mg/l)**	0.001	No Relaxation
31.	Total Coliform	MPN/100ml	**Absent**	Shall not be detectable in any 100 ml sample	
32.	E. Coli	MPN/100ml	**Absent**	Shall not be detectable in any 100 ml sample	

Note: - *BDL-Below Detection Limit, **DL- Detection Limit #These parameter are not covered in our NABL scope.

Table 3.9 Ground Water Quality Monitoring Results (January 2022 Winter) Near Mine site

S. No.	Parameter	Unit	Test-Method	Limits of IS:10500 -2012	
				Requirement (Acceptable Limits)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 ^{0}C)	--	**7.54**	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	***BDL (**DL 1.0 Hazen)**	5	15
3.	Turbidity	NTU	***BDL (**DL 1.0 NTU)**	1	5
4.	Odour	--	**Agreeable**	Agreeable	Agreeable
5.	Taste	--	**Agreeable**	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	mg/l	**364.00**	200	600
7.	Calcium as Ca	mg/l	**83.26**	75	200
8.	Total Alkalinity as $CaCO_3$	mg/l	**389.00**	200	600
9.	Chloride as Cl	mg/l	**95.31**	250	1000
10.	Cyanide as CN	mg/l	***BDL(**DL 0.02 mg/l)**	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	**37.97**	30	100
12.	Total Dissolved Solids	mg/l	**621.00**	500	2000
13.	Sulphate as SO_4	mg/l	**48.50**	200	400
14.	Fluoride as F	mg/l	**0.32**	1.0	1.5
15.	Nitrate as NO_3	mg/l	**19.74**	45	No Relaxation
16.	Iron as Fe	mg/l	**0.13**	1.0#	No relaxation
17.	Aluminium as Al	mg/l	***BDL(**DL 0.002 mg/l)**	0.03	0.2
18.	Boron	mg/l	***BDL(**DL 0.01 mg/l)**	0.5	2.4#
19.	Chromium as Cr	mg/l	***BDL(**DL 0.002 mg/l)**	0.05	No Relaxation
20.	Phenolic Compounds	mg/l	***BDL(**DL 0.0004 mg/l)**	0.001	0.002
21.	Mineral Oil	mg/l	***BDL(**DL 0.05 mg/l)**	1.0	No Relaxation
22.	Anionic Detergents as	mg/l	***BDL(**DL 0.05 mg/l)**	0.2	1.0
23.	Zinc as Zn	mg/l	**1.08**	5	15
24.	Copper as Cu	mg/l	**0.07**	0.05	1.5
25.	Manganese as Mn	mg/l	***BDL(**DL 0.01 mg/l)**	0.1	0.3
26.	Cadmium as Cd	mg/l	***BDL(**DL 0.002 mg/l)**	0.003	No Relaxation
27.	Lead as Pb	mg/l	***BDL(**DL 0.002 mg/l)**	0.01	No Relaxation
28.	Selenium as Se	mg/l	***BDL(**DL 0.001 mg/l)**	0.01	No Relaxation
29.	Arsenic as As	mg/l	***BDL(**DL 0.002 mg/l)**	0.01	0.05
30.	Mercury as Hg	mg/l	***BDL (**DL 0.0005 mg/l)**	0.001	No Relaxation
31.	Total Coliform	MPN/100ml	**Absent**	Shall not be detectable in any 100 ml sample	
32.	E. Coli	MPN/100ml	**Absent**	Shall not be detectable in any 100 ml sample	

Note: - *BDL-Below Detection Limit, **DL- Detection Limit #These parameter are not covered in our NABL scope.

Table 3.10 Ground Water Quality Monitoring Results (January 2022 Winter)) Vill- Kaliyana

S. No.	Parameter	Unit	Test-Method	Limits of IS:10500 -2012	
				Requirement (Acceptable Limits)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 ^{0}C)	--	**7.58**	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	***BDL (**DL 1.0 Hazen)**	5	15
3.	Turbidity	NTU	***BDL (**DL 1.0 NTU)**	1	5
4.	Odour	--	**Agreeable**	Agreeable	Agreeable
5.	Taste	--	**Agreeable**	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	mg/l	**380.00**	200	600
7.	Calcium as Ca	mg/l	**90.45**	75	200
8.	Total Alkalinity as $CaCO_3$	mg/l	**404.00**	200	600
9.	Chloride as Cl	mg/l	**97.12**	250	1000
10.	Cyanide as CN	mg/l	***BDL(**DL 0.02 mg/l)**	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	**37.50**	30	100
12.	Total Dissolved Solids	mg/l	**643.00**	500	2000
13.	Sulphate as SO_4	mg/l	**50.45**	200	400
14.	Fluoride as F	mg/l	**0.31**	1.0	1.5
15.	Nitrate as NO_3	mg/l	**20.58**	45	No Relaxation
16.	Iron as Fe	mg/l	**0.10**	1.0#	No relaxation
17.	Aluminium as Al	mg/l	***BDL(**DL 0.002 mg/l)**	0.03	0.2
18.	Boron	mg/l	***BDL(**DL 0.01 mg/l)**	0.5	2.4#
19.	Chromium as Cr	mg/l	***BDL(**DL 0.002 mg/l)**	0.05	No Relaxation
20.	Phenolic Compounds	mg/l	***BDL(**DL 0.0004 mg/l)**	0.001	0.002
21.	Mineral Oil	mg/l	***BDL(**DL 0.05 mg/l)**	1.0	No Relaxation
22.	Anionic Detergents as	mg/l	***BDL(**DL 0.05 mg/l)**	0.2	1.0
23.	Zinc as Zn	mg/l	**0.21**	5	15
24.	Copper as Cu	mg/l	**0.05**	0.05	1.5
25.	Manganese as Mn	mg/l	***BDL(**DL 0.01 mg/l)**	0.1	0.3
26.	Cadmium as Cd	mg/l	***BDL(**DL 0.002 mg/l)**	0.003	No Relaxation
27.	Lead as Pb	mg/l	***BDL(**DL 0.002 mg/l)**	0.01	No Relaxation
28.	Selenium as Se	mg/l	***BDL(**DL 0.001 mg/l)**	0.01	No Relaxation
29.	Arsenic as As	mg/l	***BDL(**DL 0.002 mg/l)**	0.01	0.05
30.	Mercury as Hg	mg/l	***BDL (**DL 0.0005 mg/l)**	0.001	No Relaxation
31.	Total Coliform	MPN/100ml	**Absent**	Shall not be detectable in any 100 ml sample	
32.	E. Coli	MPN/100ml	**Absent**	Shall not be detectable in any 100 ml sample	

Note: - *BDL-Below Detection Limit, **DL- Detection Limit. #These parameter are not covered in our NABL scope.

3.3.4 Discussion on Ground water Quality in the Study Area

The Ground water quality of all location were observed to be slightly alkaline in nature with total alkalinity reaching up to 389.00 and 497.00 mg/L against the permissible limit of 600 mg/l. Total Hardness in the water of all location were observed 364.00 mg/L and 497.00 mg/L at project site against permissible limit of 600 mg/L. However, remaining parameters are within the CPCB prescribed limits.

3.3.5 Ground Water Level in and Around the Mine area

Ground water level was monitored villages and locations located approx. 5 Km in and around mine area. Water level of the water sources was measured manually in post monsoon (month of November) and during winter (month of January). The data is given below in table 3.11.

Table 3.11 Ground Water level in and around the Mine site

Sample. Number	Village Name	Location	Pre monsoon (May 2021)	Monsoon (August 2021)	Post monsoon (Nov 2021)	Winter (Jan 2022)
W1	Mine Site	28°33'3.00"N 76°11'15.65"E	62.8	61.05	60.82	60.95
W2	Mahra	28°33'27.98"N 76°10'52.35"E	41.98	39.92	39.20	39.31
W3	Kalali	28°31'23.57"N 76°11'10.72"E	29.78	27.65	26.1	26.32
W4	Kaliyana	28°33'8.88"N 76°11'49.25"E	34.88	32.95	31.98	32.1
W5	Mandola	28°31'19.40"N 76°12'38.47"E	20.35	18.35	17.75	17.90
W6	Kheri Bura	28.589097°N 76.194339°E	20.10	18.66	18.3	18.55

3.3.6 Surface Water Quality Monitoring Locations

Keeping in view the importance of water as important source to the local population, sample of water were collected from the mine site for the assessment of impacts of the project on the water quality.

Surface water sampling was carried out from Rivers/Ponds present within 10 Km of the project site. The samples were analysed for various parameters to compare with the standards for water as per IS: 3025 (Part 1). The details of water sampling locations are given in **Table 3.12**.

Table 3.12 Details of Ground Water Quality Monitoring Station

S. No.	Location Code	Location Name/ Description
1.	**SW1**	Pond Near Mandoli Village
2.	**SW2**	Pond Near Kalali Village

3.3.7 Methodology of Surface Water Quality Monitoring

Sampling of surface water was carried out on. Samples were collected on March 2022 as grab sample and sampling forms are filled in as per the sampling plan. The preservative sample were properly added to preserve as per standard operating procedures (SOP) and stored immediately in ice boxes, which were ensured for appropriate temperatures. Sample for chemical analysis was collected in polyethylene carboys. Samples collected for metal content were acidified to <2 pH with 1 ml HNO_3. Samples for bacteriological analysis were collected in sterilized glass bottles.

Soon after the completion of sampling, chain of custody sheets for the samples are filled in and then they were transported by road for further analysis. Proper care was taken during packing and transportation of samples. All the samples reached the central laboratory within the holding times for different parameters. After ensuring the same the samples were forwarded immediately for analysis.

The samples were analysed as per the standard procedures specified in 'Standard Methods for the Examination of Water and Wastewater' published by American Public Health Association (APHA) and CPCB. The analytical techniques and the test methods adopted for testing of water are given in **Table 3.13 & 3.14.**

3.3.8 Surface Water Quality Monitoring Results

The detailed surface water quality monitoring results are presented in **Table 3.13 & 3.14.**

Table 3.13 Surface Water Quality Monitoring Results (March 2022.) Pond Near Mandoli Village

S. No.	Parameter	Unit	Test-Method	Result
1.	pH (at 25 ^{0}C)	--	APHA ,4500-H^+ B Electrometric Method	7.76
2.	Colour	Hazen	APHA ,2120 B, Visual Comparison	6.0
3.	Turbidity	NTU	APHA, 2130 B, Nephlelometric Method	16.00
4.	Odour	--	APHA, 2150 B , Threshold Test Method	Agreeable
5.	Total Hardness as	--	APHA , 2340 C, EDTA Titrimetric	418.84
6.	Calcium as Ca	mg/l	APHA, 3500 Ca B, EDTA Titrimetric	131.62
7.	Alkalinity as $CaCO_3$	mg/l	APHA , 2320 B, Titrimetric Method	541.52
8.	Chloride as Cl	mg/l	APHA, 4500-Cl^- B, Argentometric	101.21
9.	Residual free Chlorine	mg/l	APHA, 4500 Cl^-B Iodometric Method	*BDL(**DL 0.15mg/l)
10.	Cyanide as CN	mg/l	APHA , 4500 CN^- D	*BDL(**DL 0.02 mg/l)
11.	Magnesium as Mg	mg/l	APHA , 3500 Mg B, Calculation Method	21.81
12.	Total Dissolved Solids	mg/l	APHA , 2540 C, Gravimetric Method	1139.00
13.	Total Suspended solids	mg/l	APHA,2540 D Gravimetric Method	72.00
14.	Dissolved Oxygen	mg/l	APHA,4500 O B Iodometric Method	6.4
15.	Sulphate as SO^4	mg/l	APHA , 4500 E, Turbidimetric Method	96.51
16.	Fluoride as F	mg/l	APHA , 4500-F^- D, SPADNS Method	0.25
17.	BOD (3 Days at 27^{0}C)	mg/l	APHA, 5210 C / IS 3025,P-44	12.00
18.	COD	mg/l	APHA, 5220 B, Open Reflux Method	44.00
19.	Conductivity	ms/cm	APHA, 2510 B, Conductivity Meter	1.75
20.	Nitrate as NO_3	mg/l	IS 3025 (P-34) ,Chromotropic Method	21.24
21.	Sodium as Na	mg/l	APHA,3500 Na B, Flame Photometric	147.00
22.	Potassium as K	mg/l	APHA 3500 K B, Flame Photometric	8.3
23.	Iron as Fe	mg/l	IS 3025 (P-65):2014(RA:2019)	0.56
24.	Aluminium as Al	mg/l	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)
25.	Boron	mg/l	IS 3025 (P-65):2014(RA:2019)	0.71
26.	Chromium as Cr	mg/l	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)
27.	Phenolic Compounds	mg/l	APHA, 5530 C Chloroform Extraction Method	*BDL(**DL 0.0004mg/l)
28.	Mineral Oil	mg/l	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)
29.	Anionic Detergents as MBAS	mg/l	APHA, 5540 C MBAS Method	*BDL(**DL 0.05 mg/l)

30.	Zinc as Zn	mg/l	IS 3025 (P-65):2014(RA:2019)	2.55
31.	Copper as Cu	mg/l	IS 3025 (P-65):2014(RA:2019)	0.36
32.	Manganese as Mn	mg/l	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)
33.	Cadmium as Cd	mg/l	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)
34.	Total Coliform	MPN/100ml	IS 1622:1981(RA: 2019)	1600
35.	Fecal Coliform	MPN/100ml	IS 1622:1981(RA: 2019)	900

Note: - *BDL-Below Detection Limit, **DL- Detection Limit. #These parameter are not covered in our NABL scope.

Table 3.14 Surface Water Quality Monitoring Results (March 2022) Pond Near Kalali Village

S. No.	Parameter	Unit	Test-Method	Result
1.	pH (at 25 ^{0}C)	--	APHA ,4500-H^+ B Electrometric Method	7.71
2.	Colour	Hazen	APHA ,2120 B, Visual Comparison	5.0
3.	Turbidity	NTU	APHA, 2130 B, Nephlelometric Method	28.00
4.	Odour	--	APHA, 2150 B , Threshold Test Method	Agreeable
5.	Total Hardness as	--	APHA , 2340 C, EDTA Titrimetric	461.24
6.	Calcium as Ca	mg/l	APHA, 3500 Ca B, EDTA Titrimetric	130.52
7.	Alkalinity as $CaCO_3$	mg/l	APHA , 2320 B, Titrimetric Method	540.41
8.	Chloride as Cl	mg/l	APHA, 4500-Cl^- B, Argentometric	98.6
9.	Residual free Chlorine	mg/l	APHA, 4500 Cl^-B Iodometric Method	*BDL(**DL 0.15mg/l)
10.	Cyanide as CN	mg/l	APHA , 4500 CN^- D	*BDL(**DL 0.02 mg/l)
11.	Magnesium as Mg	mg/l	APHA , 3500 Mg B, Calculation Method	32.79
12.	Total Dissolved Solids	mg/l	APHA , 2540 C, Gravimetric Method	1123.00
13.	Total Suspended solids	mg/l	APHA,2540 D Gravimetric Method	59.00
14.	Dissolved Oxygen	mg/l	APHA,4500 O B Iodometric Method	5.8
15.	Sulphate as SO^4	mg/l	APHA , 4500 E, Turbidimetric Method	72.3
16.	Fluoride as F	mg/l	APHA , 4500-F^- D, SPADNS Method	0.26
17.	BOD (3 Days at 27^{0}C)	mg/l	APHA, 5210 C / IS 3025,P-44	11.00
18.	COD	mg/l	APHA, 5220 B, Open Reflux Method	40.00
19.	Conductivity	ms/cm	APHA, 2510 B, Conductivity Meter	1.73
20.	Nitrate as NO_3	mg/l	IS 3025 (P-34) ,Chromotropic Method	21.51
21.	Sodium as Na	mg/l	APHA,3500 Na B, Flame Photometric	98.00
22.	Potassium as K	mg/l	APHA 3500 K B, Flame Photometric	5.6
23.	Iron as Fe	mg/l	IS 3025 (P-65):2014(RA:2019)	0.31
24.	Aluminium as Al	mg/l	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)
25.	Boron	mg/l	IS 3025 (P-65):2014(RA:2019)	0.74
26.	Chromium as Cr	mg/l	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)
27.	Phenolic Compounds	mg/l	APHA, 5530 C Chloroform Extraction Method	*BDL(**DL 0.0004mg/l)
28.	Mineral Oil	mg/l	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)

29.	Anionic Detergents as MBAS	mg/l	APHA, 5540 C MBAS Method	*BDL(**DL 0.05 mg/l)
30.	Zinc as Zn	mg/l	IS 3025 (P-65):2014(RA:2019)	2.31
31.	Copper as Cu	mg/l	IS 3025 (P-65):2014(RA:2019)	0.26
32.	Manganese as Mn	mg/l	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)
33.	Cadmium as Cd	mg/l	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)
34.	Total Coliform	MPN/100ml	IS 1622:1981(RA: 2019)	1600
35.	Fecal Coliform	MPN/100ml	IS 1622:1981(RA: 2019)	900

Note: - *BDL-Below Detection Limit, **DL- Detection Limit. #These parameter are not covered in our NABL scope.

3.3.9 Discussion on Surface water Quality in the Study Area

Electrical Conductivity levels was observed in surface water samples are in the range of 1.73 to 1.75 ms/cm The Surface water quality of both locations were observed to be slightly alkaline in nature with total alkalinity reaching up to 541.52 and 540.41 mg/L surface water which is found within the permissible limit. Total Hardness in the water of both locations was observed 418.84 mg/L and 461.24 mg/L. However, remaining parameters are within the CPCB prescribed limits.

3.4 SOIL MONITORING

3.4.1 Soil Monitoring Locations

The objective of the soil monitoring is to identify the impacts of ongoing project activities on soil quality and also predict impacts, which have arisen due to execution of various mining activities. Accordingly, a study of assessment of the soil quality has been carried out

To assess impacts of ongoing project activities on the soil in the area, the Physico-chemical characteristics of soils were examined by obtaining soil samples from selected points and analysis of the same. Single sample of soil was collected from the mine site for studying soil characteristics, the location of which is listed in **Table 3.15**

Table 3.15 Details of Soil Quality Monitoring Location

S. No.	Location Code	Location Name/ Description
1.	**S1**	**Near Mine Site**
2.	**S2**	**Village- Kalyana**

3.4.2 Methodology of Soil Monitoring

The sampling has been done in line with IS: 2720 & Methods of Soil Analysis, Part-1, 2nd edition, 1986 of American Society for Agronomy and Soil Science Society of America. The homogenized samples were analyzed for physical and chemical characteristics (physical, chemical and heavy metal concentrations). The soil samples were collected in the month of March 2022.

The samples have been analyzed as per the established scientific methods for Physico-chemical parameters. The heavy metals have been analyzed by using Atomic Absorption Spectro-photometer.

3.4.3 Soil Monitoring Results

Single sample of soil is collected from the site to check the quality of soil of the study area .The Physico-chemical characteristics of the soil, as obtained from the analysis of the soil sample, are presented in **Table 3.16 & 3.17**.

Table 3.16 Physico-Chemical Characteristics of Soil (S1) in the Study Area

S. No.	Parameter	Protocol	Unit	Result
1.	pH (at 25 ^{0}C)	IS : 2720 (P-26) by pH Meter	--	**7.51**
2.	Conductivity	IS:14767 by Conductivity meter	mS/cm	**0.279**
3.	Soil Texture	IS : 2720 (P-22, RA2003)	--	**Sandy loam**
4.	Color	SOP , SP-78,Issue No.-01& Issue Date-14/02/2013	--	**Yellowish Brownish**
5.	Water holding capacity	SOP , SP-81,Issue No.-01& Issue Date-14/02/2013	%	**33.45**
6.	Bulk density	SOP , SP-80,Issue No.-01& Issue Date-14/02/2013	gm/cc	**1.50**
7.	Chloride as Cl	SOP , SP-85,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**40.89**
8.	Calcium as Ca	SOP , SP-82,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**23.66**
9.	Sodium as Na	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**44.82**
10.	Potassium as K	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	kg/hec.	**116.48**
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method	%	**0.36**
12.	Magnesium as Mg	SOP , SP-83,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**11.82**
13.	Available Nitrogen as N	IS:14684 Distillation Method	kg./hec.	**125.42**
14.	Available Phosphorus	SOP , SP-86,Issue No.-01& Issue Date-14/02/2013	kg./hec.	**17.42**
15.	Zinc as Zn	USEPA 3050B	mg/100gm	**3.74**
16.	Manganese as Mn	USEPA 3050B	mg/100gm	**1.40**
17.	Chromium as Cr	USEPA 3050B	mg/100gm	**0.49**
18.	Lead as Pb	USEPA 3050B	mg/100gm	**0.46**
19.	Cadmium as Cd	USEPA 3050B	mg/100gm	**0.25**
20.	Copper as Cu	USEPA 3050B	mg/100gm	**0.89**

Table 3.17 Physico-Chemical Characteristics of Soil (S2) in the Study Area

S. No.	Parameter	Protocol	Unit	Result
1.	pH (at 25 ^{0}C)	IS : 2720 (P-26) by pH Meter	--	**7.57**
2.	Conductivity	IS:14767 by Conductivity meter	mS/cm	**0.296**
3.	Soil Texture	IS : 2720 (P-22, RA2003)	--	**Silty loam**
4.	Color	SOP , SP-78,Issue No.-01& Issue Date-14/02/2013	--	**Brownish Black**
5.	Water holding capacity	SOP , SP-81,Issue No.-01& Issue Date-14/02/2013	%	**36.82**
6.	Bulk density	SOP , SP-80,Issue No.-01& Issue Date-14/02/2013	gm/cc	**1.44**
7.	Chloride as Cl	SOP , SP-85,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**47.45**
8.	Calcium as Ca	SOP , SP-82,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**28.76**
9.	Sodium as Na	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**54.22**
10.	Potassium as K	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	kg/hec.	**146.28**
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method	%	**0.48**
12.	Magnesium as Mg	SOP , SP-83,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**16.74**
13.	Available Nitrogen as N	IS:14684 Distillation Method	kg./hec.	**158.11**
14.	Available Phosphorus	SOP , SP-86,Issue No.-01& Issue Date-14/02/2013	kg./hec.	**23.85**
15.	Zinc as Zn	USEPA 3050B	mg/100gm	**3.70**
16.	Manganese as Mn	USEPA 3050B	mg/100gm	**1.42**
17.	Chromium as Cr	USEPA 3050B	mg/100gm	**0.51**
18.	Lead as Pb	USEPA 3050B	mg/100gm	**0.47**
19.	Cadmium as Cd	USEPA 3050B	mg/100gm	**0.27**
20.	Copper as Cu	USEPA 3050B	mg/100gm	**0.91**

3.4.4 Discussion on Soil Characteristics in the Study Area

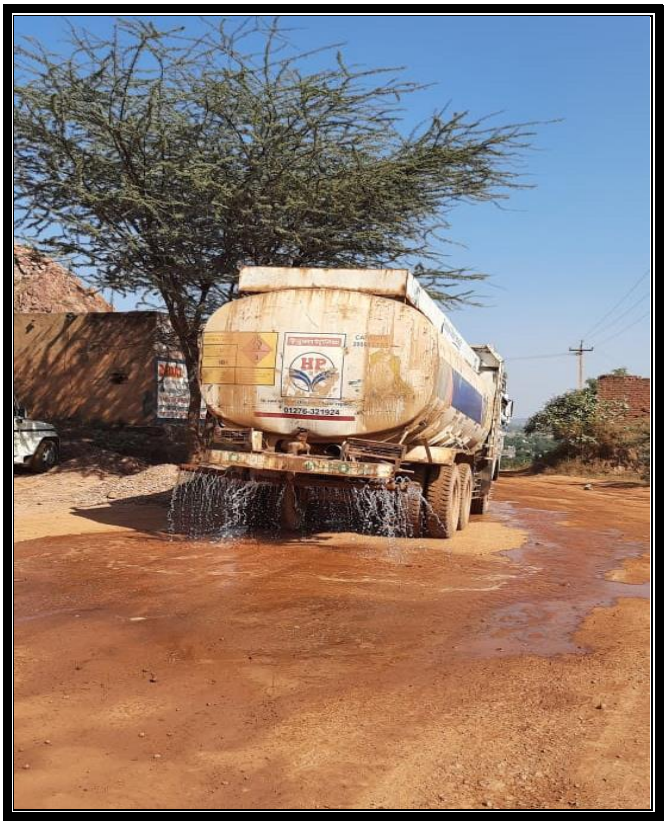
The soil in study area is characterized by moderate organic content. The soil quality in the project area has not been affected by the Mining activities.

3.5 MONITORING PHOTOGRAPHS

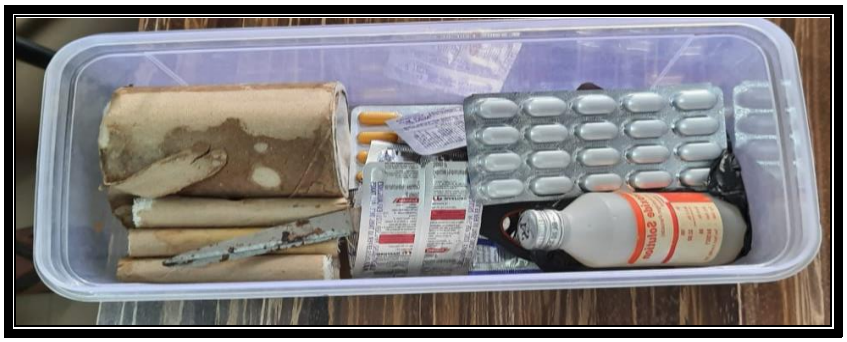
Ambient Air Quality Monitoring

Noise Monitoring

Soil Sampling



Water Sprinkling



First Aid Box

Blasting Notice

Loading Point

Plantation

Workers shelters

Haul Road

Haul Road

Haul Road

Haul Road

Plantation

plantation

Plantation

Plantation

Plantation Details (August)

Year 2021 - 2022

Pillar	OLD Plant	New Plant	Total Plant	Area (L x B) Mtr.	Total Area (M^2)	Damaged	Survived	Remark.
1-2	48	15	63	50 x 20	1000			
2-3	12		12	10 x 10	100			
3-4	16		16	70 x 20	1400			
4-5	11		11	30 x 10	300			
5-6	349	525	874	190 x 20	3800			
6-7	413	120	533	160 x 15	2400			
7-8	84	55	139	50 x 20	1000			
8-9	120		120	60 x 10	600			
9-10	48		48	40 x 10	400			
10-11	73		73	40 x 10	400			
11-12	79	165	244	60 x 15	900			
12-13	17	35	52	20 x 10	200			
13-14	39		39	20 x 10	200			
14-15	88		88	20 x 10	200			
15-16	57		57	20 x 20	400			
16-17	92		92	10 x 10	100			
17-18	45		45	30 x 20	600			
18-19	151		151	10 x 10	100			
19-20	36		36	10 x 5	50			
20-21	05		05	10 x 5	50			
21-22	07		07	10 x 5	50			
22-23	38		38	10 x 5	50			
23-24	79		79	10 x 10	100			
24-25	238	285	523	160 x 10	1600			
	2145	1200	3345		16000 M^2			

Plantation Record

HARYANA STATE POLLUTION CONTROL BOARD
SCF-32, sector 13, HUDA, Bhiwani Ph. 01664-240259

E-mail: hspcb.pkl@sify.com

No. HSPCB/Consent/ : 313100419CRDCTO6870943 **Dated:03/09/2019**

To.

M/s :Ridhi Sidhi KSM Resources JV
223min,224 to 228 & 72, Village Kalali & Kalyana, District Charkhi Dadri, Haryan

Subject: Grant of consent to operate to M/s Ridhi Sidhi KSM Resources JV.

Please refer to your application no. 6870943 received on dated 2019-08-21 in regional office Jind.With reference to your above application for consent to operate,M/s Ridhi Sidhi KSM Resources JV is here by granted consent as per following specification/Terms and conditions.

Consent Under	BOTH
Period of consent	29/08/2019 - 30/09/2024
Industry Type	Mining and ore beneficiation
Category	RED
Investment(In Lakh)	784.0
Total Land Area(Sq. meter)	644000.0
Total Builtup Area(Sq. meter)	0.0
Quantity of effluent	
1. Trade	0.0 KL/Day
2. Domestic	1.0 KL/Day
Number of outlets	1.0
Mode of discharge	
1. Domestic	Septic tank
2. Trade	
Domestic Effluent Parameters	
1. BOD	30 mg/l
2. COD	250 mg/l
3. TSS	100 mg/l
4. pH	9.0
Trade Effluent Parameters	
1. BOD	30 mg/l
2. COD	250 mg/l
3. TSS	100 mg/l
Number of stacks	1
Height of stack	
1. NA	

Emission parameters	
1. PM2.5	60
2. PM10	100
Product Details	
1. Rock Stone	4833 Metric Tonnes/day
Capacity of boiler	
1. NA	Ton/hr
Type of Furnace	
1. NA	
Type of Fuel	
1. Diesel	KL/day
Raw Material Details	
Rock Stone	4833 Metric Tonnes/Day

Regional Officer, Jind

Haryana State Pollution Control Board.

Terms and conditions

1. The applicants shall maintain good house keeping both within factory and in the premises. All hose pipelines values, storage tanks etc. shall be leak proof. In plant allowable pollutants levels, if specified by State Board should be met strictly.
2. The applicant/company shall comply with and carry out directive/orders issued by the Board in this consent order at all subsequent times without negligence of his /its part. The applicant/company shall be liable for such legal action against him as per provision of the law/act in case of violation of any order/directives. Issued at any time and or non compliance of the terms and conditions of his consent order.
3. The applicant shall make an application for grant of consent at least 90 days before the date of expiry of this consent.
4. Necessary fee as prescribed for obtaining renewal consent shall be paid by the applicant alongwith the consent application.
5. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred to above required variation (including the change of any control equipment either in whole or in part) this Board shall after giving the applicant an opportunity of being heard vary all or such condition and there upon the applicant shall be bound to comply with the conditions so varied.
6. The industry shall provide adequate arrangement for fighting the accidental leakages, discharge of any pollutants gas/liquids from the vessels, mechanical equipment etc. which are likely to cause environment pollution.
7. The industry shall comply noise pollution (Regulation and control) Rules, 2000.
8. The industry shall comply all the direction/Rules/Instructions as may be issued by the MOEF/CPCB/HSPCB from time to time.
9. The industry shall ensure that various characteristics of the effluents remain within the tolerance limits as specified in EPA Standard and as amended from time to time and at no time the concentration of any characteristics should exceed these limits for discharge.

10. The industry would immediately submit the revised application to the Board in the event of any change in the raw material in process, mode of treatment/discharge of effluent. In case of change of process at any stage during the consent period, the industry shall submit fresh consent application alongwith the consent to operate fee, if found due, which may be on any account and that shall be paid by the industry and the industry would immediately submit the consent application to the Board in the event of any change during the year in the raw material, quantity, quality of the effluent, mode of discharge, treatment facilities etc.
11. The officer/official of the Board shall reserve the right to access for the inspection of the industry in connection with the various process and the treatment facilities. The consent to operate is subject to review by the Board at any time.
12. Permissible limits for any pollutants mentioned in the consent to operate order should not exceed the concentration permitted in the effluent by the Board.
13. The industry shall pay the balance fee, in case it is found due from the industry at any time later on.
14. If the industry fails to adhere to any of the conditions of this consent to operate order, the consent to operate so granted shall automatically lapse.
15. If the industry is closed temporarily at its own, they shall inform the Board and obtain permission before restart of the unit.
16. The industry shall comply all the Directions/ Rules/Instructions issued from time to time by the Board.

Specific Conditions :

. (i).That the unit will submit the analysis report from the Board lab within three month from the date of issue of first consent to operate. (ii). That the unit will run and maintain the APCM & green belt. (iii). That the unit will apply for renewal of consent to operate before 90 days from the expiry of this CTO. (iv).The said mining project will make strict compliance of EC granted by MOEF/SEIAA. (v).The said unit will submit half yearly Environment management report as per EC condition & board policy for mining projects.(vi). The previous unit EC is consider temporary for this unit ,the said project will obtain fresh EC from SEIAA and then submit fresh EC in the said firm name as soon as possible . (vii).Unit will apply for HW authorization & make agreement with board authorized agency for safe disposal of Hazardous waste as per HOWM Rules,2016. (viii). The said unit will make Dust Suppression and wet drilling by using water through sprinklers etc.(ix) unit will install AAQMS at three locations within mining lease area for EC compliance (copy of comprehensive inspection report on prescribed Performa along with photographs) (x) Unit will take all necessary clearances from all the concerned departments / agencies. (xi). The unit will abide with the directions/guidelines HSPCB/CPCB/ any court decision/ direction of any competent authority. (xii) This CTO is without prejudice to any action under the provisions of applicable laws / acts / notification / courts order to be taken in respect of any violation at any stage without any claim of the unit. If the unit fails to comply the provisions of EC/CTE/CTO, various applicable provisions of concerned departments / agencies / authorities / any relevant decision of court, the consent to operate so granted shall be revoked automatically without giving any notice.

Regional Officer, Jind
Haryana State Pollution Control Board.

HARYANA STATE POLLUTION CONTROL BOARD
SCF-32, sector 13, HUDA, Bhiwani Ph. 01664-240259
Website: www.hspcb.gov.in E-Mail - hspcb.pkl@sifymail.com
Telephone No.: 0172-2577870-73

No. HSPCB/Consent/ : 313100419CRDCTE6702638 **Dated:19/08/2019**

To.

M/s : Ridhi Sidhi KSM Resources JV
223min,224 to 228 & 72, Village Kalali & Kalyana, District Charkhi Dadri, Haryan
CHARKHI
127306

Sub. : Grant of consent to Establish to M/s Ridhi Sidhi KSM Resources JV

Please refer to your application no. 6702638 received on dated 2019-07-02 in regional office Jind.

With reference to your above application for consent to establish,M/s Ridhi Sidhi KSM Resources JV is here by granted consent as per following specification/Terms and conditions.

Consent Under	AIR/WATER
Period of consent	19/08/2019 - 18/08/2024
Industry Type	Mining and ore beneficiation
Category	RED
Investment(In Lakh)	784.0
Total Land Area (Sq. meter)	644000.0
Total Builtup Area (Sq. meter)	0.0
Quantity of effluent	
1. Trade	0.0 KL/Day
2. Domestic	2.0 KL/Day
Number of outlets	1.0
Mode of discharge	
1. Domestic	Septic tank
2. Trade	
Permissible Domestic Effluent Parameters	
1. BOD	30 mg/l
2. COD	250 mg/l
3. TSS	100 mg/l
Permissible Trade Effluent Parameters	
1. NA	mg/l
Number of stacks	1
Height of stack	
1. NA	

Permissible Emission parameters	
1. PM10	100
2. PM2.5	60
Capacity of boiler	
1. NA	Ton/hr
Type of Furnace	
1. NA	
Type of Fuel	
1. Diesel	KL/day

Regional Officer, Jind

Haryana State Pollution Control Board.

Terms and conditions

1. The industry has declared that the quantity of effluent shall be 2 KL/Day i.e 0KL/Day for Trade Effluent, 0 KL/Day for Cooling, 2 KL/Day for Domestic and the same should not exceed .

2. The above 'Consent to Establish' is valid for 60 months from the date of its issue to be extended for another one year at the discretion of the Board or till the time the unit starts its trial production whichever is earlier. The unit will have to set up the plant and obtain consent during this period.

3. The officer/official of the Board shall have the right to access and inspection of the industry in connection with the various processes and the treatment facilities being provided simultaneously with the construction of building/machinery. The effluent should conform the effluent standards as applicable

4. That necessary arrangement shall be made by the industry for the control of Air Pollution before commissioning the plant. The emitted pollutants will meet the emission and other standards as laid/will be prescribed by the Board from time to time.

5. The applicant will obtain consent under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21/22 of the Air (Prevention & Control of Pollution) Act,1981 as amended to-date-even before starting trial production

6. The above Consent to Establish is further subject to the conditions that the unit complies with all the laws/rules/decisions and competent directions of the Board/Government and its functionaries in all respects before commissioning of the operation and during its actual working strictly.

7. No in-process or post-process objectionable emission or the effluent will be allowed, if the scheme furnished by the unit turns out to be defective in any actual experience

8. The Electricity Department will give only temporary connection and permanent connection to the unit will be given after verifying the consent granted by the Board, both under Water Act and Air Act.

9. Unit will raise the stack height of DG Set/Boiler as per Board's norms.

10. Unit will maintain proper logbook of Water meter/sub meter before/after commissioning.

11. That in the case of an industry or any other process the activity is located in an area approved and that in case the activity is sited in an residential or institutional or commercial or agricultural area, the necessary permission for siting such industry and process in an residential or institutional or commercial or agricultural area or controlled area under Town and Country Planning laws CLU or Municipal laws has to be obtained from the competent Authority in law permitting this deviation and be submitted in original with the request for consent to operate.

12. That there is no discharge directly or indirectly from the unit or the process into any interstate river or Yamuna River or River Ghaggar.

13. That the industry or the unit concerned is not sited within any prohibited distances according to the Environmental Laws and Rules, Notification, Orders and Policies of Central Pollution control Board and Haryana State Pollution Control Board.

14. That of the unit is discharging its sewage or trade effluent into the public sewer meant to receive trade effluent from industries etc. then the permission of the Competent Authority owing and operating such public sewer giving permission letter to his unit shall be submitted at time of consent to operate.

15. That if at any time, there is adverse report from any adjoining neighbor or any other aggrieved party or Municipal Committee or Zila Parishad or any other public body against the unit's pollution; the Consent to Establish so granted shall be revoked.

16. That all the financial dues required under the rules and policies of the Board have been deposited in full by the unit for this Consent to Establish.

17. In case of change of name from previous Consent to Establish granted, fresh Consent to Establish fee shall be levied.

18. Industry should adopt water conservation measures to ensure minimum consumption of water in their Process. Ground water based proposals of new industries should get clearance from Central Ground Water Authority for scientific development of previous resource.

19. That the unit will take all other clearances from concerned agencies, whenever required.

20. That the unit will not change its process without the prior permission of the Board.

21. That the Consent to Establish so granted will be invalid, if the unit falls in Aravali Area or non conforming area.

22. That the unit will comply with the Hazardous Waste Management Rules and will also make the non-leachate pit for storage of Hazardous waste and will undertake not to dispose off the same except for pit in their own premises or with the authorized disposal authority.

23. That the unit will submit an undertaking that it will comply with all the specific and general conditions as imposed in the above Consent to Establish within 30 days failing which Consent to Establish will be revoked.

24. That unit will obtain EIA from MoEF, if required at any stage.

25. In case of unit does not comply with the above conditions within the stipulated period, Consent to Establish will be revoked.

26. That unit will obtain consent to operate from the board before the start of product activity.

Specific Conditions

Other Conditions :

(I) The previous unit EC is consider temporary for this unit, the said project will submit fresh EC in the said firm name as soon as possible. (II)The unit will apply for consent to operate before starting production activity and will comply with each condition of EC obtained by previous firm from MOEF(III)Unit will apply for HW authorization & make agreement with board authorized agency for safe disposal of Hazardous waste as per HOWM Rules,2016. (IV) Unit will take all necessary clearances from all the concerned departments / agencies. (V) The said unit will make Dust Suppression and wet drilling by using 36 KLD water through sprinklers etc.(VI)Unit will obtain necessary permission from Mines and Geology Department in compliance of Hon'ble Punjab & Haryana High court Chandigarh order dt.27.05.2019. (VII). The unit will abide with the directions/guidelines HSPCB/CPCB/ any court decision/ direction of any competent authority. (VIII). This CTE is prejudice to any action under the provisions of applicable laws / acts / notification / courts order to be taken in respect of any violation at any stage without any claim of the unit. If the unit fails to comply the provisions of water/air act, conditions of CTE, various applicable provisions of concerned departments / agencies / authorities / any relevant decision of court, the consent to establish so granted shall be revoked automatically without giving any notice.

Regional Officer, Jind

Haryana State Pollution Control Board.

Haryana Water Resources (Conservation, Regulation and Management) Authority

Irrigation & Water Resources Department
Rear Building, 3rd Floor, HSVP, Sector-6,
Panchkula, Haryana 134109
Email Address: ce-lcu.irr@gov.in

No. HWRA/Consent/: 2121346HWRAITO353562 **Dated:23/11/2021**

To.

M/s: Ridhi Sidhi KSM Resources JV
Village Kalali & Kalyana, Charkhi Dadri,
Haryana-127306

Subject: Grant of consent for ground water extraction to M/s Ridhi Sidhi KSM Resources JV.

Please refer to your application no. HWRA/IND/N/2021/940. With reference to your above application for consent for ground water extraction, M/s Ridhi Sidhi KSM Resources JV in here by granted consent as per following specification/Terms and conditions.

NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	M/s Ridhi Sidhi KSM Resources JV		
Project Address:	Kalali & Kalyana		
Village:	Kalali & Kalyana	Block:	NA
District:	Charkhi Dadri	State:	Haryana
Pin Code:	127306		
Communication Address:	Ridhi Sidhi KSM Resources JV, Village Kalali & Kalyana, Charkhi Dadri, Haryana-127306		
Address of HWRA Office:	Irrigation & Water Resources Department Rear Building, 3rd Floor, HSVP, Sector-6, Panchkula, Haryana 134109		

1.	**NOC No.:**	HWRA/NOC/INF/ORIG/2021/2231			
2.	Application No.:	HWRA/IND/N/2021/940	3.	Category:	Mining
4.	Project Status:	New Project	5.	NOC Type:	New
6.	**Valid from:**	22/11/2021	7.	**Valid up to:**	21/11/2022
8.	Ground Water Abstraction Permitted:				

Fresh Water		Saline Water		Dewatering		Total	
m³/day	m³/year	m³/day	m³/year	m³/day	m³/year	m³/day	m³/year
150	36000					150	36000

9.	Details of ground water abstraction /Dewatering structures									
Total Existing No.:0						**Total Proposed No.:1**				
		DW	DCB	TW	MP	DW	DCB	BW	TW	MP
	Abstraction Structure*	0	0	0	0	0	0	0	1	0
*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit										
10.	Quantum of ground water recharge(m^3/year):			170						
11.	Number of Piezometers (Observation wells) to be constructed/ monitored & Monitoring mechanism.			No. of Piezometers		Monitoring Mechanism				
						Manual	DWLR**		DWLR With Telemetry	
	**DWLR - Digital Water Level Recorder			1		0	1		0	

(Compliance Conditions given overleaf)

Devender Singh

Digitally signed by Devender Singh
Date: 2021.11.23. 12:27:04 +05'30'

Additional Chief Secretary (HWRA)

Validity of this NOC shall be subject to compliance of the following mandatory conditions:

1) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose withoutprior approval of the Central Ground Water Authority (HWRA).
2) The proponent shall seek prior permission from HWRA for any increase in quantum of ground water abstraction (morethan that permitted in NOC for specific period).
3) All new as well as existing ground water abstraction/ de-watering structures shall be fitted with digital water flow meters by the firm at its own cost, immediately on completion of their construction or grant of NOC as the case maybe. In case of renewal of NOCs, all existing ground water abstraction structures shall continue to be fitted with digital water flow meters. Intimation of installation of flow meters shall be sent by the proponent to the Regional Director of HWRA within 6 months of grant of NOC. Daily ground water abstraction data shall be monitored / continue to be monitored (in case of renewal) by the firm and recorded in a log book. Details of month-wise ground water abstraction shall be submitted to the Regional Director, HWRA once every year.
4) In case the ground water abstraction is more than 10 m^3/d, monthly water level monitoring data shall be maintained and submitted annually to the Regional Office of HWRA. Wherever groundwater withdrawal is more than 500 m^3/d, the firm shall install telemetry system in one of the piezometers and share USER ID and password of the telemetry system with the Regional Director, HWRA.
5) In case ground water abstraction is more than 10 m^3/d, ground water quality shall be monitored once in a year (during pre- monsoon period) and the report submitted to the Regional Office, HWRA. Wherever the extraction is less than 10 m^3/day, ground water quality report shall be submitted by the proponent at the time of submission of self-compliance report.
6) Ground water augmentation measures, as stipulated in the NOC, shall be implemented (in new cases) / continue to be maintained (in case of renewal) in consultation with the concerned Regional Director, HWRA.
7) Proof of recharge/water harvesting structures constructed (photographs of structures) shall be submitted to the concerned Regional Director, HWRA within 6 months from the date of issue of NOC. The firm shall also undertake periodic maintenance of recharge structures at its own cost.
8) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises, failing which the firm shall be responsible for any consequences arising thereupon.
9) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firminside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.
10) The firm shall optimize water use through recycling/ reuse of waste water after proper treatment.
11) Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tube well(s) tapping saline water zone shall be constructed within 3 months of grant of NOC. The firm shall also ensure safe disposal of saline residue, if any.
12) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, HWRA for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as bufferzones of the mine.
13) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.
14) The firm shall report compliance of the NOC conditions online in the website (www.HWRA-noc.gov.in) within one year from the date of issue of this NOC.
15) This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to constructionof tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.
16) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrativeclearances from appropriate authorities.

17) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently ofthe NOC.
18) This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.
19) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.

(Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent.)

Devender Singh
Digitally signed by Devender Singh
Date: 2021.11.23. 12:27:04 +05'30'

Additional Chief Secretary (HWRA)

...06-2020 at
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...E. ANY PERSON
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...S OF NOTICE.
...LUJA(email id.)
...a13@gmail.com

...HUDA, ... supporting documents within 30 days from the date of publication of this notice, otherwise the Estate Officer may accord permission to transfer / re-allotment of the said property as per HUDA policy and may not entertain subsequent claim, if any.

Name: Kanwal Jeet Kaur
Legal heirs
on behalf of Estate Officer Sirsa

Public Notice

This is to inform that M/s Riddhi Siddhi KSM Resources JV has been accorded Environmental Clearence for Mining of Stone along with associated minor Minerals at Village Kalali and Kalyana District Charkhi Dadri, Haryana (Area 64.40 Hectors) mining project under EIA notification, 2006 by SEIAA Haryana. Copy of EC Letter is available with State Pollution Control Board/ Committee and Website of the Ministry of Environment, Forest and Climate change (www.parivesh.nic.in)

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झज्जर-गुरुग्राम रोड पर बिना नंबर की एक बलेनो गाड़ी में सवार चार लड़कों ने उनकी गाड़ी के आगे अपनी गाड़ी लगा दी। चालक एवं परिचालक साइड का शीशा तोड़ते हुए गाड़ी छीन ली।

Public Notice

This is to inform that M/s Riddhi Siddhi KSM Resources JV has been accorded Environmental Clearence for Mining of Stone along with associated minor Minerals at Village Kalali and Kalyana District Charkhi Dadri, Haryana (Area 64.40 Hectors) mining project under EIA notification, 2006 by SEIAA Haryana. Copy of EC Letter is available with State Pollution Control Board/ Committee and Website of the Ministry of Environment, Forest and Climate change (www. parivesh.nic.in)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	**VEL/RS/A/01**	**Report No.:**	**VEL/A/2203/16/007**
Issued To:	**M/s RidhiSidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, CharkhiDadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**21/03/2022**
		Period of Analysis	**16/03/2022 to 21/03/2022**
Name & address of Project :	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai &Kalyana, Distt- CharkhiDadri, Haryana.**	**Receipt Date:**	**16/03/2022**
Sample Description :	**Ambient Air Quality Monitoring**		

General Information:-

Sample collected by	: VardanEnviro Lab Representative
Sampling Location	: **Up Wind Direction(Near Mine Site)**
Instrument Used	: RDS & FPS with all accessories
Instrument Code	: VEL/RDS-FPS/08
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **15/03/2022 to 16/03/2022**
Time of Monitoring	: 09:25 AM to 09:25 AM
Ambient Temperature (°C)	: Min 17.0 Max 31.0
Surrounding Activity	: Human, Vehicular & Mining Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: **IS:5182& CPCB Guidelines**
Parameter Required	: PM $_{10}$, PM $_{2.5}$, NO_2 ,SO_2 & CO

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	**Particulate Matter ($PM_{2.5}$)**	#SOP No. VEL/SOP/01, Section No. SP 63	**84.46**	$\mu g/m^3$	60
2.	**Particulate Matter (PM_{10})**	IS: 5182 (P-23) Gravimetric Method	**166.41**	$\mu g/m^3$	100
3.	**Nitrogen Dioxide (NO_2)**	IS: 5182 (P-6) Jacob &Hochheiser	**22.71**	$\mu g/m^3$	80
4.	**Sulphur Dioxide (SO_2)**	IS: 5182 (P-2) Modified West and Gaeke	**6.47**	$\mu g/m^3$	80
5.	**Carbon Monoxide (CO)**	IS: 5182 (P-10) Gas Chromatography, RA:2003	**0.76**	mg/m^3	4

*NAAQS – National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 18.11.2009
SOP-As per Laboratory Standard Operating Procedure

VARDAN ENVIROLAB GURUGRAM Kusum Sharma (Checked By)

VARDAN ENVIROLAB Dr Singh Authorised Signatory (Approved By)

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ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	**VEL/RS/A/02**	**Report No.:**	**VEL/A/2203/16/008**
Issued To:	**M/s RidhiSidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, CharkhiDadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**21/03/2022**
		Period of Analysis	**16/03/2022 to 21/03/2022**
Name & Address of Project:	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.**	**Receipt Date:**	**16/03/2022**
Sample Description	**Ambient Air Quality Monitoring**		

General Information:-

Sample collected by	: VardanEnviro Lab Representative
Sampling Location	: **Down Wind direction (500 mtr from mine site)**
Instrument Used	: RDS & FPS with all accessories
Instrument Code	: VEL/RDS-FPS/09
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **15/03/2022 to 16/03/2022**
Time of Monitoring	: 09:55 AM to 09:55 AM
Ambient Temperature (°C)	: Min 17.0 Max 31.0
Surrounding Activity	: Human, Vehicular & Mining Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: **IS:5182& CPCB Guidelines**
Parameter Required	: PM $_{10}$, PM $_{2.5}$, NO_2 ,SO_2 & CO

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	**Particulate Matter ($PM_{2.5}$)**	#SOP No. VEL/SOP/01, Section No. SP 63	**89.52**	$\mu g/m^3$	60
2.	**Particulate Matter (PM_{10})**	IS: 5182 (P-23) Gravimetric Method	**171.45**	$\mu g/m^3$	100
3.	**Nitrogen Dioxide (NO_2)**	IS: 5182 (P-6) Jacob &Hochheiser	**25.61**	$\mu g/m^3$	80
4.	**Sulphur Dioxide (SO_2)**	IS: 5182 (P-2) Modified West and Gaeke	**5.86**	$\mu g/m^3$	80
5.	**Carbon Monoxide (CO)**	IS: 5182 (P-10) Gas Chromatography, RA:2003	**0.80**	mg/m^3	4

*NAAQS – National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 18.11.2009
SOP -As per Laboratory Standard Operating Procedure

VARDAN ENVIROLAB GURUGRAM Kushal Sharma (Checked By)

VARDAN ENVIRO LAB Dr Sanjay Singh (Approved By) Authorised Signatory

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ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	**VEL/RS/A/03**	**Report No.:**	**VEL/A/2203/16/009**
Issued To:	**M/s RidhiSidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, CharkhiDadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**21/03/2022**
		Period of Analysis	**16/03/2022 to 21/03/2022**
Name & Address of Project:	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.**	**Receipt Date:**	**16/03/2022**
Sample Description:	**Ambient Air Quality Monitoring**		

General Information:-

Sample collected by	: Vardan Enviro Lab Representative
Sampling Location	: **Down Wind direction (Kaliyana Village)**
Instrument Used	: RDS & FPS with all accessories
Instrument Code	: VEL/RDS-FPS/10
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **15/03/2022 to 16/03/2022**
Time of Monitoring	: 10:35 AM to 10:35 AM
Ambient Temperature (°C)	: Min 17.0 Max 31.0
Surrounding Activity	: Human, Vehicular & Mining Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: **IS:5182& CPCB Guidelines**
Parameter Required	: PM $_{10}$, PM $_{2.5}$, NO_2 ,SO_2 & CO

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	**Particulate Matter ($PM_{2.5}$)**	#SOP No. VEL/SOP/01, Section No. SP 63	**70.76**	$\mu g/m^3$	60
2.	**Particulate Matter (PM_{10})**	IS: 5182 (P-23) Gravimetric Method	**156.21**	$\mu g/m^3$	100
3.	**Nitrogen Dioxide (NO_2)**	IS: 5182 (P-6) Jacob &Hochheiser	**19.24**	$\mu g/m^3$	80
4.	**Sulphur Dioxide (SO_2)**	IS: 5182 (P-2) Modified West and Gaeke	**5.49**	$\mu g/m^3$	80
5.	**Carbon Monoxide (CO)**	IS: 5182 (P-10) Gas Chromatography, RA:2003	**0.72**	mg/m^3	4

*NAAQS – National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 18.11.2009

VARDAN ENVIROLAB GURUGRAM Kusum Sharma (Checked By)

VARDAN ENVIROLAB Dr. Singh (Approved By)

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Test Report

Sample Number:	**VEL/RS/AN/01**	**Report No.:**	**VEL/AN/2203/16/007**
Issued To:	**M/s RidhiSidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, CharkhiDadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**22/03/2022**
		Receipt Date:	**16/03/2022**
Name & Address of Project:	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.**		
Sample Description:	**AMBIENT NOISE LEVEL MONITORING**		

General Information:-

Sample collected by	:	VardanEnviroLab Representative
Sampling Location	:	**Up Wind Direction (Near Mine Site)**
Instrument Used	:	Sound Level Meter
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	**15/03/2022to 16/03/2022**
Time of Monitoring	:	06:00 AM to 06:00AM
Surrounding Activity	:	Human, Vehicular & Mining Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	**IS-9989**
Sampling Duration	:	24 Hours
Parameter Required	:	L_{max}, L_{min}, &L_{eq}

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	**L_{max}**	IS-9989	**77.6**	**69.7**	dB(A)
2.	**L_{min}**	IS-9989	**50.7**	**37.5**	dB(A)
3.	**L_{eq}**	IS-9989	**67.58**	**60.67**	dB(A)
4.	**As per #DGMS Limits in dB(*A) Leq (Mining Area)**	-	**75.0**	**70.0**	dB(A)

Note- * A "decibel" is a unit in which noise is measured. #DGMS-Directorate General of Mines & Safety

VARDAN ENVIROLAB GURUGRAM Kushal Sharma (Checked By)

VARDAN ENVIROLAB Dr. Singh Authorised Signatory (Approved By)

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Test Report

Sample Number:	**VEL/RS/AN/02**	**Report No.:**	**VEL/AN/2203/16/008**
Issued To:	**M/s RidhiSidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, CharkhiDadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**22/03/2022**
Name & Address of Project:	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.**	**Receipt Date:**	**16/03/2022**
Sample Description :	**AMBIENT NOISE LEVEL MONITORING**		

General Information:-

Sample collected by	: VardanEnviro Lab Representative
Sampling Location	: **Down Wind Direction (500 mtr from mine site)**
Instrument Used	: Sound Level Meter
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **15/03/2022to 16/03/2022**
Time of Monitoring	: 06:00 AM to 06:00AM
Surrounding Activity	: Vehicular & Mining Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: **IS-9989**
Sampling Duration	: 24 Hours
Parameter Required	: L_{max}, L_{min}, &L_{eq}

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	**L_{max}**	IS-9989	**79.6**	**72.6**	dB(A)
2.	**L_{min}**	IS-9989	**52.9**	**39.7**	dB(A)
3.	**L_{eq}**	IS-9989	**70.11**	**63.76**	dB(A)
4.	**As per #DGMS Limits in dB(*A) Leq (Mining Area)**	-	**75.0**	**70.0**	dB(A)

Note- * A "decibel" is a unit in which noise is measured. #DGMS-Directorate General of Mines& Safety

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	**VEL/RS/AN/03**	**Report No.:**	**VEL/AN/2203/16/009**
Issued To:	**M/s RidhiSidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, CharkhiDadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**22/03/2022**
Name & Address of Project:	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.**	**Receipt Date:**	**16/03/2022**
Sample Description :	**AMBIENT NOISE LEVEL MONITORING**		

General Information:-

Sample collected by	: VardanEnviro Lab Representative
Sampling Location	: **Down Wind Direction (Kaliyana Village)**
Instrument Used	: Sound Level Meter
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **15/03/2022to 16/03/2022**
Time of Monitoring	: 06:00 AM to 06:00AM
Surrounding Activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: **IS-9989**
Sampling Duration	: 24 Hours
Parameter Required	: L_{max}, L_{min}, &L_{eq}

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	L_{max}	IS-9989	**61.5**	**44.5**	dB(A)
2.	L_{min}	IS-9989	**45.7**	**36.6**	dB(A)
3.	L_{eq}	IS-9989	**51.88**	**43.14**	dB(A)
4.	**CPCB Limits in dB(*A) Leq (Residential Area)**	-	**55.0**	**45.0**	dB(A)

Note- * A "decibel" is a unit in which noise is measured.

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Test Report

Sample Number:	**VEL/RS/S/01**	**Report No.:**	**VEL/S/2203/16/003**
Issued To:	**M/s RidhiSidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, CharkhiDadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**22/03/2022**
Name & Address of Project:	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana ,Distt- CharkhiDadri, Haryana**	**Period of Analysis:**	**16/03/2022 to 22/03/2022**
		Receipt Date:	**16/03/2022**
		Sampling Date:	**15/03/2022**
Sample Description:	**Soil Sample**	**Type of Sampling:**	**Composite**
Sampling Location:	**Near Mine Site**	**Sampling Quantity:**	**2.0 Kg**
Sampling & Analysis Protocol:	**IS 2720, USEPA 3050B & SOP**	**Packing Status:**	**Temp Sealed**

S. No.	Parameter	Test-Method	Result	Unit
1.	**pH (at 25 ^{0}C)**	IS : 2720 (P-26) by pH Meter	**7.51**	--
2.	**Conductivity**	IS:14767,2000, RA	**0.279**	mS/cm
3.	**Soil Texture**	SOP , SP-87,Issue No.-01	**Sandy loam**	--
4.	**Color**	SOP , SP-78,Issue No.-01	**Yellowish Brownish**	--
5.	**Water holding capacity**	SOP , SP-81,Issue No.-01	**33.45**	%
6.	**Bulk density**	SOP , SP-80,Issue No.-01	**1.50**	gm/cc
7.	**Chloride as Cl**	SOP , SP-85,Issue No.-01	**40.89**	mg/100g
8.	**Calcium as Ca**	SOP , SP-82,Issue No.-01	**23.66**	mg/100g
9.	**Sodium as Na**	SOP , SP-84,Issue No.-01	**44.82**	mg/kg
10.	**Potassium as K**	SOP , SP-84,Issue No.-01	**116.48**	kg/hec.
11.	**Organic Matter**	IS:2720 (P-22) Titrimetric Method, RA	**0.36**	%
12.	**Magnesium as Mg**	SOP , SP-83,Issue No.-01	**11.82**	mg/100g
13.	**Available Nitrogen as N**	IS:14684 Distillation Method, RA	**125.42**	kg./hec.
14.	**Available Phosphorus**	SOP , SP-86,Issue No.-01	**17.42**	kg./hec.
15.	**Zinc (as Zn)**	USEPA 3050B	**3.74**	mg/kg
16.	**Manganese (as Mn)**	USEPA 3050B	**1.40**	mg/kg
17.	**Lead (as Pb)**	USEPA 3050B	**0.49**	mg/kg
18.	**Cadmium (as Cd)**	USEPA 3050B	**0.46**	mg/kg
19.	**Chromium (as Cr)**	USEPA 3050B	**0.25**	mg/kg
20.	**Copper (as Cu)**	USEPA 3050B	**0.89**	mg/kg

*SOP-Laboratory standard operating procedure.

VARDAN ENVIROLAB GURUGRAM Kusnal Sharma (Checked By)

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Test Report

Sample Number:	**VEL/RS/S/02**	**Report No.:**	**VEL/S/2203/16/004**
Issued To:	**M/s RidhiSidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, CharkhiDadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**22/03/2022**
		Period of Analysis:	**16/03/2022 to 22/03/2022**
Name & Address of Project:	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai & Kalyana ,Distt-CharkhiDadri, Haryana**	**Receipt Date:**	**16/03/2022**
		Sampling Date:	**15/03/2022**
		Type of Sampling:	**Composite**
		Sampling Quantity:	**2.0 Kg**
Sample Description:	**Soil Sample**	**Packing Status:**	**Temp Sealed**
Sampling Location:	**Village - Kalyana**		
Sampling & Analysis Protocol:	**IS 2720, USEPA 3050B & SOP**		

S. No.	Parameter	Test-Method	Result	Unit
1.	**pH (at 25 ^{0}C)**	IS : 2720 (P-26) by pH Meter	**7.57**	--
2.	**Conductivity**	IS:14767,2000, RA	**0.296**	mS/cm
3.	**Soil Texture**	SOP , SP-87,Issue No.-01	**Silty loam**	--
4.	**Color**	SOP , SP-78,Issue No.-01	**Brownish Black**	--
5.	**Water holding capacity**	SOP , SP-81,Issue No.-01	**36.82**	%
6.	**Bulk density**	SOP , SP-80,Issue No.-01	**1.44**	gm/cc
7.	**Chloride as Cl**	SOP , SP-85,Issue No.-01	**47.45**	mg/100g
8.	**Calcium as Ca**	SOP , SP-82,Issue No.-01	**28.76**	mg/100g
9.	**Sodium as Na**	SOP , SP-84,Issue No.-01	**54.22**	mg/kg
10.	**Potassium as K**	SOP , SP-84,Issue No.-01	**146.28**	kg/hec.
11.	**Organic Matter**	IS:2720 (P-22) Titrimetric Method, RA	**0.48**	%
12.	**Magnesium as Mg**	SOP , SP-83,Issue No.-01	**16.74**	mg/100g
13.	**Available Nitrogen as N**	IS:14684 Distillation Method, RA	**158.11**	kg./hec.
14.	**Available Phosphorus**	SOP , SP-86,Issue No.-01	**23.85**	kg./hec.
15.	**Zinc (as Zn)**	USEPA 3050B	**3.70**	mg/kg
16.	**Manganese (as Mn)**	USEPA 3050B	**1.42**	mg/kg
17.	**Lead (as Pb)**	USEPA 3050B	**0.51**	mg/kg
18.	**Cadmium (as Cd)**	USEPA 3050B	**0.47**	mg/kg
19.	**Chromium (as Cr)**	USEPA 3050B	**0.27**	mg/kg
20.	**Copper (as Cu)**	USEPA 3050B	**0.91**	mg/kg

VARDAN ENVIROLAB GURUGRAM
(Checked By)

VARDAN ENVIROLAB
(Approved By)
Authorised Signatory

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Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	**VEL/RS/W/01**	**Report No.:**	**VEL/W/2203/16/001**
Issued To:	**M/s Ridhi Sidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, Charkhi Dadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
Name of the Project:	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai & Kalyana, Distt- Charkhi Dadri, Haryana.**	**Reporting Date:**	**22/03/2022**
Sample Description:	**Surface water Sample**	**Period of Analysis:**	**16/03/2022-22/03/2022**
Sampling Location:	**Pond Near Mandoli Village**	**Receipt Date:**	**16/03/2022**
Sample Collected by:	**Vardan Enviro Lab Representative**	**Sampling Date:**	**15/03/2022**
Preservation:	**Ice Box**	**Sampling Quantity:**	**2.0 Ltr**
Sampling and Analysis Protocol:	**IS 3025, APHA & 23rd Edition 2017**	**Sampling Type:**	**Grab**

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 ^{0}C)	APHA ,4500-H^+ B Electrometric Method	7.76	--
2.	Colour	APHA ,2120 B, Visual Comparison Method	6.0	Hazen
3.	Turbidity	APHA, 2130 B, Nephlelometric Method	16.00	NTU
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--
5.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	418.84	mg/l
6.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	131.62	mg/l
7.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	541.52	mg/l
8.	Chloride as Cl	APHA, 4500-Cl^- B, Argentometric Method	101.21	mg/l
9.	Residual free Chlorine	APHA, 4500 Cl^-B Iodometric Method	*BDL(**DL 0.15mg/l)	mg/l
10.	#Cyanide as CN	APHA , 4500 CN^- D	*BDL(**DL 0.02 mg/l)	mg/l
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	21.81	mg/l
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	1139.00	mg/l
13.	Total Suspended solids	APHA,2540 D Gravimetric Method	72.00	mg/l
14.	Dissolved Oxygen	APHA,4500 O B Iodometric Method	6.4	mg/l
15.	Sulphate as SO^4	APHA , 4500 E, Turbidimetric Method	96.51	mg/l
16.	Fluoride as F	APHA , 4500-F^- D, SPADNS Method	0.25	mg/l
17.	BOD (3 Days at 27^{0}C)	APHA, 5210 C / IS 3025,P-44	12.00	mg/l
18.	COD	APHA, 5220 B, Open Reflux Method	44.00	mg/l

VARDAN ENVIROLAB GURUGRAM Kusnal Sharma (Checked By)

VARDAN ENVIROLAB Dr Singh Authorised Signatory (Approved By)

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Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample No.: **VEL/RS/W/01**			Report No.: **VEL/W/2203/16/001**	
S. No.	**Parameter**	**Test-Method**	**Result**	**Unit**
19.	Conductivity	APHA, 2510 B, Conductivity Meter Method	1.75	ms/cm
20.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	21.24	mg/l
21.	Sodium as Na	APHA,3500 Na B, Flame Photometric Method	147.00	mg/l
22.	Potassium as K	APHA 3500 K B, Flame Photometric Method	8.3	mg/l
23.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.56	mg/l
24.	Aluminium as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l
25.	Boron	IS 3025 (P-65):2014(RA:2019)	0.71	mg/l
26.	Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l
27.	Phenolic Compounds	APHA, 5530 C Chloroform Extraction Method	*BDL(**DL 0.0004mg/l)	mg/l
28.	#Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)	mg/l
29.	#Anionic Detergents as MBAS	APHA, 5540 C MBAS Method	*BDL(**DL 0.05 mg/l)	mg/l
30.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	2.55	mg/l
31.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.36	mg/l
32.	Manganese as Mn	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l
33.	Cadmium as Cd	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l
34.	Total Coliform	IS 1622:1981(RA: 2019)	1600	MPN/100ml
35.	Fecal Coliform	IS 1622:1981(RA: 2019)	900	MPN/100ml

Note: -*BDL-Below Detection Limit, **DL- Detection Limit,
#These parameter are not covered in our NABL scope

VARDAN ENVIROLAB GURUGRAM
Kushal Sharma
(Checked By)

VARDAN ENVIROLAB
Dr Sanjay Singh
Authorised Signatory
(Approved By)

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
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Test Report

Sample Number:	**VEL/RS/W/02**	**Report No.:**	**VEL/W/2203/16/002**
Issued To:	**M/s Ridhi Sidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, Charkhi Dadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
Name of the Project:	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai & Kalyana, Distt- Charkhi Dadri, Haryana.**	**Reporting Date:**	**22/03/2022**
Sample Description:	**Surface water**	**Period of Analysis:**	**16/03/2022-22/03/2022**
Sampling Location:	**Pond Near Kalali Village**	**Receipt Date:**	**16/03/2022**
Sample Collected by:	**Vardan Enviro Lab Representative**	**Sampling Date:**	**15/03/2022**
Preservation:	**Ice Box**	**Sampling Quantity:**	**2.0 Ltr**
Sampling and Analysis Protocol:	**IS 3025, APHA & 23rd Edition 2017**	**Sampling Type:**	**Grab**

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 ^{0}C)	APHA ,4500-H^+ B Electrometric Method	7.71	--
2.	Colour	APHA ,2120 B, Visual Comparison Method	5.0	Hazen
3.	Turbidity	APHA, 2130 B, Nephlelometric Method	28.00	NTU
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--
5.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	461.24	mg/l
6.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	130.52	mg/l
7.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	540.41	mg/l
8.	Chloride as Cl	APHA, 4500-Cl^- B, Argentometric Method	98.6	mg/l
9.	Residual free Chlorine	APHA, 4500 Cl^-B Iodometric Method	*BDL(**DL 0.15mg/l)	mg/l
10.	#Cyanide as CN	APHA , 4500 CN^- D	*BDL(**DL 0.02 mg/l)	mg/l
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	32.79	mg/l
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	1123.00	mg/l
13.	Total Suspended solids	APHA,2540 D Gravimetric Method	59.00	mg/l
14.	Dissolved Oxygen	APHA,4500 O B Iodometric Method	5.8	mg/l
15.	Sulphate as SO^4	APHA , 4500 E, Turbidimetric Method	72.3	mg/l
16.	Fluoride as F	APHA , 4500-F^- D, SPADNS Method	0.26	mg/l
17.	BOD (3 Days at 27^{0}C)	APHA, 5210 C / IS 3025,P-44	11.00	mg/l
18.	COD	APHA, 5220 B, Open Reflux Method	40.00	mg/l

VARDAN ENVIROLAB GURUGRAM Kusnal Sharma (Checked By)

VARDAN ENVIROLAB Dr Sanjay Singh Authorised Signatory (Approved By)

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Test Report

Sample No.: **VEL/RS/W/02**			Report No.: **VEL/W/2203/16/002**	
S. No.	**Parameter**	**Test-Method**	**Result**	**Unit**
19.	Conductivity	APHA, 2510 B, Conductivity Meter Method	1.73	ms/cm
20.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	21.51	mg/l
21.	Sodium as Na	APHA,3500 Na B, Flame Photometric Method	98.00	mg/l
22.	Potassium as K	APHA 3500 K B, Flame Photometric Method	5.6	mg/l
23.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.31	mg/l
24.	Aluminium as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l
25.	Boron	IS 3025 (P-65):2014(RA:2019)	0.74	mg/l
26.	Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l
27.	Phenolic Compounds	APHA, 5530 C Chloroform Extraction Method	*BDL(**DL 0.0004mg/l)	mg/l
28.	#Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)	mg/l
29.	#Anionic Detergents as MBAS	APHA, 5540 C MBAS Method	*BDL(**DL 0.05 mg/l)	mg/l
30.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	2.31	mg/l
31.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.26	mg/l
32.	Manganese as Mn	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l
33.	Cadmium as Cd	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l
34.	Total Coliform	IS 1622:1981(RA: 2019)	1600	MPN/100ml
35.	Fecal Coliform	IS 1622:1981(RA: 2019)	900	MPN/100ml

Note: -*BDL-Below Detection Limit, **DL- Detection Limit,
#These parameter are not covered in our NABL scope.

VARDAN ENVIROLAB GURUGRAM
(Checked By)

VARDAN ENVIROLAB
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ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	**VEL/RS/W/01**	**Report No.:**	**VEL/W/2111/11/003**
Issued To:	**M/s Ridhi Sidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, Charkhi Dadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**15/11/2021**
		Period of Analysis:	**11/11/2021 to 15/11/2021**
Name & Address of Project	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalali & Kalyana, Distt- Charkhi Dadri, Haryana.**	**Receipt Date:**	**11/11/2021**
		Sampling Date:	**10/11/2021**
		Sampling Quantity:	**2.0 Ltr**
Sample Description:	**Ground Water Sample**	**Sampling Type:**	**Grab**
Sampling Location:	**Near Mine Site**	**Preservation:**	**Ice Box**
Sample Collected by	**Vardan Enviro Lab representative**	**Parameter Required:**	**As Per Work Order**
Sampling & Analysis Protocol:	**IS 3025 &APHA, 23rd Edition 2017**		

S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 - 2012	
					Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 ^{0}C)	APHA ,4500-H^+ B Electrometric Method	7.57	--	6.5 to 8.5	No Relaxation
2.	Colour	APHA ,2120 B, Visual Comparison Method	*BDL (**DL 1.0 Hazen)	Hazen	5	15
3.	Turbidity	APHA, 2130 B, Nephlelometric Method	*BDL (**DL 1.0 NTU)	NTU	1	5
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--	Agreeable	Agreeable
5.	Taste	APHA , 2160 B, Threshold Test Method	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	456.00	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	135.47	mg/l	75	200
8.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	486.00	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl^- B, Argentometric Method	97.63	mg/l	250	1000
10.	Cyanide as CN	IS:3025 (P-27)	*BDL(**DL 0.02 mg/l)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	28.67	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	745.00	mg/l	500	2000
13.	Sulphate as SO_4	APHA , 4500 E, Turbidimetric Method	56.78	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F^- D, SPADNS Method	0.46	mg/l	1.0	1.5
15.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	23.45	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.14	mg/l	1.0	No relaxation
17.	Aluminum as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.05	No Relaxation

VARDAN ENVIROLAB GURUGRAM Kusum Sharma (Checked By)

VARDAN ENVIROLAB Dr. Singh Authorised Signatory (Approved By)

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ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample No.: **VEL/RS/W/01**						**VEL/W/2111/11/003**
S. No	**Parameter**	**Test-Method**	**Result**	**Unit**	**Limits of IS:10500-2012**	
					Requirement (Acceptable) Limit	**Permissible limit in the Absence of Alternate Source**
20.	Conductivity (at 25 ^{0}C)	APHA, 2510 B, Conductivity Meter Method	1146	µS/cm	—	—
21.	Phenolic Compounds	APHA, 5530 Chloroform Extraction Method	*BDL(**DL 0.0004 mg/l)	mg/l	0.001	0.002
22.	Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)	mg/l	1.0	No Relaxation
23.	Anionic Detergents as MBAS	Annex K, IS 13428/IS 3025 (P-68)	*BDL(**DL 0.05 mg/l)	mg/l	0.2	1.0
24.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	1.24	mg/l	5	15
25.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.10	mg/l	0.05	1.5
26.	Manganese as Mn	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.1	0.3
27.	Cadmium as Cd	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.003	No Relaxation
28.	Lead as Pb	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
29.	Selenium as Se	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.001 mg/l)	mg/l	0.01	No Relaxation
30.	Arsenic as As	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
31.	Mercury as Hg	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.0005 mg/l)	mg/l	0.001	No Relaxation
32.	Total Coliform	IS 15185:2002(RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 15185:2002 (RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	

Note: - *BDL-Below Detection Limit, **DL- Detection Limit

VARDAN ENVIROLAB GURUGRAM (Checked By)

VARDAN ENVIROLAB (Approved By) Authorised Signatory

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	**VEL/RS/W/02**	**Report No.:**	**VEL/W/2111/11/004**
Issued To:	**M/s Ridhi Sidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, Charkhi Dadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	
		Period of Analysis:	**15/11/2021**
Name & Address of Project	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalali & Kalyana, Distt- Charkhi Dadri, Haryana.**	**Receipt Date:**	**11/11/2021 to 15/11/2021**
		Sampling Date:	**11/11/2021**
		Sampling Quantity:	**2.0 Ltr**
Sample Description:	**Ground Water Sample**	**Sampling Type:**	**Grab**
Sampling Location:	**Village- Kaliyana**	**Preservation:**	**Ice Box**
Sample Collected by	**Vardan Enviro Lab representative**	**Parameter Required:**	**As Per Work Order**
Sampling & Analysis Protocol:	**IS 3025 &APHA, 23rd Edition 2017**		

S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012	
					Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 ^{0}C)	APHA ,4500-H^+ B Electrometric Method	7.63	--	6.5 to 8.5	No Relaxation
2.	Colour	APHA ,2120 B, Visual Comparison Method	*BDL (**DL 1.0 Hazen)	Hazen	5	15
3.	Turbidity	APHA, 2130 B, Nephlelometric Method	*BDL (**DL 1.0 NTU)	NTU	1	5
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--	Agreeable	Agreeable
5.	Taste	APHA , 2160 B, Threshold Test Method	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	461.00	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	146.78	mg/l	75	200
8.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	497.00	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl^- B, Argentometric Method	98.75	mg/l	250	1000
10.	Cyanide as CN	IS:3025 (P-27)	*BDL(**DL 0.02 mg/l)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	23.03	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	768.00	mg/l	500	2000
13.	Sulphate as SO_4	APHA , 4500 E, Turbidimetric Method	59.74	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F^- D, SPADNS Method	0.40	mg/l	1.0	1.5
15.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	25.48	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.16	mg/l	1.0	No relaxation
17.	Aluminium as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.05	No Relaxation

VARDAN ENVIROLAB GURUGRAM Kusum Sharma (Checked By)

VARDAN ENVIROLAB Dr Singh (Approved By)

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Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample No.: **VEL/RS/W/02**					**VEL/W/2111/11/004**	
S. No	**Parameter**	**Test-Method**	**Result**	**Unit**	**Limits of IS:10500-2012**	
					Requirement (Acceptable) Limit	**Permissible limit in the Absence of Alternate Source**
20.	Conductivity (at 25 ^{0}C)	APHA, 2510 B, Conductivity Meter Method	1182	µS/cm	—	—
21.	Phenolic Compounds	APHA, 5530 Chloroform Extraction Method	*BDL(**DL 0.0004 mg/l)	mg/l	0.001	0.002
22.	Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)	mg/l	1.0	No Relaxation
23.	Anionic Detergents as MBAS	Annex K, IS 13428/IS 3025 (P-68)	*BDL(**DL 0.05 mg/l)	mg/l	0.2	1.0
24.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	1.25	mg/l	5	15
25.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.11	mg/l	0.05	1.5
26.	Manganese as Mn	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.1	0.3
27.	Cadmium as Cd	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.003	No Relaxation
28.	Lead as Pb	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
29.	Selenium as Se	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.001 mg/l)	mg/l	0.01	No Relaxation
30.	Arsenic as As	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
31.	Mercury as Hg	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.0005 mg/l)	mg/l	0.001	No Relaxation
32.	Total Coliform	IS 15185:2002(RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 15185:2002 (RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	

Note: - *BDL-Below Detection Limit, **DL- Detection Limit

VARDAN ENVIROLAB GURUGRAM
(Checked By)

(Approved By)

NOTE: a)The results listed refer only to the tested samples & applicable parameters
b) Total liabilities of our lab will be restricted to the invoice amount only
c) The sample will be destroyed after retention time unless otherwise specified
d) This report is not to be reproduced wholly or in part and cannot be used as evidence in the court of law

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	**VEL/RS/W/01**	**Report No.:**	**VEL/W/2201/11/003**
Issued To:	**M/s Ridhi Sidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, Charkhi Dadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**15/01/2022**
		Period of Analysis:	**11/01/2022 to 15/01/2022**
Name & Address of Project	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalali & Kalyana, Distt- Charkhi Dadri, Haryana.**	**Receipt Date:**	**11/01/2022**
		Sampling Date:	**10/01/2022**
		Sampling Quantity:	**2.0 Ltr**
Sample Description:	**Ground Water Sample**	**Sampling Type:**	**Grab**
Sampling Location:	**Near Mine Site**	**Preservation:**	**Ice Box**
Sample Collected by	**Vardan Enviro Lab representative**	**Parameter Required:**	**As Per Work Order**
Sampling & Analysis Protocol:	**IS 3025 &APHA, 23rd Edition 2017**		

S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012	
					Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 ^{0}C)	APHA ,4500-H^+ B Electrometric Method	7.54	--	6.5 to 8.5	No Relaxation
2.	Colour	APHA ,2120 B, Visual Comparison Method	*BDL (**DL 1.0 Hazen)	Hazen	5	15
3.	Turbidity	APHA, 2130 B, Nephlelometric Method	*BDL (**DL 1.0 NTU)	NTU	1	5
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--	Agreeable	Agreeable
5.	Taste	APHA , 2160 B, Threshold Test Method	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	364.00	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	83.26	mg/l	75	200
8.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	389.00	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl^- B, Argentometric Method	95.31	mg/l	250	1000
10.	Cyanide as CN	IS:3025 (P-27)	*BDL(**DL 0.02 mg/l)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	37.97	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	621.00	mg/l	500	2000
13.	Sulphate as SO_4	APHA , 4500 E, Turbidimetric Method	48.50	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F^- D, SPADNS Method	0.32	mg/l	1.0	1.5
15.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	19.74	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.13	mg/l	1.0	No relaxation
17.	Aluminum as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.05	No Relaxation

VARDAN ENVIROLAB GURUGRAM Kushal Sharma (Checked By)

VARDAN ENVIROLAB Dr Singh Authorised Signatory (Approved By)

NOTE: a)The results listed refer only to the tested samples & applicable parameters
b) Total liabilities of our lab will be restricted to the invoice amount only
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Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample No.: **VEL/RS/W/01**						**VEL/W/2201/11/003**
S. No	**Parameter**	**Test-Method**	**Result**	**Unit**	**Limits of IS:10500-2012**	
					Requirement (Acceptable) Limit	**Permissible limit in the Absence of Alternate Source**
20.	Conductivity (at 25 ^{0}C)	APHA, 2510 B, Conductivity Meter Method	956	µS/cm	—	—
21.	Phenolic Compounds	APHA, 5530 Chloroform Extraction Method	*BDL(**DL 0.0004 mg/l)	mg/l	0.001	0.002
22.	Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)	mg/l	1.0	No Relaxation
23.	Anionic Detergents as MBAS	Annex K, IS 13428/IS 3025 (P-68)	*BDL(**DL 0.05 mg/l)	mg/l	0.2	1.0
24.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	1.08	mg/l	5	15
25.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.07	mg/l	0.05	1.5
26.	Manganese as Mn	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.1	0.3
27.	Cadmium as Cd	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.003	No Relaxation
28.	Lead as Pb	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
29.	Selenium as Se	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.001 mg/l)	mg/l	0.01	No Relaxation
30.	Arsenic as As	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
31.	Mercury as Hg	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.0005 mg/l)	mg/l	0.001	No Relaxation
32.	Total Coliform	IS 15185:2002(RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 15185:2002 (RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	

Note: - *BDL-Below Detection Limit, **DL- Detection Limit

VARDAN ENVIROLAB GURUGRAM (Checked By)

VARDAN ENVIRO (Approved By) Authorised Signatory

NOTE: a)The results listed refer only to the tested samples & applicable parameters
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Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	**VEL/RS/W/02**	**Report No.:**	**VEL/W/2201/11/004**
Issued To:	**M/s Ridhi Sidhi KSM Resources, Khatoni Number 1049, Behind Hotel Mejban, Laharu Road, Charkhi Dadri, Haryana**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**15/01/2022**
		Period of Analysis:	**11/01/2022 to 15/01/2022**
Name & Address of Project	**Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalali & Kalyana, Distt- Charkhi Dadri, Haryana.**	**Receipt Date:**	**11/01/2022**
		Sampling Date:	**10/01/2022**
		Sampling Quantity:	**2.0 Ltr**
Sample Description:	**Ground Water Sample**	**Sampling Type:**	**Grab**
Sampling Location:	**Village- Kaliyana**	**Preservation:**	**Ice Box**
Sample Collected by	**Vardan Enviro Lab representative**	**Parameter Required:**	**As Per Work Order**
Sampling & Analysis Protocol:	**IS 3025 &APHA, 23rd Edition 2017**		

S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012	
					Requirement (Acceptable Limit)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 ^{0}C)	APHA ,4500-H^+ B Electrometric Method	7.58	--	6.5 to 8.5	No Relaxation
2.	Colour	APHA ,2120 B, Visual Comparison Method	*BDL (**DL 1.0 Hazen)	Hazen	5	15
3.	Turbidity	APHA, 2130 B, Nephlelometric Method	*BDL (**DL 1.0 NTU)	NTU	1	5
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--	Agreeable	Agreeable
5.	Taste	APHA , 2160 B, Threshold Test Method	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	APHA , 2340 C, EDTA Titrimetric Method	380.00	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	90.45	mg/l	75	200
8.	Alkalinity as $CaCO_3$	APHA , 2320 B, Titrimetric Method	404.00	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl^- B, Argentometric Method	97.12	mg/l	250	1000
10.	Cyanide as CN	IS:3025 (P-27)	*BDL(**DL 0.02 mg/l)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	37.50	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	643.00	mg/l	500	2000
13.	Sulphate as SO_4	APHA , 4500 E, Turbidimetric Method	50.45	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F^- D, SPADNS Method	0.31	mg/l	1.0	1.5
15.	Nitrate as NO_3	IS 3025 (P-34) ,Chromotropic Method	20.58	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.10	mg/l	1.0	No relaxation
17.	Aluminium as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.05	No Relaxation

VARDAN ENVIROLAB GURUGRAM Kushal Sharma (Checked By)

VARDAN ENVIROLAB Dr Singh Authorised Signatory (Approved By)

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Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
Branch Off: Plot No. 24 & 25, Narayan Vihar, Block-B, Jaipur - 302035 (Rajasthan)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample No.: **VEL/RS/W/02**					**VEL/W/2201/11/004**	
S. No	**Parameter**	**Test-Method**	**Result**	**Unit**	**Limits of IS:10500-2012**	
					Requirement (Acceptable) Limit	**Permissible limit in the Absence of Alternate Source**
20.	Conductivity (at 25 ^{0}C)	APHA, 2510 B, Conductivity Meter Method	988	µS/cm	—	—
21.	Phenolic Compounds	APHA, 5530 Chloroform Extraction Method	*BDL(**DL 0.0004 mg/l)	mg/l	0.001	0.002
22.	Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)	mg/l	1.0	No Relaxation
23.	Anionic Detergents as MBAS	Annex K, IS 13428/IS 3025 (P-68)	*BDL(**DL 0.05 mg/l)	mg/l	0.2	1.0
24.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	0.21	mg/l	5	15
25.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.05	mg/l	0.05	1.5
26.	Manganese as Mn	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.1	0.3
27.	Cadmium as Cd	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.003	No Relaxation
28.	Lead as Pb	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
29.	Selenium as Se	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.001 mg/l)	mg/l	0.01	No Relaxation
30.	Arsenic as As	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
31.	Mercury as Hg	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.0005 mg/l)	mg/l	0.001	No Relaxation
32.	Total Coliform	IS 15185:2002(RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 15185:2002 (RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	

Note: - *BDL-Below Detection Limit, **DL- Detection Limit

VARDAN ENVIROLAB GURUGRAM
Kushal Sharma
(Checked By)

VARDAN ENVIROLAB
Dr Singh
Authorised Signatory
(Approved By)

NOTE: a)The results listed refer only to the tested samples & applicable parameters
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Garland

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Haryana

Date	:	**26/01/2022**
Time	:	**16:57:54 PM**
Validity upto	:	**25/01/2023**

HR840367

Certificate SL. No.	:	HR06901710000664
Registration No.	:	HR840367
Date of Registration	:	31/Mar/2020
Month & Year of Manufacturing	:	October-2018
Valid Mobile Number	:	******7676
Emission Norms	:	BHARAT STAGE IV
Fuel	:	DIESEL
PUC Code	:	HR0690171
GSTIN	:	
MIL observation	:	No

Vehicle Photo with Registration plate
60 mm x 30 mm

Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)
1	2	3	4	5
Idling Emissions	Carbon Monoxide (CO)	percentage (%)		
	Hydrocarbon, (THC/HC)	ppm		
High idling emissions	CO	percentage (%)		
	RPM	RPM	2500 ± 200	
	Lambda	-	1 ± 0.03	
Smoke Density	Light absorption coefficient	1/metre	1.62	0.74

This PUC certificate is system generated through the national register of motor vehicles and does not require any signature.

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to https://vahan.parivahan.gov.in

Authorised Signature with stamp of PUC operator
60mm x 20 mm

(FORM – O)

(See rule 29F (2) and 22L)

Report of medical examination under rule 29B (To be issued in triplicate)**

Certificate No. SLG/CKD/01/21 dt- 14/02/21

Certified that Shri/~~Shrimati~~* SUCHIT KUMAR employed as Mine Manager in Kalali & Kalyana Stone mine, Forrm A No. 01 has been examined for an initial/periodical medical examination. He/she* appears to be 50 years of age. The findings of the the examining authority are given in the attached sheet. It is considered that Shri/~~Shrimati~~* Suchit Kumar

(a)* is medically fit for any employment in mines.

(b)* is suffering from Nil And is medically unfit for

(d) any employment in mine; or

(e) any employment below ground; or

(f) any employment or work.....

©* is suffering from..... is should get this disability* cured/controlled and should be again examined within a period of .....months. He/She will appear for re-examination with the result of test of..... and the opinion of.....Specialist from..... He/She may be permitted/not* permitted to carry on his duties during this period.

Space for affixing
Passport Size
Photograph of the Candidate.

Signature of the examining authority

.....

Name and designation in Block letters Date

Place :

Date: 14/02/21

* Delete whatever is not applicable.

** One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the manager of the mine concerned by registered post; and the third copy shall be retained by the examining authority.

Dr. S.A.
EX.
MBBS
Reg No. 7616

Report of the examination authority

(to be filled in for every medical examination whether initial or periodical or re-examination or agter cure/control of disability).

Annexure to Certificate No..... as result of medical examination on.....

Identicication Mark..Cut mark on Forehead.

Left thumb impression of The candidate

1. **General development-** Good / ~~Fair~~ / ~~Poor~~
2. **Height**.....5-6.....cms.
3. **weight**.....73.....kg.
4. **Eyes:**

i. visual aculity- Distant vision (with or without glasses).Right eye..6/6.....Left eye..6/6 c glasses

ii. night blindness — Nil

iii. Colour blindness — nil

iv. Any organic disease of eyes — Nil

v. Squnit (* to be tasted in special cases)

5. **Ears :**

a. Hearing: right ear.....Normal Left ear.....Normal

b. Any organic diseases. — NO

6.**Respiratory system. measurement:**

(a) .after full inspiration.....38.....cms.

(b)After full expiration.....34....cms.

7.**Circualatory system:-** (a)Blood pressure 140/80 (b)pulse 78/mt.

8.**Abdomen: -** (a) Tenderness. NAD (b) Liver.

(c) Spleen. (d) tumer

9.**Nervous system:-** (a) History of fits or epilepsy

(b) paralysis

(c) mental health NAD.

10.**Locomotory system.**

11.**skin.**

12.**Hyrocele.** NAD.

13.**Hernia**

14.**Any other abhnormality.** Nil

15.**Unine:-** (a)reaction : Sugar — Nil (b)Ablumin : Nil (c)sugar : Nil

16.**Skiagram of chest.** NAD.

17. Any other test considered necessary by the examining authority. Nil

18. Any opinion of specialist considered necessary.

signature of the examining authority

Dr. B.C. Gupta
EX-SMO
MBBS HCMS
Reg No. 7016

(FORM – O)

(See rule 29F (2) and 22L)

Report of medical examination under rule 29B (To be issued in triplicate)**

Certificate No. CHL/IKS/01/21 dt 14/2/21

Certified that Shri/Shrimati* Manish Kumar employed as Blasting Hafer. Kalapi & Kalyana Stan mine, Forrm A No. - 3 has been examined for an initial/periodical medical examination. He/she* appears to be 34 years of age. The findings of the the examining authority are given in the attached sheet. It is considered that Shri/Shrimati* manish - kumar.

(a)* is medically fit for any employment in mines.

(b)* is suffering from..... And is medically unfit for

(d) any employment in mine; or

(e) any employment below ground; or

(f) any employment or work.....

©* is suffering from..... is should get this disability* cured/controlled and should be again examined within a period of .....months. He/She will appear for re-examination with the result of test of..... and the opinion of.....Specialist from..... He/She may be permitted/not* permitted to carry on his duties during this period.

Space for affixing
Passport Size
Photograph of the Candidate

Signature of the examining authority

.....

Name and designation in Block letters Date

Dr. S.C. Gupta
Ex. SMO
MBBS, DNB, MSI
Reg No. 7616

Place :
Date: 14/02/21

* Delete whatever is not applicable.

** One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the manager of the mine concerned by registered post; and the third copy shall be retained by the examining authority.

Report of the examination authority

(to be filled in for every medical examination whether initial or periodical or re-examination or agter cure/control of disability).

Annexure to Certificate No. 5(2)/(KF)/06/21 as result of medical examination on 14/02/21

Identicication Mark..Cut mark Right hand.

Left thumb impression of The candidate

Good /Fair/ Poor

1. **General development-**
2. **Height**.....5'-6"...cms.
3. **weight**...60.....kg.
4. **Eyes:**

i. visual acuity- Distant vision (with or without glasses).Right eye..6/6.....Left eye...6/6

ii. night blindness / NAD

iii. Colour blindness

iv. Any organic disease of eyes Coat glasses.

v. Squnit (* to be tasted in special cases)

5. Ears :

a. Hearing: right ear..Normal..... Left ear.....Normal

b. Any organic diseases.

6.**Respiratory system. measurement:**

(a) .after full inspiration.....38.....cms.

(b)After full expiration.....33...cms.

7.Circualatory system:- (a)Blood pressure 120/80 (b)pulse 72/mt

8.Abdomen: - (a) Tenderness. / NAD (b) Liver. NAD

(c) Spleen. (d) tumer.

9.Nervous system:- (a) History of fits or epilepsy

(b) paralysis

(c) mental health / NAD

10.Locomotory system.

11.skin.

12.Hyrocele. / NAD.

13.Hernia

14.Any other abhnormality.

15.**Unine:-** (a)reaction : (b)Ablumin : NiL (c)sugar : NiL

16.Skiagram of chest.

17. Any other test considered necessary by the examining authority.

18. Any opinion of specialist considered necessary.

Dr. S.C. Gupta
Ex. SMO
MBBS
Reg No. 7616

signature of the examining authority

FORM D

(See Rule 29 F (2) and 29 L)

Report of Medical Examination under Rule 29B

(To be issued in triplicate)

Certificate No. SK/LKN/22121 dt 14/2/21

Certified that Shri/Shrimati★ Pasan employed as excavator op.

in Kalali Kalyana Stone mine, Form B No. 82 has been examined for an initial/periodical★ medical examination. He/She appears to be 25 years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri/Shrimati★ Pasan

★(a) is medically fit for any employment in mines.

★(b) is suffering from ..... and is medically unfit for

(i) any employment in mine; or

(ii) any employment below ground; or

(iii) any employment or work.

★(c) is suffering from ..... and should get this disability★ cured / controlled and should be again examined within a period of ..... months

★He/She will appear for re - examination with the result of test of .....★★ and the opinion of ..... specialist from .....He/She★ may be permitted/not★ permitted to carry on his/her★ duties during this period.

Space for recent pass port size Photograph and attestation

Dr. S.C. Gupta
Ex. Dir.
MBBS HCMSI
Reg No. 7616

Signature of the Examining Authority
Name and Designation in Block letters

Dr. S.C. Gupta
Ex. Dir.
MBBS HCMSI
Reg No. 7616

Place :

Date :

★Delete whatever not applicable.

★★One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to Manager of the mine concerned by registered post; and the third copy shall be retained by the examining authority.

FORM O (Contd.)

REPORT OF THE EXAMINING AUTHORITY

(To be filled in for every medical examination whether initial or periodical or re-examination or after cure/control of disability)

Annexure to Certificate No.....as a result of

Medical Examination on.....

Identification of mark : Mole on neck

Left Thumb impression of the candidate

1. General development : Good / Fair / Poor
2. Height.....155.....Cm. 3. Weight.....54.....Kgs.
4. Eyes : (i) Visual acuity—Distant vision (with or without glasses)

   Right eye.....6/6.....Left eye.....6/6 with glass.

   (ii) any organic discase of eye

   ★(iii) night blindness

   ★(iv) colour blindness

   ★ (v) Squint

   (★ To be tested in special cases)

   NAD

5 Ears : (i) Hearing : Right ear.....Normal.....Left ear.....Normal.....

   (ii) any organic disease — nil

6. Respiratory system : Chest measurement :—(i) after full inspiration.....35.....Cms.

   (ii) after full expiration.....33.....Cms.

7. Circulatory system : Blood pressure.....120/70 mm.....Pulse.....72/min.....

8. Abdomen : Tenderness / NAD Liver NAD

   : Spleen Tumour

9. Nervous system : History of fits or epilepsy — nil

   Paralysis

   Mental health / NAD

10. Locomotor system
11. Skin
12. Hernia / NAD
13. Hydrocele
14. Any other abnormality
15. Urine : Reaction

    Albumin — nil

    Sugar — nil

16. Skiagarm of chest
17. Any other 'c' test considered necessary by examining authority
18. Any opinion of specialist considered necessary

Place :

Signature of the Examining Authority

Reg No. 7616