8814027600
7419712610

Riddhi Siddhi - KSM Resources JV

Mines at Khasra No. 223 mun, 224 to 228 & 72,
Kalali & Kalyana, Charkhi Dadri, Haryana - 127306

Ref. No.....

Date.....

Date: 20/05/2024

To

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-2024.

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 Siddhi KSM Resources JV**

RIDDHI SIDDHI-KSM RESOURCES JV ★ KALALI KALIYANA

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 Paryavaran Bhavan, JorBagh Road, New Delhi.

SIX MONTHLY ENVIRONMENTAL COMPLIANCE MONITORING REPORT OF STIPULATED CONDITIONS OF ENVIRONMENTAL CLEARANCE
(Period - October 2023 to March 2024)

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.

Annexures	
1	EC
2	Mining Plan
3	CTO
4	Photographs of plantation
5	NOC from DFO
6	Lab Reports
7	EMP CSR
8	Photographs of labor shelters
9	Blasting permission
10	Drilling photographs
11	Water Sprinkling photographs
12	Photographs of Anti-smogger
13	PUC Certificate
14	Wildlife conservation Plan
15	Rainwater Harvesting
16	Occupational Health Records of Workers
17	Previous Compliance Receiving

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/2023 /3441** on dated **16.06.2023**.

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 no 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.
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 trees 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 -4.**
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.	CSR Expenditure Details are mentioned below. CSR Exp. 2023-24 | Amount Health Check-up | 34,000 Staff Welfare | 200,223 Total | 234,223

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 are attached as **Annexure 11.**
9.	The PP shall manage the overburden at the mining site.	No Overburden dump in the mining site.
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 . 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 have 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-8.**
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 5,751,207** on EMP as follows-

EMP Exp. 2023-2024	Amount
Air Monitoring System	207,500
Plantation Exp.	135,200
Drinking water supply	100,050
Water Sprinkling in Approach Road	481,428
Water sprinkling in mine area	2,750,000
Water sprinkling for plantation	708,029
Road Maintenance	1,369,000
Total	5,751,207

1.	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.
2.	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.
3.	The PP shall divert the first order stream in post mining to save the natural drainage system.	Adequate measures to save natural drainage system have 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.	Noted and Complied.
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 are attached as **Annexure 6.** 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 6.**
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 6.** 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 6**

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.
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 -13.**

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 - 11.**

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 -4**
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 -4.**

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 – 14.**

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 - 17.**

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.
iii.	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 2023 to March 2024** as per EC conditions. Post Environmental Clearance Monitoring was carried out during March 2020. The samples were analysed at NABL approved Environmental laboratory. Following environmental components has been monitored and analysed.

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**	**44.52**	**59.87**	**43.33**	**60**
2	**Particulate Matter (PM_{10}), µg/m³**	**85.89**	**89.65**	**82.10**	**100**
3	**Nitrogen Dioxide (NO_2), µg/m³**	**18.45**	**16.52**	**19.45**	**80**
4	**Sulphur Dioxide (SO_2), µg/m³**	**8.90**	**15.10**	**11.26**	**80**
5.	**Carbon Monoxide (CO)**	**0.70**	**0.74**	**0.55**	**4**

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

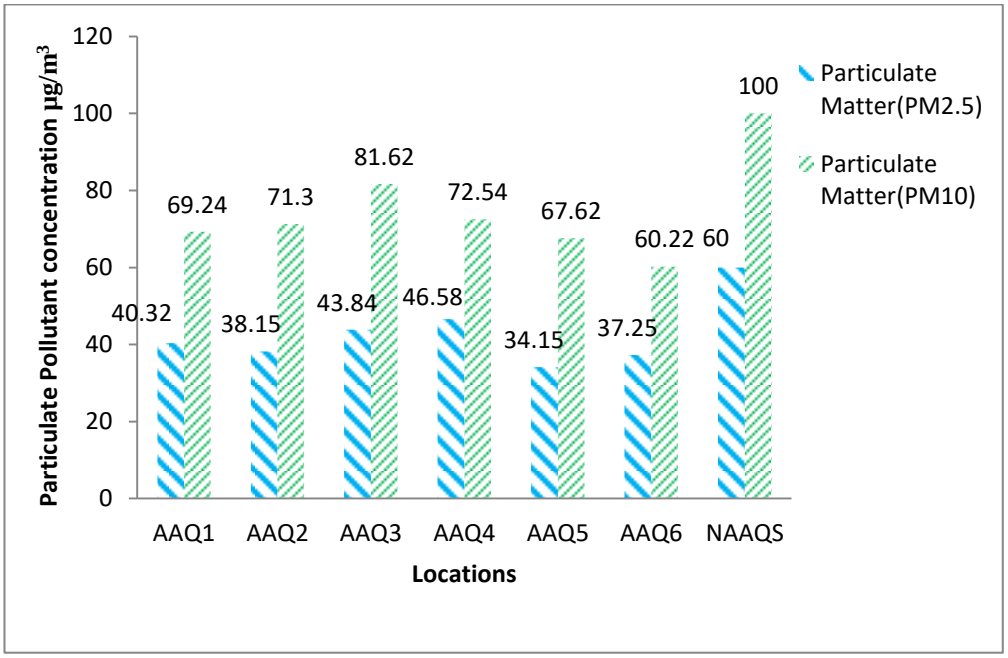


Figure 3.1 Graphical Presentation of Particulate pollutants

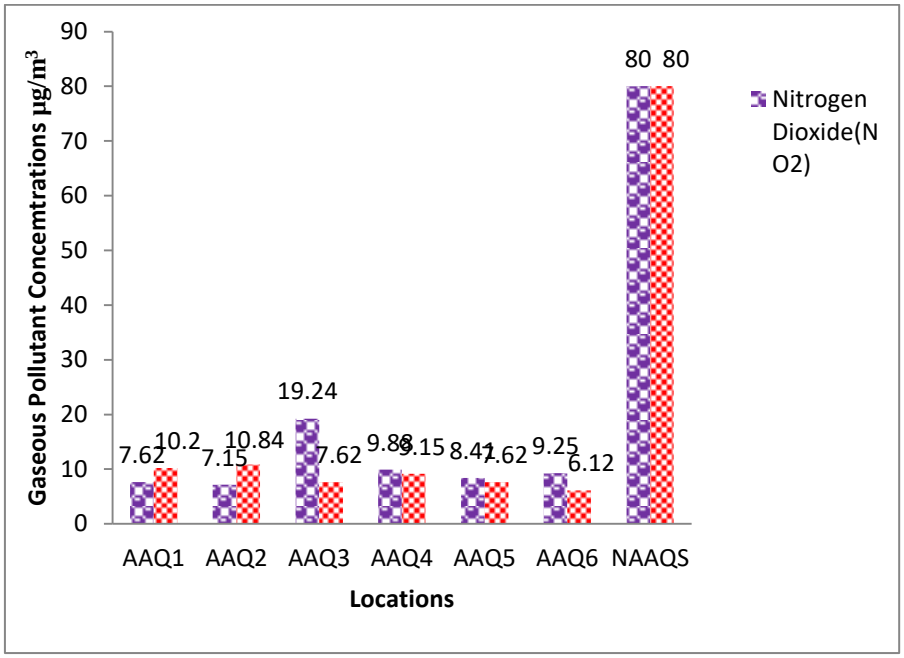


Figure 3.2 Graphical Presentation of Gaseous pollutants

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 43.33 to 59.87 µg/m^3 and 82.10 to 89.65 µg/m^3 respectively. The level of NO_x and SO_2 at all locations were found to be in range of 16.52 19.45 µg/m^3 and 8.90 to 15.10 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
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	87.8	72.6	74.9	67.9	61.2	57.3
Lmin	59.0	46.9	52.6	40.2	39.5	34.2
Leq	72.8	62.4	69.45	68.20	48.63	38.22
DGMS Limits in dB(A) Leq	75.0	70.0	75.0	70.0	55.0	45.0

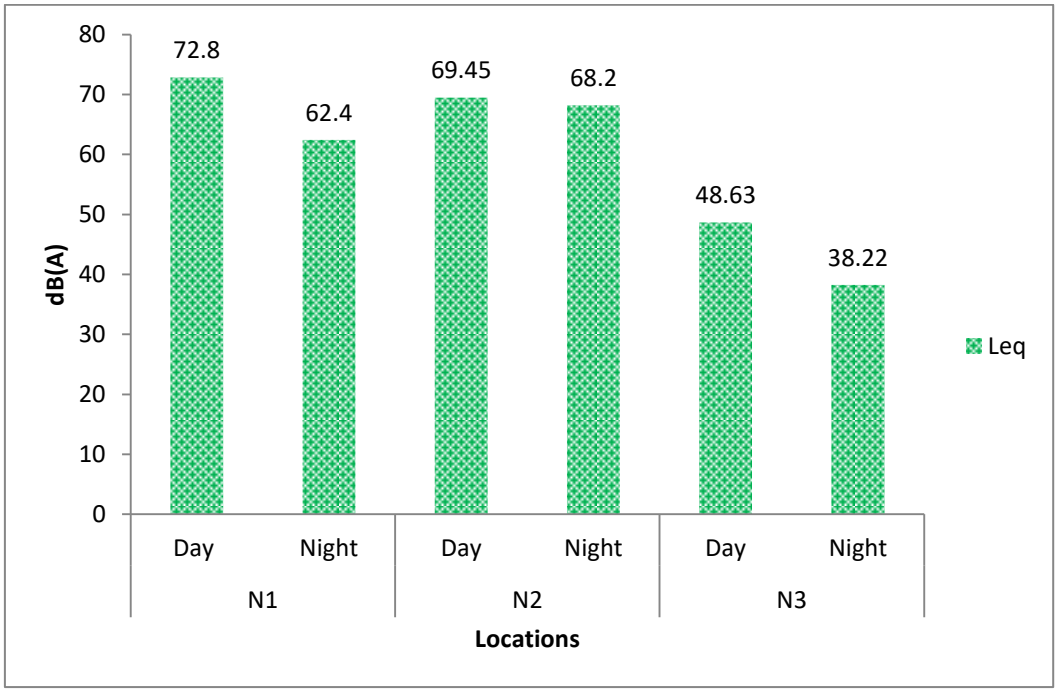


Figure 3.2 Graphical presentation of location wise variation of Ambient Noise Level

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 48.63 to 72.8 dB (A) and 38.22 to 68.20 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 analysed 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 (**Post Monsoon-2023 and Winter 2024**)
2.	**GW2**	Village- Kaliyana (**Post Monsoon-2023 and Winter 2024**)

3.3.2 Methodology of Ground Water Quality Monitoring

Sampling of ground water was carried out on **November 2023 and January 2024.** 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 Result (November-2023 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)	--	**7.78**	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	**1.0**	5	15
3.	Turbidity	NTU	***BLQ(LOQ-1.0)**	1	5
4.	Odour	--	**Agreeable**	Agreeable	Agreeable
5.	Taste	--	**Agreeable**	Agreeable	Agreeable
6.	Total Hardness as	mg/l	**295.56**	200	600
7.	Calcium as Ca	mg/l	**64.33**	75	200
8.	Total Alkalinity as	mg/l	**283.65**	200	600
9.	Chloride as Cl	mg/l	**66.00**	250	1000
10.	Cyanide as CN	mg/l	***BLQ(LOQ-0.02)**	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	**23.52**	30	100
12.	Total Dissolved Solids	mg/l	**370.00**	500	2000
13.	Sulphate as SO_4	mg/l	**33.78**	200	400
14.	Fluoride as F	mg/l	**0.34**	1.0	1.5
15.	Nitrate as NO_3	mg/l	**8.47**	45	No Relaxation
16.	Iron as Fe	mg/l	**0.14**	1.0#	No relaxation
17.	Aluminium as Al	mg/l	***BLQ(LOQ-0.005)**	0.03	0.2
18.	Boron	mg/l	***BLQ(LOQ-0.01)**	0.5	2.4#
19.	Total Chromium as Cr	mg/l	***BLQ(LOQ-0.002)**	0.05	No Relaxation
21.	Phenolic Compounds	mg/l	***BLQ(LOQ-0.0005)**	0.001	0.002
22.	Mineral Oil	mg/l	***BLQ(LOQ-0.1)**	1.0	No Relaxation
23.	Anionic Detergents as	mg/l	***BLQ(LOQ-0.05)**	0.2	1.0
24.	Zinc as Zn	mg/l	**1.00**	5	15
25.	Copper as Cu	mg/l	**0.14**	0.05	1.5
26.	Manganese as Mn	mg/l	***BLQ(LOQ-0.002)**	0.1	0.3
27.	Cadmium as Cd	mg/l	***BLQ(LOQ-0.002)**	0.003	No Relaxation
28.	Lead as Pb	mg/l	***BLQ(LOQ-0.002)**	0.01	No Relaxation
29.	Selenium as Se	mg/l	***BLQ(LOQ-0.001)**	0.01	No Relaxation
30.	Arsenic as As	mg/l	***BLQ(LOQ-0.005)**	0.01	No Relaxation
31.	Mercury as Hg	mg/l	***BLQ(LOQ-0.0005)**	0.001	No Relaxation
32.	Total Coliform	/100ml	**Absent**	---	
33.	E. Coli	/100ml	**Absent**	---	

Note: - *BLQ-Below Limit of Quantification, **LOQ- Limit of Quantification.

Table 3.8 Ground Water Ground Water Quality Monitoring Results (November-2023 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)	--	**7.48**	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	**1.0**	5	15
3.	Turbidity	NTU	***BLQ(LOQ-1.0)**	1	5
4.	Odour	--	**Agreeable**	Agreeable	Agreeable
5.	Taste	--	**Agreeable**	Agreeable	Agreeable
6.	Total Hardness as	mg/l	**220.00**	200	600
7.	Calcium as Ca	mg/l	**51.00**	75	200
8.	Total Alkalinity as	mg/l	**210.00**	200	600
9.	Chloride as Cl	mg/l	**77.52**	250	1000
10.	Cyanide as CN	mg/l	***BLQ(LOQ-0.02)**	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	**26.69**	30	100
12.	Total Dissolved Solids	mg/l	**310.00**	500	2000
13.	Sulphate as SO_4	mg/l	**40.10**	200	400
14.	Fluoride as F	mg/l	**0.40**	1.0	1.5
15.	Nitrate as NO_3	mg/l	**10.20**	45	No Relaxation
16.	Iron as Fe	mg/l	**0.10**	1.0#	No relaxation
17.	Aluminium as Al	mg/l	***BLQ(LOQ-0.005)**	0.03	0.2
18.	Boron	mg/l	***BLQ(LOQ-0.01)**	0.5	2.4#
19.	Total Chromium as Cr	mg/l	***BLQ(LOQ-0.002)**	0.05	No Relaxation
21.	Phenolic Compounds	mg/l	***BLQ(LOQ-0.0005)**	0.001	0.002
22.	Mineral Oil	mg/l	***BLQ(LOQ-0.1)**	1.0	No Relaxation
23.	Anionic Detergents as	mg/l	***BLQ(LOQ-0.05)**	0.2	1.0
24.	Zinc as Zn	mg/l	**1.10**	5	15
25.	Copper as Cu	mg/l	**0.20**	0.05	1.5
26.	Manganese as Mn	mg/l	***BLQ(LOQ-0.01)**	0.1	0.3
27.	Cadmium as Cd	mg/l	***BLQ(LOQ-0.002)**	0.003	No Relaxation
28.	Lead as Pb	mg/l	***BLQ(LOQ-0.002)**	0.01	No Relaxation
29.	Selenium as Se	mg/l	***BLQ(LOQ-0.001)**	0.01	No Relaxation
30.	Arsenic as As	mg/l	***BLQ(LOQ-0.005)**	0.01	No Relaxation
31.	Mercury as Hg	mg/l	***BLQ(LOQ-0.0005)**	0.001	No Relaxation
32.	Total Coliform	/100ml	**Absent**	--	
33.	E. Coli	/100ml	**Absent**	--	

Note: - BLQ-Below Limit of Quantification, **LOQ- Limit of Quantification.

Table 3.9 Ground Water Quality Monitoring Results (January-2024 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)	--	**7.36**	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	**1.0**	5	15
3.	Turbidity	NTU	***BLQ(LOQ-1.0)**	1	5
4.	Odour	--	**Agreeable**	Agreeable	Agreeable
5.	Taste	--	**Agreeable**	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	mg/l	**242.63**	200	600
7.	Calcium as Ca	mg/l	**48.52**	75	200
8.	Total Alkalinity as $CaCO_3$	mg/l	**240.30**	200	600
9.	Chloride as Cl	mg/l	**54.25**	250	1000
10.	Cyanide as CN	mg/l	***BLQ(LOQ-0.02)**	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	**27.63**	30	100
12.	Total Dissolved Solids	mg/l	**390.00**	500	2000
13.	Sulphate as SO_4	mg/l	**37.85**	200	400
14.	Fluoride as F	mg/l	**0.34**	1.0	1.5
15.	Nitrate as NO_3	mg/l	**15.63**	45	No Relaxation
16.	Iron as Fe	mg/l	**0.20**	1.0#	No relaxation
17.	Aluminium as Al	mg/l	***BLQ(LOQ-0.005)**	0.03	0.2
18.	Boron	mg/l	***BLQ(LOQ-0.01)**	0.5	2.4#
21.	Phenolic Compounds	mg/l	***BLQ(LOQ-0.002)**	0.001	0.002
22.	Mineral Oil	mg/l	***BLQ(LOQ-0.0005)**	1.0	No Relaxation
23.	Anionic Detergents as	mg/l	***BLQ(LOQ-0.1)**	0.2	1.0
24.	Zinc as Zn	mg/l	**1.12**	5	15
25.	Copper as Cu	mg/l	**0.21**	0.05	1.5
26.	Manganese as Mn	mg/l	***BLQ(LOQ-0.002)**	0.1	0.3
27.	Cadmium as Cd	mg/l	***BLQ(LOQ-0.01)**	0.003	No Relaxation
28.	Lead as Pb	mg/l	***BLQ(LOQ-0.002)**	0.01	No Relaxation
29.	Selenium as Se	mg/l	***BLQ(LOQ-0.002)**	0.01	No Relaxation
30.	Arsenic as As	mg/l	***BLQ(LOQ-0.001)**	0.01	No Relaxation
31.	Mercury as Hg	mg/l	***BLQ(LOQ-0.005)**	0.001	No Relaxation
32.	Total Coliform	/100ml	**Absent**	---	
33.	E. Coli	/100ml	**Absent**	----	

Note: - *BLQ-Below Detection Limit, LOQ- Detection Limit

Table 3.10 Ground Water Quality Monitoring Results (January-2024 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)	--	**7.12**	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	***BLQ(LOQ-1.0)**	5	15
3.	Turbidity	NTU	**1.0**	1	5
4.	Odour	--	**Agreeable**	Agreeable	Agreeable
5.	Taste	--	**Agreeable**	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	mg/l	**240.63**	200	600
7.	Calcium as Ca	mg/l	**51.25**	75	200
8.	Total Alkalinity as $CaCO_3$	mg/l	**230.47**	200	600
9.	Chloride as Cl	mg/l	**51.36**	250	1000
10.	Cyanide as CN	mg/l	***BLQ(LOQ-0.02)**	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	**24.10**	30	100
12.	Total Dissolved Solids	mg/l	**430.00**	500	2000
13.	Sulphate as SO_4	mg/l	**27.63**	200	400
14.	Fluoride as F	mg/l	**0.40**	1.0	1.5
15.	Nitrate as NO_3	mg/l	**10.23**	45	No Relaxation
16.	Iron as Fe	mg/l	**0.16**	1.0#	No relaxation
17.	Aluminium as Al	mg/l	***BLQ(LOQ-0.005)**	0.03	0.2
18.	Boron	mg/l	***BLQ(LOQ-0.01)**	0.5	2.4#
19.	Chromium as Cr	mg/l	***BLQ(LOQ-0.002)**	0.05	No Relaxation
21.	Phenolic Compounds	mg/l	***BLQ(LOQ-0.0005)**	0.001	0.002
22.	Mineral Oil	mg/l	***BLQ(LOQ-0.1)**	1.0	No Relaxation
23.	Anionic Detergents as	mg/l	***BLQ(LOQ-0.05)**	0.2	1.0
24.	Zinc as Zn	mg/l	**1.20**	5	15
25.	Copper as Cu	mg/l	**0.09**	0.05	1.5
26.	Manganese as Mn	mg/l	***BLQ(LOQ-0.01)**	0.1	0.3
27.	Cadmium as Cd	mg/l	***BLQ(LOQ-0.002)**	0.003	No Relaxation
28.	Lead as Pb	mg/l	***BLQ(LOQ-0.002)**	0.01	No Relaxation
29.	Selenium as Se	mg/l	***BLQ(LOQ-0.001)**	0.01	No Relaxation
30.	Arsenic as As	mg/l	***BLQ(LOQ-0.005)**	0.01	No Relaxation
31.	Mercury as Hg	mg/l	***BLQ(LOQ-0.0005)**	0.001	No Relaxation
32.	Total Coliform	/100ml	**Absent**	---	
33.	E. Coli	/100ml	**Absent**	---	

Note: - *BLQ-Below Detection Limit, LOQ- Detection Limit

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 210.00 and 283.65 mg/L against the permissible limit of 600 mg/l. Total Hardness in the water of all location were observed 220.00 mg/L and 295.56 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

Table 3.11 Ground Water level in and around the Mine site

Sample. Number	Village Name	Location	Post monsoon (November 2023)	Winter (January 2024)
W1	Mine Site	28°33'4.25"N 76°11'16.79"E		
W2	Mahra	28°33'18.71"N 76°10'43.23"E		
W3	Kalali	28°31'23.93"N 76°11'5.41"E		
W4	Kaliyana	28°33'8.88"N 76°11'49.25"E		
W5	Mandola	28°31'19.64"N 76°12'37.70"E		
W6	Kheri Bura	28.589097°N 76.194339°E		

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.

3.3 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 2024.**

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	--	**7.89**
2.	Conductivity	IS:14767 by Conductivity meter	mS/cm	**0.390**
3.	Soil Texture	IS : 2720 (P-22, RA2003)	--	**Sandy Loam**
4.	Color	SOP , SP-78,Issue No.-01& Issue Date-14/02/2013	--	**Yellowish Brown**
5.	Water holding capacity	SOP , SP-81,Issue No.-01& Issue Date-14/02/2013	%	**35.00**
6.	Bulk density	SOP , SP-80,Issue No.-01& Issue Date-14/02/2013	gm/cc	**1.74**
7.	Chloride as Cl	SOP , SP-85,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**40.85**
8.	Calcium as Ca	SOP , SP-82,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**28.63**
9.	Sodium as Na	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**134.63**
10.	Potassium as K	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	kg/hec.	**42.45**
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method	%	**0.42**
12.	Magnesium as Mg	SOP , SP-83,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**19.88**
13.	Available Nitrogen as N	IS:14684 Distillation Method	kg./hec.	**148.33**
14.	Available Phosphorus	SOP , SP-86,Issue No.-01& Issue Date-14/02/2013	kg./hec.	**23.36**
15.	Zinc as Zn	USEPA 3050B	mg/100gm	**0.94**
16.	Manganese as Mn	USEPA 3050B	mg/100gm	**1.41**
17.	Chromium as Cr	USEPA 3050B	mg/100gm	**0.20**
18.	Lead as Pb	USEPA 3050B	mg/100gm	**0.50**
19.	Cadmium as Cd	USEPA 3050B	mg/100gm	**0..38**

20.	Copper as Cu	USEPA 3050B	mg/100gm	**0.74**

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	--	**7.74**
2.	Conductivity	IS:14767 by Conductivity meter	mS/cm	**0.320**
3.	Soil Texture	IS : 2720 (P-22, RA2003)	--	**Sandy Loam**
4.	Color	SOP , SP-78,Issue No.-01& Issue Date-14/02/2013	--	**Yellowish Brown**
5.	Water holding capacity	SOP , SP-81,Issue No.-01& Issue Date-14/02/2013	%	**35.63**
6.	Bulk density	SOP , SP-80,Issue No.-01& Issue Date-14/02/2013	gm/cc	**1.40**
7.	Chloride as Cl	SOP , SP-85,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**31.20**
8.	Calcium as Ca	SOP , SP-82,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**28.85**
9.	Sodium as Na	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**143.33**
10.	Potassium as K	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	kg/hec.	**33.21**
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method	%	**0.42**
12.	Magnesium as Mg	SOP , SP-83,Issue No.-01& Issue Date-14/02/2013	mg/100gm	**11.25**
13.	Available Nitrogen as N	IS:14684 Distillation Method	kg./hec.	**154.25**
14.	Available Phosphorus	SOP , SP-86,Issue No.-01& Issue Date-14/02/2013	kg./hec.	**14.25**
15.	Zinc as Zn	USEPA 3050B	mg/100gm	**0.91**
16.	Manganese as Mn	USEPA 3050B	mg/100gm	**1.20**
17.	Chromium as Cr	USEPA 3050B	mg/100gm	**0.21**
18.	Lead as Pb	USEPA 3050B	mg/100gm	**0.55**
19.	Cadmium as Cd	USEPA 3050B	mg/100gm	**0.32**
20.	Copper as Cu	USEPA 3050B	mg/100gm	**0.85**

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.

3.4 MONITORING PHOTOGRAPHS

Ambient Air Quality Monitoring

Noise Monitoring

Soil Sampling

Water Sprinkling

Blasting Notice

Loading Point

Plantation

Workers shelters

First Aid Kit

Water Sample

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY HARYANA
Bay No. 55-58, Prayatan Bhawan, Sector-2, PANCHKULA.

No. SEIAA/HR/2020/122 Dated: 17.02.2020

To

M/s Ridhi Sidhi KSM Resources,
Khatoni Number 1049, Behind Hotel Mejban,
Loharu Road, Charkhi Dadri, Haryana

Subject: **Environment Clearance for Mining of Stone along with associated minor minerals of Production Capacity- 5.8 MTPA at Kalali and Kalyana mining Project.**

This letter is in reference to your application addressed to M.S. SEIAA, Haryana received on 02.05.2019 and subsequent letters dated 20.05.2019 & 15.06.2019 seeking prior Environmental Clearance for the above project under the EIA Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., Form-1, Pre-feasibility report, copy of approved Mining Plan, EIA/EMP on the basis of approved TOR which was approved by MoEF & CC, GoI on 10.05.2018 and the additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) constituted by MoEF & CC, GoI vide their Notification dated 30.01.2019, in its meeting held on 13.06.2019 & 30.08.2019.

[2] The SEAC has examined the application and noted that the proposal Mining of Stone along with associated minor minerals of Production Capacity- 5.8 MTPA at Kalali and Kalyana having Mine Lease area 64.40 hectares.

1.	Area of the project	64.40 hectares
2.	Date of approval of ToR by MoEF & CC, GoI	10.05.2018
3.	Date of LoI granted by Mines & Geology Department, Haryana	26.03.2018
4.	Date of approval of Mining plan granted by Mines & Geology Department, Haryana	02.07.2018
5.	Location of Project	Village Kalali and Kalyana, Charkhi-Dadri, Haryana
6.	Project Details Khasra No	Mining of Stone alongwith Associated Minor Minerals 223 min, 224 to 228 & 72
7.	Project Cost	784 lakh
8.	Water Requirement	132 KLD For Dust suppression: 36 KLD For Plantation: 92 KLD For Drinking: 4 KLD
9.	Source of water	Water tankers
10.	Total cost of the project	784 lakhs
11.	Capital Cost and Recurring Cost for Air Pollution Control Measures	Capital Cost- 138.3 lakh Recurring cost- 253.8 lakhs including Monitoring cost.
12.	Capital Cost and Recurring Cost for Green Belt Development	Capital Cost-917.38 lakhs Recurring Cost-957.38 lakhs

13.	CER Budget	22.3 lakhs
14.	Production	5.8 MTPA The elevation of the hill top is 361 mRL, the ground level is 252 mRL and working is proposed 40 mts below ground level i.e. up to 212 mRL.
15.	Depth of the mining	40 mbgl
16.	Corner Coordinates of the lease area	Block: Latitude: 28° 33' 2.999" N to 28° 33' 1.930" N; Longitude: 76° 11'15.646" E to 76° 11' 15.303" E
17.	Green belt/ plantation	30.40 Ha
18.	Machinery required	Opencast Mechanized Method, Required Machinery: Shovel, Back Hoe, Rear Dumpers, Dozer etc.
19.	Power Requirement	30 KVA
20.	Power Back up	40 KVA
21.	Incremental Load in respect of: i) $PM_{2.5}$ ii) PM_{10} iii) SO_2 iv) NO_2	Maximum 0.40867 $\mu g/m^3$ 12.70720 $\mu g/m^3$ 2.58924 $\mu g/m^3$ 21.68 $\mu g/m^3$

The SEIAA in its 122nd meeting held on 22.01.2020 decided to agree with the recommendations of SEAC to accord Environment Clearance to this project by imposing the following conditions.

A: <u>Specific conditions</u>:-

1. The PP shall construct the three pucca link roads connected to the SH-17 at the mining site before the start of mining.
2. The PP shall construct the Haul roads of 10 meters wide as proposed in EIA
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 service of the roads within a 05 kms radius of the project is marinated and improved upon after the implementation of the project.
4. No tree cutting has been proposed in the project. 2500 Plants per hectare should be planted and maintained. The Existing trees 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 hectares area will be carried out including statutory boundary barrier,
5. The Project Proponent shall obtain all necessary clearance/permission from all relevant agencies before commencement of work.
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.
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.
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.
9. The PP shall manage the overburden at the mining site.
10. The PP shall create environment division unit in the project for implementing the conditions of Environment clearance.

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
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
13. The PP shall adhere to the approved mining plan and approved closure plan by the competent authority.
14. Action plan for the public hearing issues shall be complied in letter and spirit.
15. The Proponent will provide adequate sanitary facility in the form of mobile toilets to the labours engaged for the project work.
16. Project proponent 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.
17. 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
18. The PP shall restrict maximum mining depth 4meters above the Ground Water Table i.e. upto 214mrl .
19. The PP shall divert the first order stream in post mining to save the natural drainage system.

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.
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.
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.
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.
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.
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.
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.

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.
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".
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.
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.
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.
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.
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 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.

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. PM_{10}, $PM_{2.5}$, 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.

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 PM_{10} and $PM_{2.5}$ 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 equipments/ 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.

II. Water quality monitoring and preservation

i. In case, immediate mining scheme envisages intersection of 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.

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.

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.

iv. The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial Nallahs existing/ flowing in and around the mine lease and maintain its records. 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.

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.

vi. Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in

consultation with Central Ground Water Board/State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEF &CC annually.

vii. Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards 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.

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.

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.

ii. The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages 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/masks away from the villagers and keeping the noise levels well within the prescribed limits for day/night hours.

iii. The Project Proponent shall take measures for control of noise levels below 85 dba in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers 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 workers/ personals/ laborers are working without personal protective equipment.

IV. Mining Plan

i. 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 impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.

ii. The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from 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 approval 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.

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 becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office.

V. Land Reclamation

i. The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps 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 maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.

ii. The reject/waste generated during the mining operations 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 adhered to maintain the stability of waste dumps.

iii. The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.

iv. The slope of dumps 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 climatic 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 consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/geo-membranes/clay liners/Bentonite etc. shall be undertaken for stabilization of the 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 office of MoEF&CC/SEIAA.

vi. Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow 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.

vii. Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge 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 corners of the garland drains.

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 adhered to maintain the stability of dumps. The topsoil shall be used for 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 required 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) certificate for all the vehicles from authorized pollution testing centers.

ii. The Main haulage road within the mine lease should be provided with a permanent water sprinkling 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 equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas 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.

VII. <u>Green Belt</u>

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.

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 be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.

iii. The Project Proponent shall make necessary alternative arrangements for livestock feed by 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 implement 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.

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.

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 workers engaged in the mining activities, as per the DGMS guidelines. The records 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 may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.

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 risks 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 neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections 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.

iii. The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations 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 tests all tests would be carried out in a Lab accredited by NABH. Records 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, Aluminum, 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 be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).

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 second (FEV1),Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the 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.

v. The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

vi. Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps 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 structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

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.

IX. Corporate Environment Responsibility (CER)

i. The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. 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. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

ii. Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF & CC and its concerned Regional Office.

X. Miscellaneous

i. The mining lease holders shall, after ceasing mining operations, 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.

ii. 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.

iii. The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

iv. The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEF&CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

v. 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 Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF & CC.

vi. The concerned Regional Office of the MoEF & CC including other authorized organization shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF & CC officer(s) including other authorized officer by furnishing the requisite data/information.

vii. The SEIAA, Haryana reserves the right to add new conditions, modify/annual any of the stipulated conditions and/or to revoke the clearance if implementation of any of the condition stipulated by SEIAA, Haryana or any other competent authorities is not satisfactory.

viii. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

ix. All the other statutory clearances 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.

x. That the grant of this EC is issued from the environmental angle only, and does not absolve the project proponent from the other statutory obligations prescribed under any other law or any 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, rests 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 of National Green Tribunal Act, 2010.

Chairman,
State Level Environment Impact
Assessment Authority, Haryana, Panchkula.

Endst. No. SEIAA/HR/2020/ Dated:.....

A copy of the above is forwarded to the following:

1. The Director (IA Division), MoEF&CC, GoI, Indra Paryavaran Bhavan, Zor bagh Road-New Delhi.
2. The Regional office, Ministry of Environment, Forests & Climate Change, Govt. of India, Bay's no. 24-25, Sector 31-A, Dakshin Marg, Chandigarh.
3. The Chairman, Haryana State Pollution Control Board, C-11, Sector-6, Pkl.
4. The Director General, Mines & Geology Department Haryana, Chandigarh.

Chairman,
State Level Environment Impact
Assessment Authority, Haryana, Panchkula.

Registered Post

From

The Director ,
Mines & Geology, Haryana,
DHL Square, IT Park, 2nd Floor, Plot No. 9,
Sector-22,Panchkula.

To

M/s Ridhi Sidhi KSM Resources-JV,
Khatoni No-1049,
Behind Hotel Mejban, Loharu Road,
Charkhi Dadri,Haryana.

Memo No. DMG/HY/MP/Kalali-Kalyana /2023/ 3441
Dated Panchkula, the 16-06-23

Subject: **Approval of Modified Mining Plan along with Progressive Mine Closure Plan under Rule 70(1) of the State Rules, 2012 in respect of village Kalali & Kalyana, District Charkhi Dadri for Stone along with Assocaited Minor Mineral over an area of 64.40 hectares of M/s Ridhi Sidhi KSM Resources-JV, Charkhi Dadri, Haryana.**

Reference your letter dated 10.05.2023 on the above noted subject.

2. The modified Mining Plan along with Progressive Mine Closure Plan for Stone along with Associated Minor Minerals, over an area of 64.40 hectares of land situated in village Kalali & Kalyana of District Charkhi Dadri was approved vide memo no. DMG/HY/MP/Kalali & Kalyana/3341 dated 02.07.2018.

3. Now, vide letter under reference, you submitted the same to modify the earlier approved Mining Plan for the enhancing production capacity, keeping in view the availability of mineable reserves of kalali & Kalyana lease area and need of the lease company.

4. In exercise of the powers conferred by Rule 69 of the Haryana Minor Mineral Concession, Stoking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012, I hereby approve the above said Mining Plan along with Progressive Mine Closure Plan in respect of Kalali & Kalyana Minor Minerals Mine of stone over an area of 64.40 hectares of land situated in village Kalali & Kalyana of district Charkhi Dadri. This approval is subject to the following conditions:-

(i) That this modified Mining Plan and Progressive Mine Closure Plan is approved without prejudice to any other laws applicable to the mine/area from time to time whether made by the Central Government or State Government or any other authority;

(ii) That this approval of the modified "Mining Plan along with Progressive Mine Closure Plan" of Mining does not in any way imply the approval of the State Government in terms of any other provisions of the Mines and Minerals (Development & Regulation) Act, 1957 or Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012 or any other law including Forest (Conservation) Act, 1980 and Environment Protection Act, 1986 and rules framed there under;

(iii) That this modified "Mining Plan along with Progressive Mine Closure Plan" is being approved on the basis of data provided by you. In case, at any point of time any ambiguity in the same is found, the approval will be revoked with suspension of the mining operations and will be allowed to resume operation only after modification/rectification

of the same, if so required.

(iv) That this modified "Mining Plan along with Progressive Mine Closure Plan" is approved without prejudice to any other order or direction from any court of any competent jurisdiction and is for a period of five years only and shall not be make you entitled for any extension of the lease period;

(v) That all the norms and provisions as envisaged in the Mining Plan would be adhered to during the working of mine; and

5. Further, the actual mining for the enhanced production will be allowed to be commenced only after Prior Environmental Clearance from the Competent Authority as required under EIA notification dated 14/9/2006, as amended from time to time by the MoE&F, GoI and guidelines/ circulars issued in this behalf. **Till such time other approvals are obtained the M/s Ridhi Sidhi KSM Resources-JV, Charkhi Dadri, Haryana,shall undertake mining as per already approved Mining plan only.**

Encl: Mining Plan & Progressive
Mine Closure Plan (2 copies)

State Geologist,
for Director, Mines and Geology,
Haryana.

Registered Post

Endst. No.DMG/HY/MP/Kalali-Kalyana /2023/ Dated:

A copy along with a copy of the dully approved Mining Plan and Progressive Mine Closure Plan is forwarded to the Director Mines Safety, Room No. 201-203, 2nd Floor, B-Block, CGO Complex-II, Hapur Road, Ghaziabad for information and necessary action.

Encl: Mining Plan & Progressive
Mine Closure Plan

-Sd-
State Geologist,
for Director, Mines and Geology,
Haryana.

Registered Post

Endst. No. DMG/HY/MP/Kalali-Kalyana /2023/ Dated:

A copy along with a copy of the dully approved Mining Plan and Progressive Mine Closure Plan is forwarded to the Mining Officer, Mines and Geology Department, Charkhi Dadri for information and necessary action.

Encl: Mining Plan & Progressive
Mine Closure Plan

-Sd-
State Geologist,
for Director, Mines and Geology,
Haryana.

Endst. No. DMG/HY/MP/Kalali-Kalyana /2023/ Dated:

A copy is forwarded to Shri S.N. Sharma House No. 282, Sector 11-D, Faridabad – 121 001 (Haryana) w.r.t. his letter dated 10.05.2023 for information and necessary action.

-Sd-
State Geologist,
for Director, Mines and Geology,
Haryana.

MODIFIED MINING PLAN AND PROGRESSIVE MINE CLOSURE PLAN OF STONE ALONG WITH ASSOCIATED MINOR MINERALS

VILLAGE: KALALI & KALYANA
DISTRICT: BHIWANI
STATE: HARYANA
(Area-64.40 Hectares)

Department of Geology
Haryana Panchkula
APPROVED
With Conditions
शर्तों के साथ अनुमोदित
Vide Letter No. DMG/AW/MP/Kalali Kalyana/2023
दिनांक/Dated 16-6-2023
राज्य भू-विज्ञेता
State Geologist
3441 to 3444

Submitted To :

DMG, HARYANA

Project Proponent :M/s Ridhi Sidhi KSM Resources-
W, Khatoni number 1049, Behind Hotel Mejban
Litharu Road. Charkhi Dadri, Haryana

PREPARED BY

S.N. SHARMA
RQP/DDN/0135/2001-A

INDEX

LIST OF ANNEXURE

Sr. no.	Description	Annexure no.
1	LOI	1
2	Consent letter from Applicant to Prepare Mining Plan	2
3	Certificate of RQP	3

LIST OF PLATES

Sr.no.	Description	Plate no.
1	Location plan	1
2	Key Plan	2
3	Surface Geological plan	3
4	Geological cross sections	4
5	Plan showing the position of mine Working and dump at the end of 1st Year	5
6	Plan showing the position of mineWorking and dump at the end of 2nd Year	6
7	Plan showing the position of mine Working and dump at the end of 3rd Year	7
8	Plan showing the position of mine Working and dump at the end of 4th Year	8
9	Plan showing the position of mineWorking and dump at the end of 5th Year	9
10	Sections showing the position of mine Working and dump at the end of 1st to 5th Year	10
11	Progressive mine closure plan	11
12	Conceptual mining plan	12
13	Section showing the conceptual pit limit	13

CHAPTER-1

INTRODUCTION

Introduction

M/s Ridhi Sidhi KSM Resources-JV, Khatoni number 1049, Behind Hotel Mejban Loharu Road. Charkhi Dadri, Haryanastood the highest bidder (Rs. 25,98,000,00/-) for the auction of the Kalali and Kalyana mine for Road Metal and Masonry stone (Minor Minerals) of Dadri Tehsil, District : Charkhi Dadri (Haryana) through e-Auction held on 14.03.2018 and 15.03.2018.

The Letter of intent has been issued to M/s Ridhi Sidhi KSM Resources-JV by Director of Mines & Geology, State Govt. of Haryana, Chandigarh vide Memo No. DMG/HY/ML/Kalali & Kalyana /2018/1491 dated 26/03/2018for Mining of " Stone along with Associated minor minerals in Kalali & Kalyana over an area of 64.40 hectares in Tehsil Dadri district Bhiwani, Haryana for a period of 18 years (Annexure - I).

The previous Mining Plan was approved vide letter no. DMG/Hy/MP/Kalali & Kalyana/3341-44 dated 02.07.2018 by Department of Mines & Geology, Haryana.

The Environmental Clearance (EC) for Mining of Stone along with associated minor minerals of production capacity of 58 lac T per Annum at Kalali & Kalyana Mining Project was accorded vide letter no. SEIAA/HR/2020/122 dated 17.02.2020 by State Environment Impact Assessment Authority, Panchkula (Haryana).

Presently the mine is in operation after getting EC i.e. with effect from 17.02.2020.and the yearly production from this mine was as under:

Year	Quantity in MT
17-02-2020 to 31-03-2020	505096.99
2020-21	5430056.18
2021-22	3425129.24
2022-23	6309556.61
Total	15669839.02

In view of the availability of Minerals & demand in the Market and availability of technology for higher rate of production, applicant intends to got prepare the mining plan for 80 lacs MT/year instead of 58 lacs MT. Therefore to increase the production from 58,00,000Tonne / annum to 80,00,000 Tonne/annum by way of fully mechanized , systematic & scientific way of mining, using heavy earth moving machineries and conducting deep hole blasting a modified Mining plan is required. In view of the above the leaseholder has approached us to prepare a modified mining plan for 8.0 Million MT productions/per year. Therefore a modified mining plan with progressive mine closure plan is prepared & submitted for approval under Rule 71 of Haryana Minor Mineral Concession Rule 2012.

The applicant is involved in the mining business for last many years. The applicant can invest necessary funds for the scientific and systematic development of mines including land

rejuvenation and progressive reclamation programme and other measures necessary to protect the quality of the environment and human health etc.

The objective of preparation of this Modified Mining Plan and Progressive Mine Closure Plan is to fulfill the conditions stipulated by the Department of Mines & Geology, Haryana required under Haryana Minor Mineral Concession Rules, 2012.

Furthermore, mining of mineral is no doubt essential for industrial growth and for providing better standard of living. But, in order to maintain the balance in the eco-system and sustainability of the mining area and the nearby areas a scientific Mining Plan and Progressive Mine Closure Plan is required. Therefore, the same is prepared as per the guidelines for the Mining Plan/Mining Scheme covering all-important aspects required in respect of minor minerals.

CHAPTER-2

GENERAL DETAILS

1.0. General:

Name of the Applicant: M/s Ridhi Sidhi KSM Resources-JV

Address: Khatoni number 1049, Behind Hotel Mejban
Loharu Road. Charkhi Dadri, Haryana

Telephone No: 7056667112

E-mail: riddhisiddhiksmjv@gmail.com

Status of the Applicant:-This is Joint Venture Company named as Riddhi Siddhi – KSM Resources JV, Khatoni No.1049, Behind Hotel Majban, Loharu Road, Charkhi Dadri, Haryana.

Mineral or Minerals for which the Applicant has a mining lease:

"Stone along with Associated Minor Minerals"

Details of the land covered in the 'M.L. Area' is as under: -

District: Charkhi Dadri

State: Haryana.

Tehsil : Dadri.

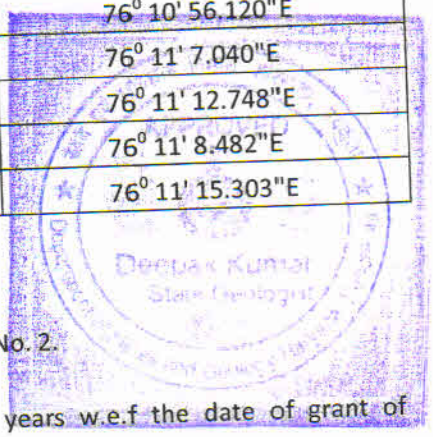
Village	Khasra no.	Area in hect.
Kalali&Kalyana	223min,224 to 228 & 72.	64.40 hectares

Latitude and Longitude of the project:

Latitude: 28° 33' 2.999"N to 28° 31' 45.671"N
Longitude: 76° 10'35.126"E to 76° 11' 29.468"E

Boundary Pillars Coordinates

Pillar No	Latitude	Longitude
1	28° 33' 2.99"N	76° 11' 15.646"E
2	28° 33' 2.974"N	76° 11' 25.913"E
3	28° 33' 1.776"N	76° 11' 25.458"E
4	28° 32' 58.492"N	76° 11' 29.468"E
5	28° 32' 55.281"N	76° 11' 28.770"E
6	28° 32' 47.478"N	76° 11' 25.665"E
7	28° 32' 41.724"N	76° 11' 22.252"E
8	28° 32' 39.194"N	76° 11' 18.065"E
9	28° 32' 22.107"N	76° 11' 6.504"E
10	28° 32' 17.091"N	76° 10' 56.771"E
11	28° 32' 13.884"N	76° 10' 51.878"E
12	28° 32' 5.401"N	76° 10' 48.472"E
13	28° 32' 5.671"N	76° 10' 47.298"E
14	28° 31' 57.513"N	76° 10' 43.859"E
15	28° 31' 51.822"N	76° 10' 40.668"E
16	28° 31' 48.062"N	76° 10' 39.633"E
17	28° 31' 45.671"N	76° 10' 38.098"E
18	28° 31' 46.411"N	76° 10' 35.126"E
19	28° 32' 5.215"N	76° 10' 43.724"E
20	28° 32' 14.954"N	76° 10' 48.395"E
21	28° 32' 24.699"N	76° 10' 56.120"E
22	28° 32' 43.742"N	76° 11' 7.040"E
23	28° 32' 53.927"N	76° 11' 12.748"E
24	28° 32' 57.441"N	76° 11' 8.482"E
25	28° 33' 1.930"N	76° 11' 15.303"E



These co-ordinates have been indicated on Plate No. 2.

Period for which mining lease is granted: 18 years w.e.f the date of grant of Environmental Clearance by competent authority or on expiry of a period of 12 months from date of issuance of LOI (Annexure-1)

1.6. Name, Address and registration number of the person who Prepared this plan.-

The applicant assigned the work of preparation of Modified Mining Plan along with Progressive Mine Closure Plan to Qualified Persons (QP):

S.N.Sharma
(Registration. No RQP/DDN/0135/2001/A.)
House No. 282, First Floor, Sector 11-D Faridabad-121006 (Haryana)
Phone no. 09560848579
E mail :snsharma@jbbtechnocrat.com

Consent letter for QP is attached as Annexure-3

2.0. Location and accessibility

The mine is located in the revenue estates of Villages Kalali & Kalyana in District : Charkhi Dadri, Haryana and is about 15 Kms from Charkhi Dadri. The lease area lies between the latitudinal parallel falling in the survey of India Topo Sheet No. 53-D/2. The lease area is located on the katcha road and then a metalled road up to village Kalali & Kalyana and is easily approachable from Charkhi Dadri, Bhiwani and other important towns.

A general location and vicinity map are attached as Plate no.1

Key plan: key plan on 1: 50,000 scale covering an area in a radius of 5 km showing salient features as per Rule 28(5) (a)of MCDR, 1988 has been prepared on Toposheet no.53 D/2 (Plate no. 2)the area is marked on the enclosed key map. The deposit lies between **Latitude:** 28° 33' 2.999"N to 28° 31' 45.67"N and **Longitude:** 76° 10'29.468"E to 76° 10' 35.126"E(Plate no. 2)

Infrastructure facilities are as detailed below

Nearest railway station	Charkhi Dadri (15 km)
Police station	Charkhi Dadri
Post office	Charkhi Dadri
Medical facilities	Charkhi Dadri and Bhiwani
Electricity	Electrical supply is available in all nearby villages.
Education facilities	Most of the nearby villages have secondary schools and for higher education institutes are available at Charkhi Dadri, Bhiwani, Rohtak & other nearby towns
Mode of transportation of mineral	Mineral stone will be transported by tippers/ trucks. Loaded trucks will travel on Kuccha road made for plying of trucks up to the crushers in the nearby area. Village Kalali & Kalyana is connected with metaled road which is further joins the Dadri and nearby villages.

PART-A

CHAPTER -3

GEOLOGY, LITHOLOGY& RESERVES

3.0 GEOLOGY, LITHOLOGY& RESERVES:

Physiographic, Drainage and Climate

There is no perennial river passing through the district. Physiographical the district consists of flat and level plain interrupted from place to place by clusters of sand dunes, isolated hillocks and rocky ridges. A few isolated rocky ridges elevated sharply from the plain occur in the south central portion of the district. The lease area is consists of Hilly terrain.

The lease area does not have any water body. There are dry nalahas in which water flows during rains for a short duration, otherwise they remain dry for the rest of the months. The rain water from these nalas drains either into local Johars or in agriculture fields.

Hydrogeology

The geological formation met within the district are ferruginouschiastolite schist associated argillaceous rocks of Aravalli group, Alwar quartzite of Delhi system, malani suite of volcanics of lower Vindhyan age, Older alluvial deposits of Quaternary age and Aeolian sands of recent age the out crops are, however, limited to small parts of the district , Older alluvium occurs extensively in the area consisting of inter bedded , lenticular, interfingering deposits of gravel sand ,soil , clay and Kanker mixed in various proportions. The youngest formations are Aeolian deposits, which are unconsolidated surface sands covering large area in the western part of the district, these deposits occur as sand dunes at the surface and consist of sands. Ground water occurs in alluvium and Aeolian sands and under lying jointed and fractured hard rock formations also form the aquifers, in alluvium, sands, silt, kankar and gravel form the water bearing zones. In-shallow aquifers zones, ground water occurs underwater table conditions whereas in the deeper zones, confined/semi - confined condition exist, hard rock's comprising of Aravalli group of rocks, Malani

suite of volcanics and Alwar Quartzites of Delhi system are water bearing but have yet not been explored thoroughly.

CLIMATE& RAINFAL:

The climate of Bhiwani district can be classified as tropical steppe, semi -arid and hot which is mainly dry with very hot summer and cold winter except during monsoon season when moist air of oceanic origin penetrates into the district. There are four seasons in a year. The hot weather season starts from mid-March to last week of the June followed by the south- west monsoon which lasts up to September. The transit ion period from September to October forms the post –monsoon season. The winter season starts late in November and remains up to first week of March. The normal annual rainfall of the district is 420 mm which is unevenly distributed over the area 22 days. The south west monsoon sets in from last week of June and withdraws in end of September, contributed about 85% of annual rainfall. July and August are the wet test months. Rest 15% rainfall is received during non-monsoon period in the wake of western disturbances and thunder storms. Generally rainfall in the district increases from southwest to northeast.

Normal Annual Rainfall:	420 mm
Normal monsoon Rainfall:	355 mm
Temperature	
Mean Maximum:	41oC (May & June)
Normal Rain days:	22

REGIONALGEOLOGYOFTHEAREA

Regionally the area belongs to the Alwar Series of Delhi Super Group. The regional stratigraphic sequence in Mohindergarh and Bhiwani District is as follows:

	Ajabgarh series	Biotite-schist, phyllites, quartzite and impure biotitic limestones and calciphyres.
Delhi System	*Alwar series*	Quartzites, arkose, conglomerates and mica-schists with bedded lavas.
	Rialo series	Rialo limestone and Rialo marble, quartzite

LOCAL GEOLOGY:

The areas were surveyed geologically. A Geological plan (Plate no.3) and sections (Plate no.4) are prepared on 1:1000 scales.

DESCRIPTION OF FORMATION

The different formations of the area belong to Alwar Series of Delhi Super Group.

The following sequences have been observed in the area.

- Alluvium
- Quartzite (Road metal and masonry stone)

The description of different formation found in the area is as under

QUARTZITE (BUILDING STONE)

This type of formation covers the major part of the hills in the area.

It is reddish, bluish and gray in color, semi friable to hard and fine grained in nature.

Quartzite occurs mostly as building stone extending over the entire length and width of the lease area.

STRUCTURE

The general strike of quartzite is N 20^0-25^0 E to S 20^0-25^0 W with dips of 45^0 to 60^0 due East.

The strike and dip of the quartzite bands is not uniform since there are structural disturbances.

ORIGIN AND CONTROL OF MINERALISATION

Quartzite is a metamorphosed product of sand stone, which have undergone low degree metamorphism.

EXPLORATION & METHOD OF RESERVE ESTIMATION

The entire lease area is prominently marked by outcrops of building stone. Moreover, the area has undergone quartzite (building stone) mining in the past; therefore, no fresh exploration to prove the geological reserves was required as abundant pits of quartzite have prominently exposed across the formation.

RESERVES

Methods of estimation of reserves of quartzite:-

1) The total mineral resources and reserves have been calculated by cross-sectional area method. In this method the cross-sectional area of section line is multiplied by the influence of the section line to arrive at volume.
2) The reserves are calculated on the basis of established width, thickness and strike length/influence of the mineralized formation in the area where good pits are available such area in put under proved category.
3) The entire reserves of quartzite are put under proved category above valley level i.e. up to 250 MRL. Next 30 meters i.e reserves between 250MRL and 220 MRL are considered as probable and further 15 meters i.e up to 205 MRL as possible.
4) The bulk density of the stone is considered as 2.5 based on the experience of the nature of stone in the nearby mines .The most of the surface of the proposed area is weathered quartzite. Therefore the nature of the rock and its characteristic are considered as that of mineral occurrence in the similar quartzite/Building stone mines .The actual weight of each tone of mineral is usually comes out 2.5MT/Cubic meter..Further as per the geological reports of minerals the bulk density of pure Quartz is 2.6 . The rock types in the Kalyana and kalali are mainly quartzite with thin clay bends. A rock of same type can have a range of densities. This is partly due to different rock of same type contains different proportions of minerals. Quartzite can have quartz content anywhere between 50 to 90 %. In addition to it porosity also plays a very vital role in deciphering the bulk density. The same is not uniform throughout the mineral deposit. Therefore an average of 2.5 is considered for the proposed mines.

1. The Section wise reserves for road metal and masonry stone (quartzite) are summarized here below: -

2.

Cross section line	Cross sectional area	Influence length(m)	Bulk Density	Proved Reserves MT	Probable Reserves MT	Possible Reserves MT
A-A'	3870 12900 6450	150	2.5	1451250	4837500	2418750
B-B'	9216 14400 7200	200	2.5	4608000	7200000	3600000
C-C'	19640 14700 7350	200	2.5	9820000	7350000	3675000
D-D'	15420 11340 5670	200	2.5	7710000	5670000	2835000
E-E'	16756 9600 4800	200	2.5	8378000	4800000	2400000
F-F'	24250 9300 4650	200	2.5	12125000	4650000	2325000
G-G'	12336 8760 4380	200	2.5	6168000	4380000	2190000
H-H'	2980 4200 2100	200	2.5	1490000	2100000	1050000
I-I'	2700 3240 1620	200	2.5	1350000	1620000	810000
J-J'	160 2340 1170	200	2.5	80000	1170000	585000
K-K'	0 2080 1200	200	2.5	0	1040000	600000
L-L'	0 2600 1560	140	2.5	0	910000	546000
Category-wise reserves				53180250	45727500	23034750
Total Reserves				12,19,42,500 MT		

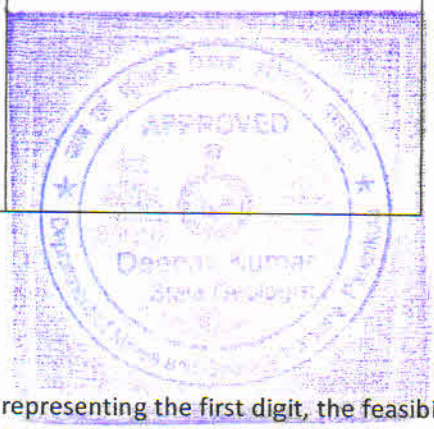
Total Resources and Mineable Reserves

al Resources	Geological erves	eserves 5m ty barrier	blocker barrier benches	frastructure riers	eable
9,42,500	19,42,500	5,000	2,500		0,65,000

Life of the mine =10,90,65,000/8000000=13.63 or say 14 years

3.4.1 Categorization of reserves as per UNFC codes

Mineral Resources (A+B)		eserves of Quartzite(RM&MS)
eral Reserves ved Mineral Reserves 2. Probable Mineral Reserves 3.Possible Mineral Reserves	122	,80,250 ,27,500 ,34,750
haining Mineral sibility Mineral Resources easibility Mineral Resources asured Mineral Resources cated Mineral Resources rred Mineral Resources onnaissance Mineral Resources	1,221 & 222	75,000 02,500



C. Details of UNFC classification

UNFC is a three digit code based system. The economic viability axis is representing the first digit, the feasibility axis the second digit and the geological axis the third digit. Each digit provided Codes 1, 2 and 3 in decreasing order. The highest category of resources under UNFC system has code (111) and for lowest category the code is (334).

Code (111): This code is provided for the economically mineable part of the measured mineral resources (proved category reserves).

Code (121): This code is provided for the economically mineable part of the indicated mineral resources (probable category reserves).

Code (211): The part of the measured mineral resources (proved category), which as per feasibility study has not found economically mineable. The reserves blocked in 7.5 m buffer zone and 45 m from permanent structure.

Code (222): The part of the indicated mineral resources (probable category) which as per feasibility study has not been found economically mineable. The reserves blocked in 7.5 m buffer zone and 45 m from permanent structure.

Code (333): Tonnage, Grade and mineral contents are to be estimated with low level of confidence and resources are also inferred from geological reserves.

3.5 Grade& Uses of Stone: -

Quartzite/ Building stone available in the area are useful as road metal and masonry stone. This stone is having very good strength. The raw/lumps stone of the Kalali-Kalyana mine area is crushed as rori , chips, and dust/crushed stone in the nearby stone crushers. This material is finally used as road metal and for RCC material in building industry mostly in the NCR area.

CHPATER-4

MINING

Site Appreciation

Our experts (Geologist, Mining Engineer) visited the mine site and found that the allotted area comprised of long and narrow hill range. During the earlier visit of the lease area, the area was covered by old pits (broken area) which was about 17.78 Hectares. Now, during the last three years i.e 17.02.2020 onwards the mining of the mineral is being undertaken in systematic and scientific manner as per theapproved Mining Plan and working of benches is being undertaken from 355 msl to 225 msl.

Pre-production Activities:

As a pre-production activity, roads from crusher to top most entry to the initial mining area, from mining faces to the proposed dump area, from ground level to the mining area, to the mines office complex, and to the garage / workshop have been developed. Access roads / haul roads from topmost bench to benches at lower levels are being developed with the advancement of working faces. As mining operations advance to lower levels, larger face lengths and width shall be available. Face management, which is a continuous process, shall be taken into account to secure shortest (average) lead distance up to crusher / dump yard as also to prevent clustering of dumpers. Following activities shall be/being undertaken during quarry development phase:

- Removal of vegetation and top soil to expose quartzite beds
- To make the access road to the mine working area.
- Provision and construction of access roads from ground level to mines office complex, workshop, entrance to mine faces
- Development of haulage road from proposed crusher location to the floor of initial mining areas at a slope of 1 in 20 is proposed (not exceeding 1 in 16 except for ramps)
- Making of parapet wall/retaining walls along gradient of haul road.

- Construction of mine office, first aid station, crèche, canteen, workshop and other ancillary infrastructural facilities shall also be undertaken during first and second year of developmental activities. This has been done.

MINING OPERATIONS:

The mining operations will comprise of following activities for excavation of mineral.

a) Drilling of "Down-the-Hole" holes as per specified pattern.

b) Blasting of holes through Primary Blasting

c) Breaking/Sizing of big boulders through Hydraulic Rock breakers. No secondary blasting shall be undertaken.

d) Loading of blasted material by deploying hydraulic excavators

e) Transportation of material to Crusher

Thus, these mining operations shall be carried out by fully mechanized opencast method utilizing Heavy Earth Moving Equipment (HEMM) in conjunction with deep hole drilling by crawler mounted DTH drills and blasting. To start with benches shall be kept narrow and then gradually widened. To the extent possible, benches shall be kept along dip and advanced along the strike to give a fairly well blended material in each bench. The direction may be varied in due course based on experience gained, to give wider benches, longer faces and proper alignment along haul roads / ramps.

It is proposed to adopt mechanized opencast mining method for exploitation of the mineral. Drilling and blasting shall be required to dislodge the mineral. The mining method involves breaking the rocks with explosives, loading the material with excavators and haulage with dumpers.

Breakup of land use (Existing, after 5 Years and at Conceptual Stage) in the lease area (In Hectares) Kalali & Kalyana Mine

Sr.no	Details	Existing land use (ha)	At the end of 5th year (ha)	At Conceptual Stage
1	Quarry Area	17.78	55.40	Nil
2	Infrastructure	0.50	0.65	0.15
3	Haulage Road	2.85	4.15	1.00
4	Agriculture	0.00	0.00	-
5	Plantation	0.80	3.60	30.40
6	Water Body	0.00	0.00	32.85
7	Habitation	0.00	0.00	0.00
8	Undisturbed land	42.97	0.00	---
9	OB Dump	0.00	0.60	----
	Total	64.40	64.40	64.40

Pit Design Parameters:-

In view of the geological setting of the deposit it is proposed to work the mine by mechanized open cast method using shovel and dumper combination. The rate of production is proposed 80,00,000 MT/year (26,667 T per day) by the following mentioned parameters so that not only the production is achieved but mine also takes a proper / regular shape and size .

Sr.no	Particulars	Dimensions with unit
1	Final Bench Height and width	9mx6.5m (with intermediate safety berm of 8 m)
2	Working Bench Width	15-20m
3	Overall Ultimate pit slope	49^{0}
4	Bench Alignment and bench slope	Parallel to each other; 80^{0}
5	Face length	All along the strike length
6	Depth of pit (Below General Ground)	40 m
7	Blast hole diameter	100-110mm
8	Inclination of blast hole	Vertical
9	Width of Haul Road	12m
10	Gradient of haul Road	1 in 16

I) Ultimate Pit slope

II) Bench Height and width

III) Face length

IV) Bench Alignment

V) Direction of face advance

VI) Depth of pit.

Ultimate pit slope: -

Quartzite rock is hard and compact. Once the pit reaches the ultimate limit which is proposed 210MRL, it is necessary that it does not start collapsing due to weathering and other effects. This can be achieved by planning ultimate pit slope at a maximum

of 49 degree to avoid collapse of the pit sides. There is no overburden except a thin sol cover. Entire mineral produced will be useful.

Bench height and width

Since the host rock quartzite is hard and compact, the same parameters are considered for making benches. In view of mechanized method of mining to be adopted, the bench height is proposed 9.0mtrs. Operating bench width will be 15-20 mtrs which will finally reduce to 6.5 mtrs while working bench below with intermediate safety berm of 8 m. Formation of benches in this manner will result in an overall safe slope of 49^0 or less in the ultimate pit position.

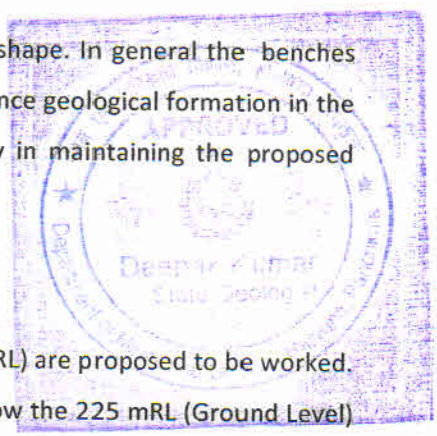
Face length :-

The following parameters have been followed to arrive at the face length to facilitate the required production of 80, 00,000 MT mineral per annum.

Since one pit is planned to develop in the area to obtain targeted production, the optimum face length available along the strike length is sufficient to cater to the optimum production required. The face length will attain the maximum length at the end of 1 st year of the plan period.

4.1. iv Bench alignment: -

The benches are gradually aligned to give a regular shape. In general the benches will advance in all directions parallel to each other. Since geological formation in the area is of simple nature, there will not be difficulty in maintaining the proposed bench alignment.



4.1.V Depth of pit:

The reserves up to 40m below the valley level (190 MRL) are proposed to be worked. The workings will start at 355 MRL and will reach below the 225 mRL (Ground Level) at the end of 5th year as detailed in the year wise plans Plate no.5-9 and Sections plate no.10.

The elevation of the hill top is 361 MRL, the ground level is 252 MRL and working is proposed up to 190mRL at Conceptual stage 62 mts below ground level i.e. up to 190 MRL.

Development during the First Five Years

Presently the lease area is being worked scientifically and systematically. The construction of garland parapet, wire fencing etc, shall be provided year wise and will be shifted along with the development of pit. A mineral and dump stack yard (2.34 hectares) area is ear marked. Soil stack yard (100mx80m) is proposed to stack the soil generated during the mining.

For making stacking yard, ground is almost level. A boundary wall around soil stack yard shall be made. The position of fencing, drain, toe wall, dump yard size and soil stack yard size, plantation etc at the end of 5th year is as detailed below and shown in the Year wise Plans at Plate no.5-9 and Sections Plate no.10.

Year	Toe wall around dumps	Drain at the end of 5th year	Drain around dumps	Fencing at the end of 5th year
At the end of 5thyear	770m	2090 m	1500m	6200m

Dump yard size = 100mx80 m

Temporary Mineral Stack Yard= 140x100

Working area occupied at the end of 5th year will be= 55.40 Hectares

Approach road from mine to mineral stack yard, soil stack yard and dump yard and site services shall also be made.

Year wise Production &Development for the first five years

It is proposed to work the mine from top down ward for which a mine road is proposed between 250 MRL to 360 MRL. About 1136mtr length will be developed during first year. During the preparation of road mineral will be mined (1136x10x5x2.5=1.15lakh ton which is in progress gradually. The position of benches and the production from individual benches year wise is as follows:-

Year	Total Production during year in lakh Tones
First	70.00
Second	75.00
Third	80.00
Fourth	80.00
Fifth	80.00

The position of bottom of pits at the end of each year will be s under

Year	Pit Bottom Level in mRL North block	South Block
1st	297 mRL	225mRL
2nd	279mRL	225mRL
3rd	261mRL	225mRL
4th	261mRL	225mRL
5th	252mRL	225mRL

During the plan period the benches will be advanced as shown in plat No. 5-9 and sections plate no.10 to achieve the targeted production.

Proposed rate of production when the mine fully developed

The proposed rate of production of 80, 00,000 MT/year shall be achieved during the start of the 3rd year. The rate of production shall be maintained for the mining plan period for next 5 years.

Mine able Reserves and Anticipated Life of the mines

As discussed in the chapter of geology, the in-situ Geological reserves are calculated 12,19,42,500 MT.As per the proposed method of mining and occurrence of mineral geological reserves (10,90,65,000 MT) are mineable. The life of the mine is therefore tentatively assessed as 14 Years at the proposed rate of 80, 00,000tons of mineral / year. However life of mine shall depend on the rate of production to be proposed in next consecutive plan periods and subject to the review of geological and mineable reserves in next plan periods.

Proposed Method of Mining

The present mining operations are designed to be carried out by mechanized open cast mining method. The entire mining operations proposed are mechanized. Apart of mining, the loading and transportation up to stack yard shall be done mechanically. It is proposed to load in the trucks/dumpers directly to the destinations and mineral is not usually put up in this stack yard to avoid the double handling. In the present operation the bench height shall be 9mtrs. Each bench will advance one by one. While carrying out the mining operations in accordance with the above provision the overall pit slope shall be maintained the 49^0 the mineral bearing rocks being hard and compact.

Conceptual Mine Plan Parameter

The first mining plan was prepared with a project life of 18 years.Now about 4 years passed. Therefore the balance life period is about 14 years. The mining is conceived as one long open mine pit. The opencast mechanized mining method has been considered feasible for exploitation of the deposit.

The aspects of geotechnical behaviour of quarry rocks have also been taken into consideration to ascertain the suitable mine pit slopes. The major rock of the quarry is quartzite with clay intercalations and could be classified in the category of harder rock strata. The conceptualized mine pits are based on appropriate overall slope angle broadly confirming to prevailing norms of mine safety department for harder rock strata. The broad configurations of mine pit slope are shown in the enclosed drawing (Plate2) and the broad details are as follows –

- Overall Slope – 49 degree
- Bench Height – 9 meters
- Bench Width – Operating width 15-20 mtrs which will finally reduce to 6.5 meters with intermediate safety berm of 8 mtrs width.
- Individual Bench Slope – 80 degree
- Burden of Holes - 4 meters
- Spacing of Holes - 5 meters

The breakup of present land use and at the end of 5^{th} year and conceptual stage is detailed as under

Breakup of land use (Existing, after 5 Years and at Conceptual Stage) in the lease area

(In Hectares) Kalali & Kalyana Mine

Sr.no	Details	Existing land use (ha)	At the end of 5th year (ha)	At Conceptual Stage
1	Quarry Area	37.28	55.40	Nil
2	Infrastructure	0.50	0.65	0.15
3	Road	--	4.15	1.00
4	Agriculture	0.00	0.00	-
5	Plantation	0.80	3.60	30.40
6	Water Body	0.00	0.00	32.85
7	Habitation	0.00	0.00	0.00
8	Undisturbed Land	25.82	0.00	---
9	OB Dump	0.00	0.60	----
	Total	64.40	64.40	64.40

Extent of Mechanization:

Description for the calculation of adequacy and type of machinery and equipment proposed to be used in different mining operations are enumerated below:-

Targeted Production= 80, 00,000 MT per Annum

Working days per annum = 300

Production per day = 26,667 MT

Drilling

a) Tonnage of mineral excavated per hole = 9m x 4m x 5m x 2.5= 450 T

b) No. of holes required per day= 26,667 T/450 T = 60

c) Total meterage of drilling/day= 60 holes x 9m = 540 m

d) Capacity of each drill machine= 10 m per hour or 60 m per shift or 120 m per day

e) Hence no of drill machines= Drilling required per day/capacity of drilling per day = 540/120 = 4.50 say 5 Nos of drill machine

Thus, It is proposed to use drill machines of 100 - 110mm dia. As per the production target of about 26667 MT (10,667 M^3per day) it is estimated that about 60 holes of 9 m depth per day (540 m per day) will be required to maintain the proposed production targets. Therefore at least 5 drill machines of higher drilling rate (10 m/hour) with availability of 75% of time as well and 80 % utilization hours will be required.

The details of machinery and performance will be as under

Sr.no	Details	
1	A machine can drill total of meters in a shift	100-110m
2	Total drill meters required per day	486 m
3	Total no of machines required per day	4.05
4	20% consideration for maintenance and spare capacity	0.81
5	Total no of machines required (4.86 say 5)	5

Loading Equipment, Haulage and Other Mining Machinery

Hydraulic Excavator:-

The productivity of excavator is decided based on the following consideration i.e. two shifts per day working and 300 days in a year

	Excavator Category	Capacity
A	Diesel Hydraulic shovel	3.2 m^3
B	Fill Factor	90 %
C	Tonnage Factor	2.50
D	Availability of excavator	80 %
E	Utilization of excavator	80%

For arriving at the rate of production per hour in case of the mine under reference, the following formula is applicable:

$$Q = C \times F \times T \times BD \times BF/Tc$$

Where Q= Per hour handling of excavator in T

C= Bucket Capacity in cubic metres = 3.2 cum

F = 0.90

T = Time in seconds = 3600

Bf = Operating efficiency = 0.90

BD = Blasted Mass = 1.4

Tc = Time cycle per pass at 90 degree swing = 45 seconds

Thus Q = 3.2 x 0.9 x 3600 x 1.4 x 0.90/45 = 290 T per Hour

Per Excavator Per Day Output = Hourly capacity of excavator x effective hour per day = 290 x 12 = 3480 T

Therefore No of Excavators required = Total Handling per day/Handling by excavator per day = 26667 / 3480 = 7.66 say 8 Nos

Hauling Equipment:

For calculation of number of dumpers, it is the lead from the mine to the destination which will determine the no of dumpers. Based on calculations, it is established that total 18 Nos of 25 MT capacity dumpers would be sufficient to execute the rated production at an average lead of 1.5 Km (one way with average speed of dumper 20 Kmph) However, including the standby equipment; total requirement of dumper works out to be 28 Nos. of 25 MT capacities.

Hydraulic Rock Breaker:

To minimize the secondary blasting and to contain the accidents due to fly rocks, it is proposed to deploy Hydraulic rock breakers for breaking of big boulders generated consequently upon primary blasting, at working face site.

Thus, the total population of the equipment and other ancillaries as per above assumptions and calculations, are summarized in below table:-

S.No.	Equipment	Size	Nos
1	Hydraulic Excavator for Loading of mineral	3.2cu.m	8
2	Rock breaker (Hydraulic Excavator) as substitute to secondary blasting	1.6 cum	2
3	Rear dumpers for transportation of mineral from mine to Destination	25T	28
4	Drill Machine with compressor of 365 cfm capacity.	100-110mm	5
5	Track chain Dozer	350 HP	1
6	Pay loader (General Purpose, loading etc.)	145 HP	1
7	Crane	40T	1
8	Tyre handler	-	1
9	Water sprinkler	10 KL	2
10	Mobile Maintenance van		1
11	Tractor	50hp	1
12	Tractor mounted compressor		1

Requirement of Diesel for operations of Heavy Earth Moving Machines and ancillary equipment :

Quantity of Diesel / Energy fuel Consumption per day: -

S. No.	Machine	Details of Diesel requirements	Consumption of Diesel (in ltr.)
1.	Dumper	(Considering diesel consumption by the dumper is 3 km / ltr.) Total Diesel consumption / 28 Dumper = 32 x 28 = 704ltr.	896 ltr
2.	Excavator & Rock Breaker	Hourly Consumption = 15ltr / Hour/ excavator 10hour diesel consumption = 15x 10x 9= 1350ltr.	1350 ltr.

3.	Dozer& Pay-loader	Diesel consumption 12ltr / hr 10hrs diesel consumption = 12 x10 = 120ltr x2= 240	240 ltr
4.	Wagon Drill/ Air Compressor	No. of Compressor- 5 compressors Diesel consumption by 5 compressors in 10 hour working = 5 x15 x 10 = 750 ltr.	750 ltr.
6.	Explosive Van		40ltr
7.	Maintenance Van		60ltr
8.	Water Tanker		30ltr
9.	Light Vehicles		30ltr
		Total Diesel requirement	**3396 ltr / day**

CHAPTER-5

BLASTING

5.1 Drilling and blasting Parameters:-

Blasting Parameters:-

Following parameters were considered for proper and adequate blast design.

- Drilling
- Selection of Hole Diameter
- Required Production
- Terrain
- Material Characteristics
- Type and Size of Excavating and Hauling Equipment
- Bench Height
- Explosives Type and Size
- Burden and Spacing
- Stemming
- Timing/Delays
- Scaled Distance (Peak Particle Velocity)
- Weather and Atmospheric Conditions
- Time of Day

For mining of building stone drilling and blasting is required. The job of drilling and blasting is of continues nature

Considering the time frame of mining and total requirement of material, the daily mineral production works out to be 26667 MT (10667 cum) The above target will be utilized to frame the pattern and size of blast. The blasting parameters are described as below.

Item	Values
Bench height (m)	09
Hole depth (m) (including sub-grade drilling)	10
Burden (m)	4.0
Spacing (m)	5.0
Volume (m^3)	4x5x9= 180
Tonnage yield (t)	180x2.5=450 T
Powder Factor (assumed)	6 T/kg of explosive
Charge per hole (kg)	450 T/6 = 75 Kg
Total quantity of rock to be Broken per day (ton)	80,00,000 t/ 300 days = 26667 TPD
Explosive required for blasting per day	26667/6 =4,444 kg
Blasting Frequency (Every day)	1
Explosive required per blast per day	4,444 kg
No. of holes per day	26667 T (Production/day)/450 t (Tonnage per hole)=59.26 say 60 Holes
No of holes per blast	60

Type of Explosives

Emulsion Primer charge

Slurry Explosive column charge

Initiation System and minimum charge per delay

Nonel Delay milliseconds delay detonators (17,25& 43)

Drilling pattern staggered

Firing pattern V pattern

Secondary Blasting

Secondary blasting will not be carried out. Large size stone/boulders shall be broken by deploying hydraulic rock breakers.

Storage of explosive

.Keeping in view the consumption of explosive, one permanent magazine for storage of explosives (10 T capacities) and storage of initiation system will be arranged. All statutory provisions as under the Explosive Act -1888 and modifications thereof are proposed to be followed.

Or Alternatively

Tie up with explosive supplier maintaining an explosive magazine with Licence to Purchase, Sell and Use. This agency can bring explosives (sell) as per requirement and use in the project premises. This system will avoid construction of explosive magazine in mine premises

Relevant Provisions under MMR-1961 regarding blasting

Regulation160. Blasters –

1. The preparation of charges and the charging and stemming of holes shall be carried out by or under the personal supervision of a competent person, in these regulations referred to as a 'blaster'. The blaster shall fire the shots himself.
2. No person shall be appointed to be a blaster unless he is the holder of Manager's, Foreman's Mate's or Blaster's certificate.
3. The manger shall fix, from time to time, the maximum number of shots that a blaster may fire in any one shift; and such number shall not unless the Regional Inspector by an order in writing and subject to such conditions as he may specify therein otherwise permits, exceed 80 in case they are fired electrically or by means of an igniter cord and 50 in other cases, and shall be based upon –
    - the time normally require to prepare and fire a shot in accordance with the provisions of these regulations;
    - the time required for that blaster to move between places where shots are fired;
    - the assistance, if any, available to him in the performance of his said duties; and
    - any other duties assigned to him, whether statutory or otherwise :

    Provided that the Director General of Mine Safety may, by an order in writing and subject to such conditions as he may specify, permit the manager to fix the maximum number of shots to be fired by a blaster differently fromthe limits specified in this sub-regulation.
4. The number of detonators issued to, and in the possession of, a blaster during his shift shall not exceed the maximum number of shots that he is permitted tofire under sub -regulation (5).

Regulation: 161 Shot firing tools –

1 Every blaster on duty shall be provided with –

a suitable electric lamp or torch ;

b a tool, made entirely of wood, suitable for charging and stemming shot holes;

c a scraper made of brass or wood suitable for cleaning out shot holes;

d where fuses are used, a knife for cutting off fuses an, unless machine capped fuses are provided, also a pair of suitable crimpers for crimping detonators; and

e where detonators are used, a pricker made of wood or a non-ferrous metal for priming cartridges.

2 No tool or appliance other than that provided as above shall be used by a blaster.

Regulation 162. Drilling, charging, stemming and firing of shot holes –

1 No drill shall be used for boring a shot hole unless it allows a clearance of at least 0.3 centimeter over the diameter of the cartridge of explosive which it is intended to use.

2 No shot hole shall be charged before it is thoroughly cleaned.

3 Before any shot hole is charged, the direction of the hole shall, where practicable, be distinctly marked on the roof or other convenient place.

4 No detonator shall be inserted into a priming cartridge until immediately before it is to be use. Detonators once inserted into a priming cartridge shall not be taken out.

5 Unless otherwise permitted by the Chief Inspector by an order in writing and subject to such conditions as he may specify therein, the charge in any shot hole shall consist of one or more complete cartridges of the same diameter and the same type of explosive.

6 The blaster shall, to the best of his judgment, ensure that no charge in a shot hole is over-charged of under-charged, having regard to the task to be performed.

7 No shot hole shall be fired by a fuse less than 1.2 metres in length.

8 Every shot hole shall be stemmed with sufficient an suitable non- inflammable stemming so as to prevent the shot from blowing out. Only sand loosely filled in, or soft clay lightly pressed home, or a compact but not hard mixture of sand and clay or water shall be used as stemming.

9 In charging or stemming a shot hole, no metallic tool, scraper or rod shall be used; an no explosive shall be forcibly pressed into a hole of insufficient size.

10 No shot shall be fired except in a properly drilled, charged and stemmed shot hole.

12 All surplus explosives shall be removed from the vicinity of a shot hole before a light is brought near it for the purpose of lighting the fuse.

13 As far as practicable, a shot shall be fired by the same blaster who charged it.

14 In any mine in which explosives other than gunpowder are used, every shot shall, if so required by the Regional Inspector, be fired electrically.

15 No more than 10 holes shall be fired in one round unless they are fired electrically or by means of an igniter cord.

16 No shot hole shall be charged except those which are to be fired in that round; and all shot holes which have be charged shall be fired in one round.

17 Where a large number of shots has to be fired, a shot firing shall, as far as practicable, be carried out between shifts.

18 No person shall remove any stemming otherwise than by means of water or an approved device, or pull out nay detonator lead or remove any explosive from any charged shot hole.

Regulation 163 Electric Shot firing.– Where shots are fired electrically, the following provisions shall have effect, namely :-

1

A No shot shall be fired except by means of a suitable shot firing apparatus ;and the number of shots fired at any one time by the apparatus shall not exceed the number for which it is designed.

B Every electrical shot firing apparatus shall be so constructed and used that –

i it can only be operated by a removable handle or plug. This handle or plug shall not be placed in position until a shot is about to be fired and shall be removed as soon as a shot has been fired; and

ii the firing circuit is made an broken either automatically or by means of a push-button switch.

C

(i) No apparatus shall be used which is defective; an every apparatus shall be once at least in every three months, be cleaned an thoroughly overhauled by a competent person.

2 No current from a signalling, lighting or power circuit shall be used for firing shots.

3 The blaster shall –

(a) retain the key of the firing apparatus in his possession throughout his shift;

(b) use a well- insulated cable of sufficient length to permit him to take proper shelter, and in no case, shall this cable be less than 20 meters in length;

(c) before coupling the cable to the firing apparatus, couple up the cable himself to the detonator leads;

(d) take care to prevent the cable from coming into contact with any power orlighting cable or other electrical apparatus;

(e) take adequate precautions to protect electrical conductors and apparatus from injury;

(f) himself couple the cable to the firing apparatus; an before doing so, see that all persons in the vicinity have taken proper shelter as provided under regulation 164; and

(g) after firing the shots and before entering the place of firing, disconnect the cable from the firing apparatus.

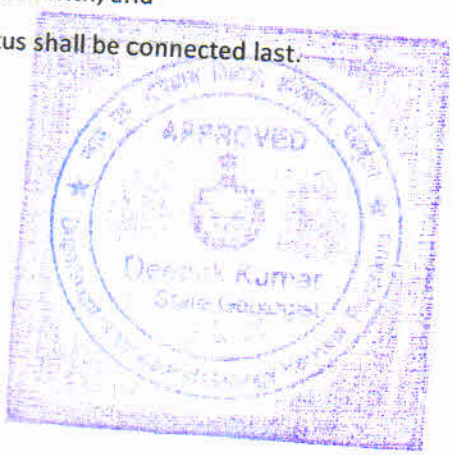
4 Where more than one shot are to be fire at the same time:-

(a) care shall be taken that all connections are properly made;

(b) all shots if fired belowground shall be connected in series;

(c) the circuit shall be tested either for electrical resistance or for continuity before connecting it to the firing apparatus. Such a test shall be made with an apparatus specifically designed for the purpose and after the provisions of regulation 164 have been complied with; and

(d) the cable to the shot firing apparatus shall be connected last.



CHAPTER- 6

MINE DRAINAGE

GENERAL:

Open cast mining projects requires effective arrangements for drainage and provision of adequate dewatering capacity in the pits under mining. In the area under mining water can reach the workings from surface drainage, rainwater and due to seepage through joints and fissures. Therefore, the problem can be solved by preventing drainage water from entering the pits on one hand and pumping out the percolated and direct rain water from the pits on the other hand . The general water table around the lease area is at 63 meters below ground.

Drainage Around and Within Mine:

The hill is mainly sloping both east and west direction. Initial mining shall be mainly above the general ground level with only one side of the pit having slope along hill and other side will remain open. Such situation do not warrant any water accumulation as natural drainage will be available from the other open side of the pit.

However, as the mine progresses and mining continue below the general ground level as envisaged during later part of lease period, the mining area will become a depression, which may warrant accumulation of water during rainy season. A scheme is proposed to prevent the accumulation of such water.

1) Garland drainage as shown in the mine plan (Plate no 5-9) shall be made all round the pit to prevent the entry of surface/ rain water inside the pits.

2) All the benches will be provided with mild inward slope to keep the benches in drained condition. Provision of sumps is provided as shown in Plate No 5-9. The lowest bench shall be slightly sloped towards the sump so that the entire drain water goes to the sump.

3) The working faces will be advanced with a mild upward gradient to facilitate the drainage. The water shall be gradually drained from the upper most bench to the lowest bench and then ultimately to the sump.

4) Similarly in the ultimate pit position, large sump will be provided at the pit bottom to accumulate drained water as well as direct rain water.

5) Following measures shall be taken to prevent fall of side as per mine statute.

Provisions under MMR 1961 regarding Mine Workings (Slope angle, fall of sides, overhangs etc)

Regulation 106. Opencast workings –

In opencast workings, the following precautions shall be observed, namely: -

1 In alluvial soil, morum gravel, clay, debris or other similar ground -

(a)

(i) the sides shall be sloped at an angle of safety not exceeding 45 degrees from the horizontal or such other angle as the Regional Inspector may permit by an order in writing and subject to such conditions as he may specify therein; or

(ii) the sides shall be kept benched and the height of any bench shall not exceed 1.5 metres and the breadth thereof shall not be less than the height: Provided that the Regional Inspector may, by an order in writing and subject to such conditions as he may specify therein, exempt from the operation of this clause any working in the case of which special difficulties exist, which in his opinion make compliance with the provisions thereof not reasonably practicable; and

(2)

(a) Where 'float' or other similar deposit is worked by manual means on a sloping face, the face shall be benched and the sides shall be sloped at an angle of not more than 60 degrees from the horizontal. The height of any bench shall not exceed six metres and the breadth thereof shall not be less than the height: Provided that where the ore-body consists of comparatively hard and compact rock, the Regional Inspector may, by an order in writing an subject to such conditions as he may specify therein, permit the height of

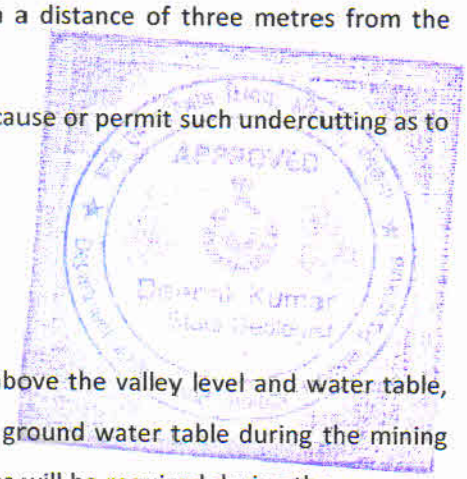
the bench to be increased up to 7.5 metres while its width is not less than six metres :Provided further that in case of a mine or part where special difficulties exist, the Chief Inspector may, by an order in writing an subject to such conditions as he may specify therein, relax the provisions of this sub-regulation.

(b) Where in any mine or part it is proposed to work by a system of deep-hole blasting and/or with the help of heavy machinery for its digging, excavation and removal in such manner as would not permit of compliance with the requirement of sub-regulation (1) the owner, agent or manager shall, not less than 60days before starting such work, give notice in writing of the method of working to the Chief Inspector and the Regional Inspector; and no such work shall be commenced o carried out except in accordance with such conditions as the Chief Inspector may specify by an order in writing. Every such notice shall be induplicate, and shall give the details of the method of working including the precautions that are proposed to taken against the anger from falls of sides and material.

3 In an excavation in any hard and compact ground or in prospecting trenches or pits, the sides shall be adequately benched, slopped or secured so as to prevent danger from fall of sides.

4 No tree, loose stone or debris shall unless otherwise permitted in writing by the Chief Inspector be allowed to remain within a distance of three metres from the edge or side of the excavation.

5 No person shall undercut any face or side or cause or permit such undercutting as to cause any overhanging.



DEWATERING:

Since the depth of mining proposed is well above the valley level and water table, there will be no chance of encountering the ground water table during the mining operations. Hence normal-pumping operations will be required during the monsoon season only. The water accumulates within the pits will be due to direct rainfall over the pit and seepage from adjoining areas, if any.

The average rainfall of the district during all these years is 420 mm only.

An examination of the above reveals that the rainy season extends from June to September. Although in the above period under consideration there has been rainfall in other months also, but it can be considered as stray occurrence and will not after all proposed pumping scheme.

The water to be pumped out from the open pits will be contributed both by direct precipitation over the open pits and seepage. The water due to direct precipitation will depend upon the rainfall and the area of the pit.

Based on the rainfall records, the sumps of the sizes as shown plates No. 5-9 shall be provided at the bottom most bench. During the monsoon period a continuous process of dewatering the sumps shall be there to facilitate the mining at the lower benches.

6.4.5 Based on the Rainfall data it is proposed to have a diesel engine operated water pump of 7.5H.P which may dewater 20m^3/hour from the pit. The water will be sent to the drain of 0.5mtr depth as shown in the year wise plans Plate No. 5-9. This water will finally go into the natural nallah.

CHAPTER- 7

STACKING OF MINEAL REJECTS AND DISPOSAL OF WASTE

Disposal of Waste

Soil: There is a thin soil cover 10 – 20 cms at places. In little amount of soil is also generated from joints and cracks.

Soil and powder of quartzite will be stacked separately

Rejects: - Entire mineral produced is usable.

Maximum Height and Slope of Dumps

The area ear - marked for the stacking the soil mixed finer material of stone is 8000 M2 Plate no 5-9 which can accommodate at least 80000 MT of material. In the present case soil generated contains fine powder of quartzite; the same shall be sorted out and stacked in separate dump yards. Yearly generation of soil/ fines which only 2000 tones shall be used for plantation and as a upper layer on the dumps. The dump may attain a maximum height of 6 mtr, with gentle slopes of 30^0. Tow walls and drains around dumps are proposed to safeguard the dumps

Dump Yard for mineral

Around 25% of material shall be used in the crusher installed at site and rest of the material will be supplied to near bye crushers those are in the close vicinity of the lease hold area.

Thus whole material excavated shall be crushed but still it is proposed to have a dump yard for mineral (Size 140 m x 140 m), which will be used in the event of less demand or any other emergent reasons to stack the mineral in the dump yard.

The height of the dump yard may attain a maximum of 8 mtrs with moderate slope of 39 degrees. This can accommodate about 2, 80,000 MT mineral.

The location of the soil and mineral dump yard is shown in plate no.5-9.

The annual quantum for construction of retaining walls/ dump yards for soil and mineral will be done during plan period. The length of the soil stack yard and dumping yard walls will be 360m and 480mtr. all along with height of one meter. Rest of the height will be made in the coming years as per the requirements of dumps. The thickness of the wall will be half meter.

As already described the optimum height of dumps shall be kept 8 mtr with gentle slope of 30^0 for soil stack and with moderate slope of 39^0 for rejects/ inter burden stacks.

CHAPTER -8

USE OF MINERAL

Road metal and masonry stone:

The entire mineral produced will be used in the building industry as road metal, crushed metal and dust etc after crushing by the crushers. The mineral will be sold to buyers in and around Haryana, Delhi and other states of north India.

CHAPTER -9

MINERAL BENEFICIATION& PROCESSING

In view of the availability of direct market for building stone R.O.M., presently there is no proposal of beneficiation. R.O.M. Mineral will be sold to various crushers located in the area. Part of the building stone product will be sold in the form of lumps to the crusher owners.

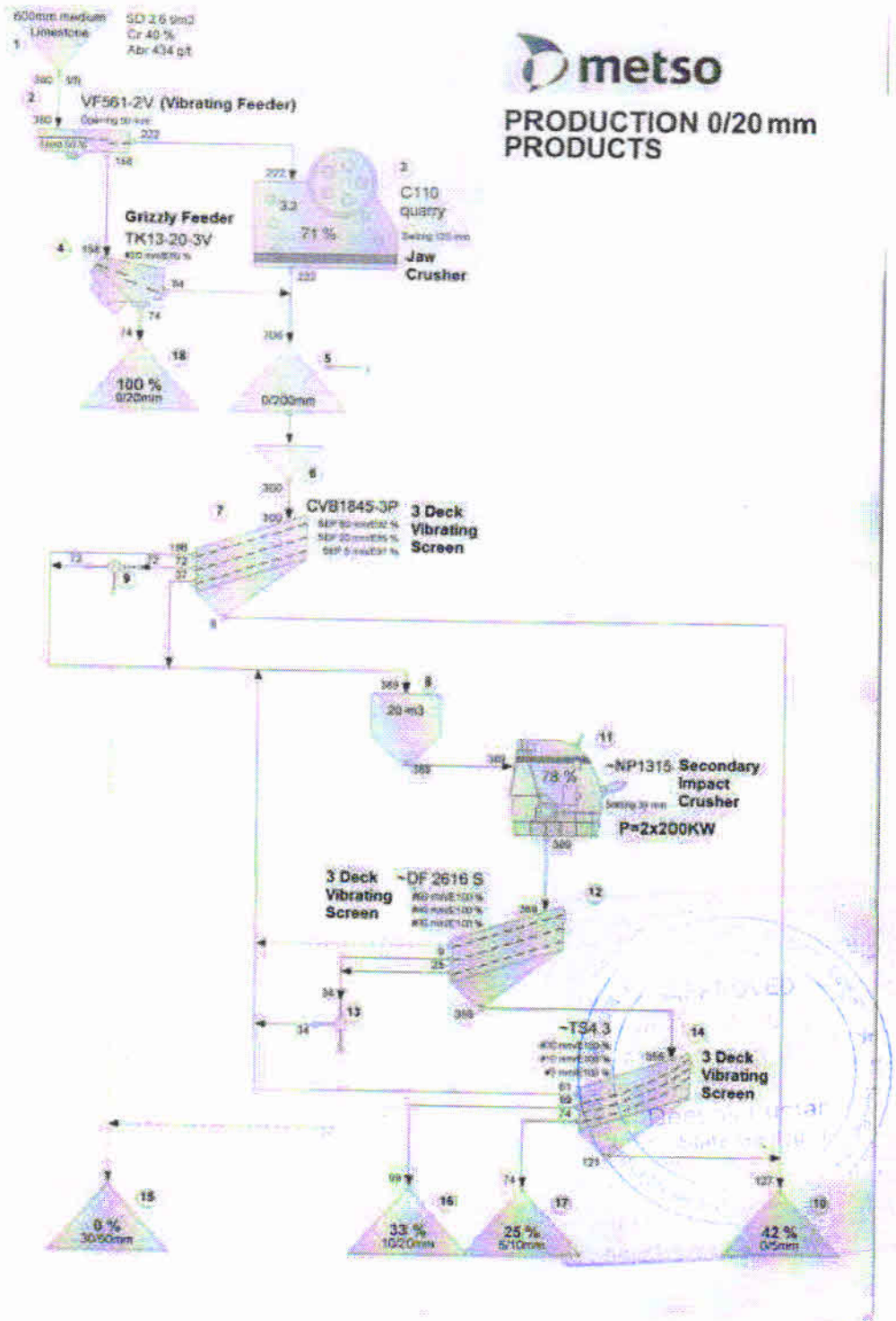
However, a part of ROM is proposed to be crushed at site through a crushing & screening plant proposed to be installed at project site as per detailed flow sheet shown at fig. here in below. The crusher is proposed to be operated through Diesel Generating Set till the electrical connection is made available at project site. Details about proposed crusher setup is as follows –

Hopper	Steel Hopper with RCC Support of 50 M3 Live Capacity
Feeder	Vibrating Grizzly Feeder with 40 KW Motor
Primary Crusher	Jaw Crusher with 110 KW Motor
Secondary Crusher	Impact Crusher with 200 KW Motor
Screens	Vibrating 3 Deck Screens (Three Nos with 40 KW Motor each)
Conveyor	800 mm & 1000 mm Conveyor Belts

Hopper, Primary Crusher & Secondary crusher is proposed to be installed with full covered shades. All screens & conveyors will have metallic cover to avoid any dust emission. Discharge chutes are proposed with rubber curtain for controlled material discharge. High presser water spray through high pressure pump and compressed air is proposed along primary hopper, discharge conveyors and primary/secondary crusher for effective control of dust emission.

Total water requirement for envisaged wet dust control system is assessed to be 10,000 Ltrs per day and as such there is no discharge of waste water.

For the proposed mineral processing (crushing) there is no chemical use involved. Furthermore, all the material crushed will be sold to end users and as such there is no waste product/ tailing waste.


metso
PRODUCTION 0/20 mm
PRODUCTS
VF561-2V (Vibrating Feeder)
Grizzly Feeder
TK13-20-3V
C110
quarry
71 %
Jaw
Crusher
100 %
0/20mm
0/200mm
CVB1845-3P
3 Deck
Vibrating
Screen
20 m3
~NP1315 Secondary
Impact
Crusher
78 %
P=2x200KW
3 Deck
Vibrating
Screen
~DF 2616 S
~TS4.3
3 Deck
Vibrating
Screen
0 %
30-90mm
33 %
10/20mm
25 %
5/10mm
42 %
0/5mm

CHAPTER- 10

SURFACE TRANSPORT

The transportation of mineral from pit head / stock yard to the consumer end crushers / traders will be carried out by the trucks deployed by the customer/purchaser and will be generally of25 MT Capacity. There is all weather metalled road and then a katcha road right up to mines to dispatch the material from mines to the market. Material is proposed to be sold to the customers/ at mine site and transported by them through their own arrangement of trucks. The practice is quite sound in the area and ensure continuous lifting of the material. Customers/purchasers come with transport arrangement of their own. However necessary arrangement of trucks can be done from the nearby truck operators union available at Charkhi Dadri. However, we propose to build kacha road with the increase of production from the mine (around 1067 trucks per day of 25 T capacity) which will bypass the village and there bye will not create any sort of problem to the near bye villagers.

CHAPTER -11

SITE SERVICE

Site Services:-

Manager's Office:-

As detailed in the preceding chapter the mines are designed to produce some 80, 00,000 ton of building stone. The activities shall be supervised by one competent person as overall manager. In addition one mining mate cum blaster is proposed to supervise the drilling and blasting operation. Main administrative office is proposed to be set up in nearby locality on rental accommodation. However, at site one office of Manager is proposed of about 5 x 3 mtrs Size which shall also provide accommodation for key supervisory staff as well.

Canteen -cum-rest shelter:-

In order to provide the rest shelter for the personnel working in the mine and also to provide tea/refreshment etc.as per the Mines Act, 1952. The arrangement shall be made to install a rest shelter-cum-canteen as shown in plate no.4 and shall be utilized by the workers. The rest shelter will be for having rest during the lunch hours by the operators/ labour. The size of rest shelter shall be about 15 x 3 meter to accommodate the working labours.

Store

Since the mining operation will involve heavy earth moving machinery, a small storeroom will be provided for day to day operations. No provisions for a separate workshop is being made as the heavy repairs will be carried out elsewhere.

First Aid Room:

To provide the first aid for any sort of injuries encountered during the mining operation, one small first aid room shall be provided. First aid kit and sufficient stock of material / medicines needed for first aid shall be provided as per requirement. As the mining engineer / Manager and mining mates are qualified first aiders they can provide first aid to the labor on the spot. More ever the Govt. Hospitals is there at

the Charkhi Dadri which is just 15 km. From the mine and necessary medical aid can be provided from there.

Crèche:

At present provision of crèche is not provided, however in future if women workers are employed, arrangement for a small crèche shall be made as per the requirement.

V.T. Centre

Necessary arrangement shall be made for conducting refresher course as laid down in Mines vocational training rules.

Magazine:

Magazine of the required sizes (for 10 T capacities) will be provided to fulfil the requirement of blasting of mineral as detailed in the chapter of Blasting. The Magazine shall be erected as shown in the enclosed plate no 5-9 . The design of the magazine shall be as per approval of the chief controller of Explosives, Govt. of India. The magazine shall be properly fenced and provided with as security guard round the clock. If explosive is purchased from authorised agency for use in mine than there will not be need of construction of magazine.

Or Alternatively

Tie up with explosive supplier maintaining an explosive magazine with Licence to Purchase, Sell and Use. This agency can bring explosives (sell) as per requirement and use in the project premises. This system will avoid construction of explosive magazine in mine premises

Electricity Supply:

Presently there is no arrangement for supply, at the mine but it is proposed to take an extension of the electricity line from the nearby point which is jus 0.5 Km from mines site.

Water Supply

The water supply for drinking& dust suppression purpose will be made available by hired tractor tanker. The water will be taken from the village Public water supply which is just 0.5 km. away from the mine site and is controlled by the public health department of the state Government . The water form supply tube well is used for the entire village Kalali & Kalyana. Therefore the same arrangement shall continue for the mines as well. The water shall be transported by the tractor and stored in syntax tanks of 10000 liters capacity.

CHAPTER-12

EMPLOYMENT POTENTIAL

General Consideration

In this project the mechanized mining is proposed for production of building stone. The proposed organizational structure for the project is worked out in view of the type of mining system adopted and the need of effective environment Management Plan. The requirement of various technical and non-technical personnel is determined while adopting the following norms:-

1. The mine will be worked in two shifts.

2. In estimating the requirement of magazine attendants, and provision of competent person, mates, blaster etc. due consideration has been given to the statutory provisions.

Man power requirement and its distribution.

The mine shall be worked in two shifts with following manpower deployment.

Managerial & Operative Staff :

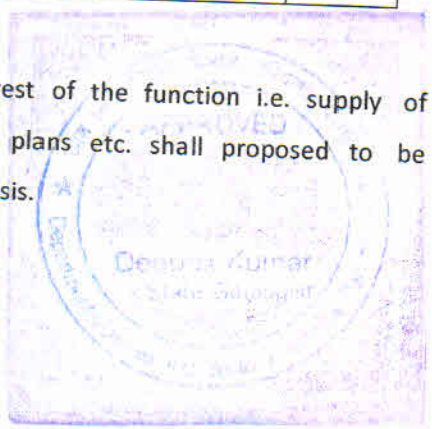
S.No.	Designation	Category	Nos
1	Project Manager / Mines Manager	Highly skilled	1
2	Assistant Managers (Shift Manager)	Highly skilled	2
3	Mining Mate cum Blaster	Highly skilled	2
4	Mechanical Engineer	Highly Skilled	1
5	Mechanical Foreman	Highly skilled	1
6	Mining Foreman	Highly Skilled	2
7	Diesel hydraulic shovel operator	Highly skilled	7
8	Front End Loader Operator	Highly skilled	1
9	Rear dumpers operators	Highly skilled	18
10	Drill operators	Highly skilled	4
11	Track chain Dozer operators	Highly skilled	1

Thus total strength of managerial and operative staff shall be 40.

In addition following manpower shall be arranged through suitable modefor related mining works, operations of ancillary equipment, handling of explosives and management of environment cell.

1	Crane	Highly skilled	1
2	Heavy duty tow truck	Highly skilled	1
3	Tyre handler	Highly skilled	1
4	Water sprinkler	Skilled	2
5	Maintenance van driver	Skilled	2
6	Tractor operator/driver	Skilled	2
7	Tractor compressor operator	Skilled	2
8	Mechanic/Helpers/labour	Semi skilled	25
9	Crusher Engineer	Highly Skilled	3
10	Crusher Foreman	Skilled	2
11	Crusher Operation & Maintenance Staff	Skilled & Semi Skilled	20

In addition to the above mentioned staff rest of the function i.e. supply of explosives, preparation and amendment of plans etc. shall proposed to be performed from the professional on contract basis.



CHAPTER- 13

ENVIRONMENT IMPACT ASSESSMENTAND ENVIRONMENT MANAGEMENT PLAN

Base line information

The area is almost barren.

Breakup of land use (Existing, after 5 Years and at Conceptual Stage) in the lease area (In Hectares) Kalali & Kalyana Mine

Sr.no	Details	Existing land use (ha)	At the end of 5th year (ha)	At Conceptual Stage
1	Quarry Area	17.78	55.40	Nil
2	Infrastructure	0.50	0.65	0.15
3	Haulage Road	2.85	4.15	1.00
4	Agriculture	0.00	0.00	-
5	Plantation	0.80	3.60	30.40
6	Water Body	0.00	0.00	32.85
7	Habitation	0.00	0.00	0.00
8	Undisturbed land	42.97	0.00	---
9	OB Dump	0.00	0.60	----
	Total	64.40	64.40	64.40

Road Metal and masonry stone/Quartzite are covered by weathered surface of the geological formation or by a thin cover of soil.

Water Regime

There is no perennial water drainage on the ground. As the surface is undulated only seasonal Nallahs(rivulets) developed in the area.

Human Settlement :

Area covered under mining plan is uninhabited. The nearest villages located within 2.5 km radius along with related details is given in the below :

Point -A: Minor Encroachment from an existing crusher and which has been removed.

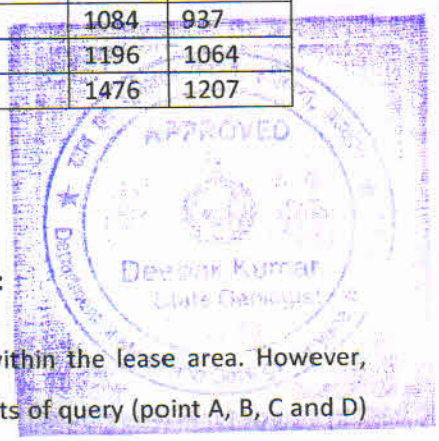
Point-B : was an office of the previous mine lease holder but now new set up of office established.

Point C: was the staff camp of previous mine lease holder

Point D : was an old weighbridge of earlier mining lease holder

Name of villages	Total Households	Population	Males	Females
DadhiChhilar(178)	197	1170	627	543
DadhiBana(73)	294	1814	940	874
Balali(72)	304	1712	896	816

JhojhuKalan(71)	1431	7831	4126	3705
Chandeni(65)	446	2337	1220	1117
Ramalwas(66)	363	2227	1159	1068
Gokal(67)	156	863	450	413
JhojhuKhurd(70)	444	2470	1313	1157
Gudana(69)	462	2474	1283	1191
Badal(84)	305	1740	977	763
Asawari(83)	110	627	320	307
Kalali(82)	241	1380	718	662
Abidpura(81)	184	1110	593	517
Mandola(74)	393	2311	1201	1110
Balkra(79)	454	2600	1319	1281
Mandoli(80)	344	1959	1047	912
Kalyana(145)	742	4018	2077	1941
Bhervi(146)	58	313	167	146
Dadri(147)	191	950	512	438
Charkhi(143)	1172	6481	3453	3028
KheriBura(144)	481	2727	1477	1250
KheriBattar(92)	359	2021	1084	937
Mahra(91)	381	2260	1196	1064
Tiwala(90)	451	2683	1476	1207



Public Building , Places and Monuments :

There are no permanent public buildings within the lease area. However, here bye clarifies the details of the four points of query (point A, B, C and D) in the Mine Lease Area of Stone along with associated minor minerals of Kalali and Kalyana mining Project, mentioned in the Google Earth Image, where Site A has got some minor encroachments from an existing crusher, which will be relocated or removed from the mine lease area before the lease will be handed over to the lessee (M/s Ridhi Sidhi KSM Resources-JV). Point B was an office of the previous mine lease holder, Point C was the staff camp of previous mine lease holder and Point D was an old weighbridge of earlier mining lease holder.

Infrastructure Facilities

The following facilities already exist in the village mentioned above

(A) Roads :

All the village are well connected by public roads with nearby town of Charkhi Dadri . Buses of Haryana Road ways ply regularly in these village.

(B) Power supply

All the villages have got power supply from the State Electricity Board.

(C) Water Supply

Water is supplied by the Public Health Department Haryana through water supply scheme to the entire village.

(D) Medical, educational, Post & Telegraphs Facilities:

A Govt. Hospital is available at Charkhi Dadri which is Just 15 Km from the Mine site. All the nearby villages have Middle schools & Sub Post Office. College, I.T.I and other facilities are available at Charkhi Dadri.

Quality of water

There are no water sources in the leaseareaexcepts dry nallahs (rivulets). The precipitated water flows along the slope of quartzite. The water table in the area is about 60mtr. below the 250mtr RL. No water samples could be collected in absence of any well/tube well in the lease area.

Number and Type of Trees :

The area under reference has natural growth of vegetation . These trees generally grown in the area are mainly JungliKikar, The height of these trees are generally smaller than 3mtrs. In the neighbouring villages and nearby fields tress of Neem, KikarJund trees, Kanji (peganiceclabra) etc. are observed. No rare species exist in the area. There are a number of small plants. The Av. density of vegetation is 50/hect, which are mainly xerophytes.

Environment Impact Assessment Statement

A Land Environment :

Land Scape

Major part of the area is virgin with only 37.28 hectares covered by old working pits . The dwelling houses of the nearby villages are about 1 to 5km away from the lease area.

Aesthetic Environment

The panoramic view of the lease hold area reveals that the area has only one ridge. Since the present mining plan envisages the proper and systematic development of working and future alignment of the pits, the area will look nice.

13.2.A.iii Soil and Land Use Pattern

The area under reference has thin soil cover or a very thin cover, with soil embodied in the joints. The soil has to be excavated first and properly stacked. This Mining Plan envisages remarkable change in the present land use pattern, which will be more uniform and systematic at the end of 5th year due to proper mining and stocking the dumps at the earmarked places.

Agriculture.

There is no involvement of agriculture land where, mining is proposed. Therefore no impact on agriculture is envisaged in this mine plan.

Forest :

There is no forest land in the lease hold area . Therefore, there is no impact of mining on the forestation except the proposal for additional plantation program which will enrich the aesthetic beauty of the area.

Vegetation and Wild life :

There is vegetation in the area as already explained. The mining activities has no adverse impact on the vegetation as the same shall be taken care of by growing additional vegetation, which is suspected to be destroyed due to mining. The same shall be compensated by planned plantation over dumping places. Since the present vegetation is of very poor quality the

adverse impact will be negligible. However the proposed plantation will ameliorate the vegetation.

The area is not inhabitant by any significant wild life except stray existence of animals like Jungle rat, mangoes jackals etc. reptiles like snakes, lizard and birds like pigeon, bet etc and insects like scorpion spider etc. Due to stray population of wild life there will be no significant effect on the wild life due to mining. Moreover, the growth of vegetation of dumps etc. shall provide additional home for these stray animals.

By adopting the proposed reclamation plan, envisaging liberal plantation of vegetation of mixed species,it is expected to provide congenial habitant to promote wild life. After abandoning the mining operations the area can be converted into a bird sanctuary or a fish farm by having the close liaison with the state Govt. authorities.

.vii Public Buildings, places and Monuments.

As mentioned at Paragraph No.13.1 (iv)

Water Environment :

13.2.B.i Surface Water and Ground Water.

There is no perennial drainage system in the mining area and while planning due care for drainage has been given. No significant effect on surface water regime is expected. The water table in this area occurs below 60-65mbelow general surface. Hence there will be no effect on the hydrology of the area as the working will not reach the water table. However, there may be some affect on the seasonal nallahs, which drain the precipitated water flowing from the area.

Further it is proposed to make necessary arrangements for developing rainwater harvesting of the mine water during rainy season. It is proposed to develop necessary bores and pits for this purpose. Thus rain water harvesting will ameliorate the ground water of the area.

13.2.B.ii Water quality

There is no water courses in the area except dry nallahs .The precipitated water also flows along the depressions formed in between the outcrop of country rocks. The water table in the area is about 60-65mtrs below the ground surface.

Air Environment

Noise :

However, since this is an isolated area without any habitation industry the existing noise level in this area is well below the level at which normal speech communication may be interfered .The creation of vegetation barrier around the workings on both the sides of the roads and office buildings will also out sound barriers.

Air

Since the area is not worked at present. There are about 10 nos of crushers which are in operative at present; the area is basically unpolluted and fresh. Since mechanized mining is proposed for removal of over burden as well as for winning of mineral there are chances of environment Pollution in due to mechanized mining. The quartzite/ building stone mining will be done by drilling with the help of Jack Hammer drills and blasting by using explosives like ANFO, ordinary detonators &substitutes. The proposed mining will not deteriorate the air quality except generation of dust .The dust with air borne may affect the quality of air

Dust

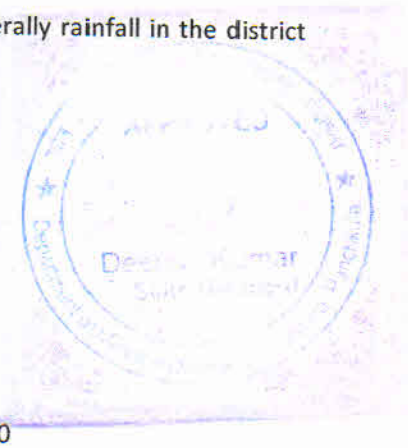
The dust generation during drilling will be reduced by wet drilling. The dust generated during blasting will be minimized by water spay at the working faces before and after the blasting. The dust generated by excavation will also be controlled by spraying of water at the working faces. Dust generated due to plying of vehicles on mine roads will be dealt with by regular sprinkling of water on the roads . The sprinkling water will be done at short intervals using only a small quantity of water at each time. just sufficient to wet the surface. Further the vehicles used for

transportation of the mineral will not be overloaded to prevent generation of airborne dust during their movement.

The speed of the movement of the vehicles will also be controlled to minimize generation of excess dust. Further as far as possible transport of mineral from the mines will not be done during the evening hours of summer season when the relative humidity is low and wind speed is high. The volume of airborne dust raised from the waste dumps will be kept under control by growing grass and vegetation.

Climate Condition

The climate of Bhiwani district can be classified as tropical steppe, semi -arid and hot which is mainly dry with very hot summer and cold winter except during monsoon season when moist air of oceanic origin penetrates into the district. There are four seasons in a year. The hot weather season starts from mid-March to last week of the June followed by the south- west monsoon which lasts up to September. The transit ion period from September to October forms the post –monsoon season. The winter season starts late in November and remains up to first week of March. The normal annual rainfall of the district is 420 mm which is unevenly distributed over the area 22 days. The south west monsoon sets in from last week of June and withdraws in end of September, contributed about 85% of annual rainfall. July and August are the wet test months. Rest 15% rainfall is received during non-monsoon period in the wake of western disturbances and thunder storms. Generally rainfall in the district increases from southwest to northeast.



Normal Annual Rainfall:	420 mm
Normal monsoon Rainfall:	355 mm
Temperature	
Mean Maximum:	41oC (May & June0
Normal Rain days:	22

The general direction of wind in summer season is west to east and in winter it is northwest to southeast (Plate no.14)

Socio Economic Environment

DEMOGRAPHIC STRUCTURE

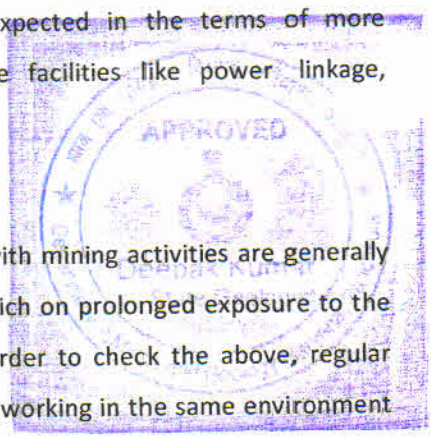
Details of the Bhiwani District primary census Abstract has been given in table.

PRIMARY CENSUS ABSTRACT DISTRICT BHIWANI At A GLANCE

Sr. No.	Item	Value			Rank in the Districts in Haryana
		Total	Rural	Urban	
1.	Population	1425022	1154629	270393	4
2.	No. Of households	246742	197505	49237	3
3.	Share in total population (%) (Haryana)	6.74	7.68	4.42	4
4	Decadal growth rate (5)	22.49	19.42	37.56	14
5	Child population age (0-6) % to total district population	15.73	16.11	14.13	7
6	Sex ratio (female per 1000 males)	879	884	859	5
7	Child sex ratio (0-6)	841	844	827	7
8	Urban population (%)	18.97			16
9	Literacy rate (%)	67.45	65.25	76.62	13
10	Female literacy rate (%)	53.00	49.72	66.90	13
11	Mate female gap in literacy (%)	20.64	29.38	18.12	
12	Share of SC population (%) to total population in district.	90.61	19.54	19.90	10
13	Workers to total population	42.76	45.65	30.39	7
14	Main workers to total workers	69.78	67.27	85.88	16
15	SC literacy	56.26	55.59	59.05	12
16	Density of population	298	244	5256	18
17	Permanent houses (%) of total census houses.	70.53	68.1	8.67	8
18	Condition of houses good (%)	43.95	41.69	53.36	16
19	Households having no exclusive room or one room (% of total households).	19.5	18.09	25.70	5
20	Household with availability of electricity (% of total household)	83.19	18.76	93.24	12
21	Household having tap water (% of total households)	55.4	48.55	84.01	6
22	Households having bathroom with houses (%)	55.05	45.0	70.93	13
23	Household having kitchen within houses (%)	62.33	60.18	71.37	5
24	Household having television	42.19	34.26	69.94	17

25	Household having telephone (%)	6.92	3.85	19.69	18
26	Household having bank accounts (%)	44.44	44.21	45.41	11
27	Household having radio (%)	42.63	42.35	43.79	5
28	Household having car, jeep (%)	2.34	1.90	4.14	17
29	Household having scooter, motorcycle (%)	10.35	7.38	22.65	19
30	Household having bicycle (%)	34.41	27.68	62.31	19
31	Household having no drainage of Wastewater (%)	36.3	41.54	14.55	6
32	Household having no Lateran (%)	64.52	73.93	25.51	6
33	Household having none of assets (%)	33.8	38.21	15.58	18
34	Electricity available, latrine no available (%)	50.19	57.28	20.81	5
35	Electricity not available, latrine available (%)	2.48	2.59	2.05	11

Due to mining activities significant changes are expected in the daily life of the inhabitants as mining activities will open new avenues of employment generation for local people. The favorable changes are expected in the terms of more employment opportunities, better Infrastructure facilities like power linkage, medical facilities, water supply etc.



Occupational health and safety :-

The people/labour those are associated with mining activities are generally exposed for pollution related diseases which on prolonged exposure to the same environment become chronic. In order to check the above, regular check up of the labour and other persons working in the same environment shall be made.Preventive measures viz. Use of respiratory masks, helmets etc. shall be adjusted to avoid the adverse impact of mining / pollution on the health of the labour.

Recreational Facilities:

After eight hours of hard work the labour/workers/operators badly need some kind of entertainment to ease them. It is therefore proposed, to organize a cultural and educative program at least once in month. Some

additional programs shall be organized,especially on the family welfare and other fields to entertain them as well as to educate them. This will include program on alcohol addiction etc.

Environment Management Plan:

To check the adverse effect likely to be caused to the proposed mining on the environment and ecology of the area environmental control measures are to be followed. Based on the environmental impact assessment made the following measures shall be taken into account for the betterment of the environment and ecology.

a) Temporary storage and Utilization of top soil :

The topsoil will be removed separately in advance of the mining of other overburden and will be stocked separately. The locations of the soil stack yard are shown in year wise plans. To prevent erosion of the stacked top soil the height of the stacks will be restricted to 6mtrs above ground level. The retaining wall will also be erected along the lower edges of the topsoil of stacks, as they will be prone to erosion. The width of these walls will be 0.5 mtrs. at top and 1 meter at the bottom with a height of about 6 mtrs. Further plantation of grass is proposed on the surface of the dump slopes to improve its quality and to restrict soil erosion.

b) Proposal for reclamation of land affected by mining activities during and at the end of mining lease period.

Land reclamation is the single broad environmental protection system which will provide protection and control of most of the adverse environmental impacts of mining and also have improvement of aesthetic beauty of the area which will be denuded due to mining activity. As a result of mining of this deposit the original ground profile will be lowered and deep depressions will be created. Further at some selected places the ground will be covered as waste dumps. Besides this the hydrographic system may be affected due to wash-off. Based on these conditions it is proposed to improve the effected land wherever possible for better land use, so as to support forestry and creation of water reservoir etc. Accordingly, the land

reclamation portion shall be done by planting trees on the dumps along the roads surroundings the office building on the waste barren land and in the open pits when they reach their ultimate stage.

Plantation Along the roads.

In order to barricade the dust generated during the movement of the trucks and also to restrict noise level a forestation is proposed along the approach roads to pits . This will improve the aesthetic beauty of the area by a screening visual intrusion of the quarry workings. For this purpose the soil produced from the mine will be brought and spread in the layer of 2mtr. thick and 6 meters. Wide along both sides of the roads.

Surrounding the office buildings :

A vegetation barrier will be provided around the office buildings and on the waste barren land.

In open pits :

As the mineral is not going to be depleted during lease period no plantation is proposed in the mineral bearing area/ pits. Only foot hill side and barren land will be planted.About 4.0 hectare area will be planted in the extreme south end pit which will be closed and reclaimed during the plan period

Afforestation/ Green belt

The lease area is hilly terrain devoid of any vegetation. Mining activities will not cause any harm to riparian vegetation cover as the working will not extend beyond the lease area. Land out side is the private agriculture land. Link road from the crusher zone pass through the areas. It is proposed to have plantation on both sides of the roads as greenbelt to provide cover against dust dissemination. Plantation will also be carried out as social forestry programme in villages, school and the areas allocated by the Panchayat/ State authorities.

Native plants like Neem, Pipal, Khejri, Ber and other local species will be planted. A suitable combination of trees that can grow fast and also have good leaf cover shall be adopted to develop the greenbelt. It is proposed

to plant 3500 no's of native species along with some fruit bearing and medicinal trees during the plan period.

Table: Greenbelt Programme

Year	Saplings to be planted	Survival 70 %	Species	Place of Plantation
I	700	490	Neem, Peepal, Ber, Shisham, Sirish, Babool, Gulmohar	Along the roads, in barren area, surrounding office & rest shelter and other social forestry programme.
II	700	490		
III	700	490		
IV	700	490		
V	700	490		
Total	**3500**	**2450**		

The tree plantation is proposed at spacing of 3m x3 mtr. The size of the pits will be 40cm x 40 cm .filled with manures . The intervening space between the trees will be covered with bush varieties. Taking a survival rate of 70% , about 700 no. of trees will be planted year wise during plan period:-

Post plantation care :

This will include the following measures :-

c) Protection from grazing and fires.

d) Watering at least once a week during dry spells.

e) Manu ring

f) Weeding and soil working.

g) Mulching

h) Replacement of causalities.

i) Protection form pests.

The maintainance system will include:-

a) Examination of signs of slopes failure and excess erosion.

b) Collection of water samples.

c) Keeping and effective track of vegetation established.

d) Checking the quality of air near mine site by air sampling and getting it analyzed.

e) Collection and analysis of regular soil samples from reclaimed areas to monitor the improvement in soil characteristics.

Equipment for Environmental Restoration Plan :

i Water tankers will be used for the sprinkling of water on the mining faces regularly .

ii A tractor with trolley will be used to transport the seeds, saplings, fertilizers and other agricultural tools. The same tractor will be used for water spray, work also. Other miscellaneous agricultural tools will be required for seedbed preparation, terracing of dumps, mulching, plantation and roast post plantation care.

Manpower and Organization:

Regular man power will be required to be deployed for supervision, sample collection, assistance in reclamation works, monitoring system of post plantation care. For carrying out the actual work of a forestation, sapling plantation , mulching, construction of drains and tanks and other maintenance work, casual labour will be deployed as and when necessary.

Program of A Forestation

The a forestation will be done proposed earlier. Plant saplings will be obtained from private/ Govt nurseries. During the forestation work the combination of different type of species will be done on the area ear marked for plantation in green belt & in the surrounding areas.

The area is demarcated on the plan plat No 5-9. The tree plantation will be made all along the mine approach roads surrounding the site services. This will cover about 4.0 ha land. About 700 trees per year will be planted on the above area. The annual area covered will be 0.80hectares. The survival rate is expected 70% therefore the saplings / plats which dies will be replace in addition to the plants proposed above.

Stabilization and Vegetation of Dumps :-

The same is already described in chapter 7 at para no. 7.3

Treatment and Disposal of water from Mine :-

There is no regular disposal of water form mines except during rainy season. The water pumped out from the mines during rainy season shall be disposed through water garland ditches where settlement tanks are provided at regular interval to settle down the UN-dissolved matter/ sediments before finally depositing of the purposed out water through the natural nallah which is situated within the lease hold area.

Since the rainy water and the ground water do not contain any toxic material, this does not need any chemical treatment before disposal.

Measure for minimizing adverse effects on water regime:

It is proposed to make necessary arrangements for developing rainwater harvesting of the mine water during rainy season. It is proposed to develop necessary bores and pits for this purpose. This will help in recharging th ground water at a faster rate.

Socio Economic benefits arising out of mining: -

The socio economic benefits in the form of labour employment for mining transportation and other ancillary activities pertaining to mining shall benefit the local people also in the activities like milk supply and sharpening of tools, maintenance of tools etc. will also better the socio-economic status of the local inhabitants.

MEASURES TAKEN AND TO BE TAKEN FOR THE CONTROL OF WATER, NOISE AND AIR POLLUTION

Air Pollution:

Emission of gases and dust takes place due to movement of vehicles. Spraying of water and plantation along the road side prevents the spread of dust. Plantation also acts as barrier for restricting pollution. Impact on air environment has been

assessed taking in to consideration the proposed production and increase emissions.

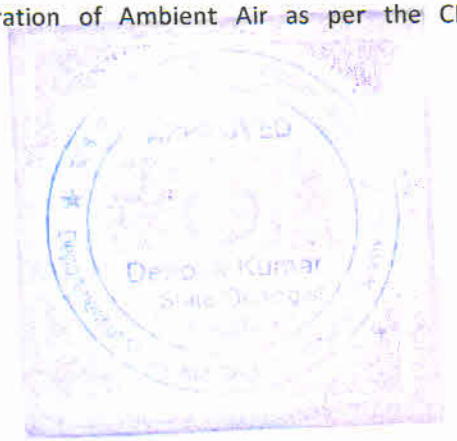
The sources of air pollution are given below:

- Operation of mining machinery/ loading operations
- Transportation of mineral
- Wind erosion from barren area and nearby area

Air pollutants released during production can be checked by:

- Dust suppression system/ water spraying would be adopted at mine working and loading points
- Excavation operations to be suspended during very strong wind conditions
- Afforestation will be carried out for control of dust
- Plantation with wide canopy trees along approach road will help in dust suppression
- Persons to be provided with dust mask and other personal protective equipment, particularly during summer months and dust storm periods.

The following table indicates the concentration of Ambient Air as per the CPCB guidelines. (For reference purpose)



S. No.	Pollutants	Time weighted Average	Concentration of Ambient Air	
			Industrial, Residential, Rural and Other Areas	Ecologically Sensitive Area (notified by central Government)
1.	2.	3.	4.	5.
1	Sulphur Dioxide (SO^2), µg/m^3	Annual*	50	20
		24 hours**	80	80
2	Nitrogen Dioxide (NO_x), µg/m^3	Annual*	40	30
		24 hours**	80	80
3	Particulate Matter (Size less than 10 ìm) or PM_{10}, µg/m^3	Annual*	60	60
		24 hours**	100	100
4	Particulate Matter (Size less than 2.5 ìm) or $PM_{2.5}$, µg/m^3	Annual*	40	40
		24 hours**	60	60
5	Ozone (O_3), µg/m^3	8 hours**	100	100
		1 hours**	180	180
6	Lead (Pb), µg/m^3	Annual*	0.50	0.50
		24 hours**	1.0	1.0
7	Carbon Monoxide (CO), mg/ m^3	8 hours**	02	02
		1 hours**	04	04
8	Ammonia (NH_3), µg/m^3–	Annual*	100	100
		24 hours**	400	400
9	Benzene (C_6H_6), µg/m^3	Annual*	05	05
10	Benzo(O) Pyerene Particulate Phae only ng/ m^3	Annual*	01	01
11	Arsenic (As), ng/ m^3	Annual*	06	06
12	Nickel (Ni), ng/ m^3	Annual*	20	20

National Ambient Air Quality Standards

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 8 hourly or 1 hourly monitored values, as applicable, shall be compiled with 98% of the time in a year. 2% of the time, they may exceed the limits but not on to two consecutive days of monitoring.

(Source: CPCB notification Dated 18th November 2009)

Transportation

- Regular water spraying on haulage roads during mineral transportation by water sprinklers,
- Avoid over loading of tippers & consequent spillage on the roads,
- Mineral carrying trucks will be effectively covered by tarpaulin to avoid escape of fines to atmosphere,
- Air quality shall be regularly monitored both in the core zone and the buffer zone.

Controlling of NOx level

The source of NOx is due to vehicular emission. This can be controlled by proper maintenance and servicing of vehicles. Only P.U.C. certificated vehicles will be permitted

Noise Pollution

There is drilling and blasting for mineral extraction. Noise pollution due to drilling, blasting &transportation will cause some problem to the inhabitants of this area because there is human settlement in close proximity to the link roads in lease area. Effective steps will be taken to keep the noise level well below the DGMS prescribed limit of 85 dBA.

Noise control is achieved by the following:

- Proper care and maintenance of the equipment will be carried out.
- Personal protective equipment will be provided to the workers.

DETAILS OF HEALTH CHECKUP AND INSURANCE OF ALL THE EMPLOYED PERSONS (FOR EXISTING LEASE)

All workers will be subjected to medical examination as per Mines Rule 1955 both at times of appointment and at least once in five years. Medical camps will be organized for this activity. Insurance of all employees as per the rules will be carried out.

Corporate Social Responsibility

As a corporate responsibility following measures along with budget provision is proposed for improving the conditions of persons in and around the project area:

Sr. No.	Description	Amount (in lacs)
1	Health check up camps	3.0
2	Surveillance programme of the workers	2.0
3	Insurance cover of workers	5.0
4	Assistance to local schools, scholarship to students	2.5
5	Sanitations and drinking water facilities	5.0
6	Vocational training to persons for income generation	2.5
7	Assistance to self help groups	5.0
Total		**25.00**

Fund Provision for Environmental Management

It is proposed to create an Environment Management Fund. The contractor shall deposit/pay an amount equal to 10% of the due contract money along with instalments towards the 'Mines and Minerals Development, Restoration and Rehabilitation fund.

Fund Provision for EMP Measures

Following provisions are proposed to be taken for improving, control and monitoring of environment protection measures

Sr. No.	Particulars	Amount (in lacs)
1	Pollution monitoring – Air, Water, Noise	4.0
2	Pollution abatement – Water sprinkling	3.0
3	Wire fencing at plantation sites	1.0
4	Plantation including maintenance	1.0
5	Rainwater harvesting	2.0
6	Haul road and other roads repair and maintenance	2.5
	Total	13.5

The protection measures will be dynamic and subject to periodic review so that measures remain effective and appropriate.

CHAPTER-14
PROGRESSIVE MINE CLOSURE PLAN

Introduction:-

Vide notification GSR 330(E) date 10-04-2003, MCDR, 1988 has been amended incorporating preparation of Mine Closure Plan. Corresponding amendments has been made in MCDR, 1960. Accordingly Haryana Government has also amended the mineral concession rules which requires the Mine Closure Plan (Progressive & Final) as per chapter 10 of the "Haryana Minor Mineral Concession, Stocking, Transportation of Minerals and Prevention of Illegal Mining Rules, 2012".In the present case as it is a new mine a progressive mine closure plan, as a component of the mining plan is required. The present position of the deposit does not permit to close any part of the pits. At the proposed pace of work in the next coming years it will not be possible to close down any part except doing protective works like fencing and making of a drain, plantation etc.

(A) Name & address of the lessee

M/S Ridhi Sidhi-KSM Resources JV, Khatoni No. 1049, Loharu Road, Charkhi Dadri (Haryana)

(B) LOCATION OF THE LEASE AREA

District: Charkhi Dadri
State: Haryana.
Taluka: Dadri.
Village: Kalali & kalyana

(C) EXTENT OF THE LEASE AREA

The mine is located in the revenue estates of Villages Kalali & Kalyanain Distt. Bhiwani, Haryana and is about 15 Kms from Charkhi Dadri ,District Bhiwani. The lease area lies between the latitudinal parallel falling in the survey of India TopoSheet No. 53-D/2. The total lease area granted is 64.40 hectares (valid for 18 Years from date of Environmental Clearance or One Year from the date of issue of LOI, whichever is earlier). The details of extent of area has given in preceding chapters.

Village	Khasra no.	Area in hect.
Kalali&Kalyana	223min,224 to 228 & 72.	64.40hectares

The lease area is located on the katcha road and then a metalled road upto village Kalali & Kalyana and is easily approachable from Charkhi Dadri, Bhiwani and other important towns.

(D) PRESENT LAND USE PATTERN

Details are given below:

Sr.no	Details	Existing land use (ha)
1	Quarry Area	37.28
2	Infrastructure	0.50
3	Haulage Road	--
4	Agriculture	0.00
5	Plantation	0.80
6	Water Body	0.00
7	Habitation	0.00
8	Undisturbed land	25.82
9	OB Dump	0.00
	Total	64.40

(E) METHOD OF MINING:

(Details are given in Chapter 4 of the main Mining plan)

The present mining operations are designed to be carried out by open cast mining means. The entire mining operations proposed are mechanized. A part of mining, the loading and transportation up to stack yard shall be done mechanically. It is proposed to load in the trucks/dumpers directly to the destinations and mineral is not put up in this stack yard to avoid the double handling. In the present operation the bench height shall be 9mtrs. Each bench will advance one by one. While carrying out the mining operations in accordance with the above provision the overall pit

slope shall be maintained the 49^{0}as the mineral bearing rocks being hard and compact.

(F) MINERAL PROCESSING OPERATION:

Part of the building stone product is proposed to be sold in the form of lumps to the crusher owners. However, a part of ROM is proposed to be crushed at site through a crushing & screening plant proposed to be installed at project site as per details and flow flow sheet shown in Chapter 9.

Reasons for closure:

The progressive mine closure plan has been prepared in compliance of Rule 70 (1) of Haryana Minor Mineral Concession Rules 2012 under MMCR 1986.This is reproduced as under:

Rule 70.(1) Every mineral concession holder shall prepare a Mining Plan along with the Mine Closure Plan (Progressive & Final) and shall not commence mining operations in any area except in accordance with such Mining Plan duly approved by an officer authorized by the Director in this behalf.

As the mineral is not going to be depleted during the plan period no immediate closure is planned as sufficient reserves are available to carry on the activities. Also there is good market potential in domestic market.

Statutory Obligations:

The lessee is bound to submit the Modified Mining Plan & Progressive Mine Closure Plan and to follow the following rules :

In addition to it the rules pertaining to the Protection of Environment i.e Environment Act . Environment Rules and other associated rules for the protection of environment will have to be followed during the course of mining . The Rules stipulated in Mines Act, Mines rules Metal life rouse Mines Regulation1961 and Haryana Mineral Rules, 2012 will be followed.

Closure plan preparations

Name, address and registration number of the recognised persons who prepared the progressive closure plan and name and address of the executing agency who is involved in the preparation of progressive mine closure plan.

S.N.Sharma
RQP/DDN/135/2001-A (**Annexure-III**)

Lessee will himself implement the closure plan; no outside agency will be involved.

MINE DESCRIPTION

General Geology and Local Geology

Regional Geology

Details are given in the Chapter 3 of main Mining Plan

Local Geology

Details are given in the Chapter 3 of main Mining Plan

Reserves

Details are given in the Chapter 3 of main Mining Plan

Mining Method:

Mining method to be followed is described in Chapter 4 of Mining Plan

Mineral Beneficiation

Details are given in the Chapter 9 of main Mining Plan

3 Review of implementation of mining plan including five years progressive closure plan upto the final closure plan

Mining Plan and Progressive mine closure plan are being submitted for the first time. It will be reviewed after five years and review of implementation will be given with next mining scheme.

CLOSURE PLAN

Mined - out land

At the end of mining plan period, about 55.40 ha area will be mined out. Land use at various stages is given in the table below:

Table 11: Land Use at the end of plan period

Sr.no	Details	Existing land use (ha)	At the end of 5th year (ha)	At Conceptual Stage
1	Quarry Area	17.78	55.40	Nil
2	Infrastructure	0.50	0.65	0.15
3	Haulage Road	2.85	4.15	1.00
4	Agriculture	0.00	0.00	-
5	Plantation	0.80	3.60	30.40
6	Water Body	0.00	0.00	32.85
7	Habitation	0.00	0.00	0.00
8	Undisturbed land	42.47	0.00	---
9	OB Dump	0.00	0.60	----
	Total	64.40	64.40	64.40

Water quality management

There are no water courses in the area except dry nallahs .The precipitated water also flows along the depressions formed in between the outcrop of country rocks. The water table in the area is about 60 to 65mtrs. below the ground surface .There is no flow of water in the lease in post monsoon period . Area is having 420 mm rainfall in a year. During rainy season, water will be accumulated the pit which will be drained out and finally it will be sent in to natural drain. A settling tank will be provided so that the finer sediments are settled down. These finer sediments will be collected after rain is over. There will be no intersection of water table as working will be carried above the water level which is 65 m below the general surface of area. Some wells are located in the agriculture fields where water table was recorded around 65m.

Air Quality Management:

The proposed mining method is not likely to produce much of dust and fugitive

emissions to cause damage to ambient air quality of the area . Workers will be provided with personnel protective equipment like face mask, ear plug/ muffs.

For air pollution management at the progressive mine closure of mine, green be lt will be developed to prevent and control air pollution.

Waste Management:

As stated in mining method, soil dump yard shall be maintained for stacking the top soil. It is also proposed a stack yard for mineral in case of emergency or downfall in sales.

Top Soil Management

There is a very thin soil/ top soil which will be scraped and used for plantation.

Tailing dam management

There is no proposal of beneficiation of mineral.

Infrastructure:

The infrastructure facilities like site office, first–aid station, rest shelter/ store, drinking water etc. will be established.

Disposal of mining machinery:

It is propose to deploy heavy earth moving machineries in the mine and a crusher is to installed in lease hold area for in-house crushing of mineral. As this plan is for 5 years period and hence during plan period no disposal or decommissioning of machineries is proposed. But at the end of the lease period, the crusher will be de-commissioned. Small set up of office complex shall be maintained even after expiry of lease, to look after the plantation and other proposed reclamation measures.

Safety & Security:

Safety measures will be implemented to prevent access to excavation area by un-authorized persons as per Mine Act 1952, MMR 1961.

i. Safety measures will be implemented as per Mine Act 1952 , MMR1961 ,Mines Rules 1955.

ii. Provisions of MMR 1961 shall be followed strictly and all roads shall be 12 mw idea and have a gradient of not more than 1 in 16.

iii. The bench height will be 9.0m.

iv. Width of working bench will be kept around 20.0 m for ease of operations and provide sufficient room for the movement of equipment.

v. Protective equipment like dust masks ,earplugs/ muffs and other equipment shall be provided for use by the work persons.

vi. Notices giving warning to prevent inadvertent entry of persons shall be displayed at all conspicuous places and in particular near mine entries.

vii. Danger signs shall be displayed near the excavations.

viii. Security guards will be posted.

ix. In the event of temporary closer, approaches will be fenced off and notice displayed.

Disaster Management and Risk Assessment:

This should deal with action plan for high risk accidents like landslides, subsidence, flood, inundation in underground mines, fire, seismic activities, tailing dam failures etc. and emergency plan proposed for quick evacuation, ameliorative measures to be taken etc. The capability of lessee to meet such eventualities and the assistance to be required from the local authorities should be described.

- The mechanized mining activities in the hilly area may involve any high risk accident due to side falls/collapse , flying stones due to blasting etc.
- The complete mining operation will be carried out under the Management and control of experienced and qualified Mines Manager having Certificate of Competency to manage the mines granted by DGMS.
- All the provisions of Mines Act 1952, MMR 1961 and Mines Rules 1955, Mineral Rules, 2012, Haryana and other laws applicable to mine will strictly be complied with.
- During heavy rainfall the mining activities will be suspended
- All persons in supervisory capacity will be provided with proper communication facilities.

Competent persons will be provided FIRST AID kits which they will always carry.

Care and Maintenance during Temporary Discontinuance:

In case of any temporary discontinuance due to court order or due to statutory requirement or any other unforeseen circumstance following measures shall be taken for care, maintenance and monitoring of conditions.

- Notice of temporary discontinuance of work in mine shall be given to the DGMS as per the MMR 1961.
- All the mining machinery shall be shifted to a safe place.
- Entrance to the mine or part of the mine, to be discontinued shall be fenced off. Fencing shall be as per the circular 11/1959 from DGMS.
- Security Guards shall be posted for the safety and to prevent any unauthorized entry to the area.
- Carry out regular maintenance of the facilities/area detailed below in such a way as would have been done as if the mines were operation:

  Mine roads and approach roads,

  Fencing on approach roads,

  Checking and maintenance of machines and equipment,

  Drinking water arrangements,

  Mine office, first aid stations etc.

- Competent persons shall inspect the area regularly.
- Air, water and other environmental monitoring shall be carried out as per CPCB and IBM Guideline.
- Care and upkeep of plantation shall be carried out on regular basis.
- Status of the working and status monitoring for re-opening of the mines shall be discussed daily.

In case of discontinuance due to any natural calamities/abnormal conditions, mining operation will be restarted as early as possible after completing rescue work, restoring safety and security, repairs of roads etc.

5.0 ECONOMIC REPERCUSSION OF CLOSURE OF MINE AND MANPOWER RETRENCHMENTS

Lease area will be granted for a period of 18 years only. As per the production programme envisaged, at the end of lease period, still sufficient reserves would be left available for continuing production activities further. Hence, no closure is planned. There will be no effect on the man power as the persons belong to nearby villages and will have an option either to be available for employment for the next contract/ lease or do the agriculture in their fields.

6.0 TIME SCHEDULING FOR ABANDONMENT

The lease area has enormous potential for continuance of operations even after the expiry of the awarded period. The details of time schedule of all abandonment will be given at the time of final closer plan.

7.0 ABANDONMENT COST

As at present mining is not going to be closed so abandonment cost could not be assessed. However based on the progressive mine closure activities during the plan period, cost is assessed as given below:

Table: Abandonment Cost

ACTIVITY	YEAR					Rate	Amount (inRs.)
	First	Second	Third	Fourth	Fifth		
Plantation (in no.)	700	700	700	700	700	@100 Rs per sapling Including maintenance	3,50,000
Plantation cost	70,000	70,000	70,000	70,000	70,000		
Wire fencing (meter)	60,000	60,000	60,000	60,000	60,000	@ of 120Rs per meter	3,00,000
Toe walls (m)770m	7,70,000	-	-	-	-	@ Rs 1000/m	7,70,000
Drain(m) 770m	7,70,000	-	-	-	-	@ Rs 1000/m	7,70,000
	Total						21,90,000

8.0 FINANCIAL ASSURANCE

Now as per the Haryana Minor Mineral Concession, Stocking, Transportation of Minerals & Prevention of Illegal Mining Rules, 2012, the Financial Assurance of the lease area is calculated on complete lease area. However total 61.90 ha area will be put in use up to the end of the plan period. Details of area put in use as given below for reference purpose.(As per circular No.4/2006 issued by CCOM, Nagpur following table has been considered for calculation for financial assurance).

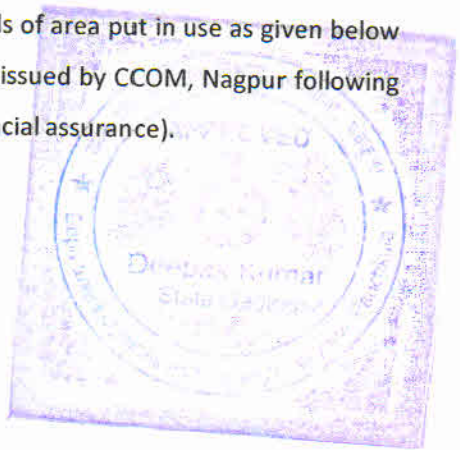
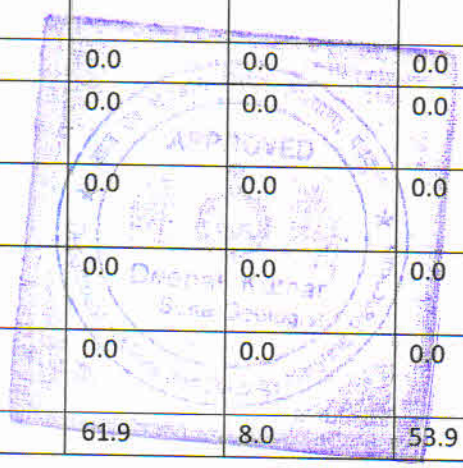


Table: Calculation for Financial Assurance

S. No.	Item	Area put on use at start of plan (Ha) (A)	Requirement at the end of plan period (Ha)	Total area put to use (Ha) (B)	Area considered as fully reclaimed & rehabilitation (Ha) (C)	Net area considered for calculation (Ha) D = (B-C)
1.	Area to be excavated	37.28	55.40	55.40	4.0	51.40
2.	Storage for topsoil	0.00	0.20	0.20	0.0	0.20
3.	Overburden/ dumps	0.0	0.60	0.60	0.0	0.60
4.	Mineral storage	0.0	1.40	1.40	0.0	1.40
5.	Infrastructure (Workshop, Adm. Building & Road)	0.0	0.30	0.30	0.0	0.30
6.	Green belt	0.0	4.0	4.0	4.0	0.0
7.	Tailing pond	0.0	0.0	0.0	0.0	0.0
8.	Effluent treatment plan	0.0	0.0	0.0	0.0	0.0
9.	Mineral separation plant	0.0	0.0	0.0	0.0	0.0
10.	Township area	0.0	0.0	0.0	0.0	0.0
11.	Others to specify	0.0	0.0	0.0	0.0	0.0
Total		37.28	61.9	61.9	8.0	53.9



Total 64.40 ha area is considered for calculation. The total financial assurance (@15000/- per ha.) will be of Rs 9,66,000/. This will be given by lessee as per rule no 70 (1) (6) amended in 2012 as surety bond / bank guarantee.

9.0 CERTIFICATE

It is enclosed with the report.

10.0 PLAN AND SECTION

Plan and section are prepared and enclosed with the mining plan.

S.N. SHARMA
B.E(MINING)
Qualified Person

7419712610
8814027600

Riddhi Siddhi - KSM Resources JV

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

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

CONSENT LETTER FROM APPLICANT

The Modified Mining Plan& Progressive Mine Closure Plan in respect of Kalali & Kalyana Stone Mine along with associated minerals, District: Bhiwani (Haryana) of Riddhi Siddhi -- KSM Resources JV, Khatoni No. 1049, Behind Hotel Mejban. Loharu Road, Charkhi Dadri (Haryana) covering lease area of 64.40 ha District : Charkhi Dadri (Haryana) is being prepared by S.N. Sharma (RQP/DDN/0135/2001-A.)

I request The Director Mines and Geology, Haryana to make further correspondence regarding modification of the mining plan with the said RQP on the following address:-

S.N. Sharma
282, First Floor, Sector-11D, Faridabad (Haryana)
Mobile :09560848579
Mail : snsharma@jbbtechnocrat.com

I also authorize Shri S.N. Sharma to make correspondence with your office.

I hereby undertake that the mining scheme in respect of the area prepared by RQP be deemed to have been made with my knowledge and consent and shall be acceptable to me and binding on me in all respects.

Place: Charkhi Dadri
Date: 10.11.2022

Riddhi Siddhi-KSM Resources JV

Signature of the applicant

Authorised Signatory

(Authorized Signatory)

S.N. SHARMA
RQP/DDN/0135/2001-A
Qualified Person

Renewed /नवीनीकृत up to 29/3/2021

खनन योजना तैयार करने हेतु
योग्य व्यक्ति के रूप में
मान्यता का प्रमाणपत्र

28/3/11
क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines

(खनिज रियायत नियमावली 1960 के नियम 22(सी) के अंतर्गत)

श्री एस. एन. शर्मा

वल्द श्री के. सी. शर्मा

निवासी मकान नं. 2181, सेक्टर-16, फरीदाबाद, हरियाणा

द्वारा अपनी योग्यताओं और अनुभव का संतोषप्रद प्रमाण प्रस्तुत करने के फलस्वरूप खनिज रियायत नियमावली, 1960 के नियम 22(सी) के अंतर्गत उन्हें एतद्द्वारा खनन योजना तैयार करने हेतु योग्य व्यक्ति के रूप में मान्यता प्रदान की जाती है ।

उनका पंजीयन क्रमांक REP/DDN/135/2001/A है ।

यह मान्यता दिनांक 29.03.2011 को समाप्त

होने वाली पाँच वर्षों की अवधि के लिए वैध है ।

APPROVED
Deepak Kumar
State Geologist

स्थान : देहरादून
दिनांक : 30.03.2001

क्षेत्रीय खान नियंत्रक
भारतीय खान ब्यूरो
क्षेत्रीय खान नियंत्रक
Regional Controller of Mines
भारतीय खान ब्यूरो
Indian Bureau of Mines

S.N.SHARMA
B.E(MINING)
Qualified Person

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.

HARYANA STATE

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 :

HARYANA STATE

(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 STATE

HARYANA STATE POLLUTION CONTROL BOARD
Regional office, HSPCB Charkhi dadri, Ramkrishan Parisar, Lal Kothi Wali Gali, Ward No.17,Loharu Road, Charkhi Dadri-127306. Email:- hspcbrocd@gmail.com
E-mail: hspcb@hry.nic.in

No. HSPCB/Consent/ : 313100423CRDCTO45516607 **Dated:11/09/2023**

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. 45516607 received on dated 2023-09-07 in regional office Charkhi Dadri.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	11/09/2023 - 30/09/2025
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. NA	
Trade Effluent Parameters	
1. NA	
Number of stacks	1
Height of stack	
1. NA	
Emission parameters	
1. PM 2.5	60 mg/m3
2. PM 10	100 mg/m3

3. SOX	80 mg/m3
4. NOX	80 mg/m3
Product Details	
1. Stone along with minor mineral	23200 Metric Tonnes/day
Capacity of boiler	
1. NA	Ton/hr
Type of Furnace	
1. NA	
Type of Fuel	
1. Electricity	KL/day
Raw Material Details	
Stone along with minor mineral	23200 Metric Tonnes/Day

Regional Officer, Charkhi Dadri
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.

HARYANA STATE

Specific Conditions :

1. Unit will comply with provision of all applicable Acts/Rules/Direction of the Board / CPCB/ NGT/CAQM along with general conditions of the board.
2. The unit will maintain its APCM / dust suppression system in well working condition.
3. Unit will comply all the prescribed air emission standards under the provisions of Air(Prevention and Control of Pollution) Act, 1981 and Environment (Protection) Act, 1986 amended from time to time.
4. Unit will procure water for sprinkling from approved source and will maintain log book for the same.
5. CTO so granted is without prejudice to the any violation caused by unit in past and will be deemed cancelled on account of any such observation.
6. The unit will strictly comply with all the conditions of EC granted by MoEF&CC, CTE & CTO granted by the Board and in case of non compliance of the conditions, the CTO shall be revoked without giving any more opportunity.
7. The unit will abide by all the directions / orders issued from time to time by all the court i.e. District Courts, Hon'ble Punjab & Haryana High Court, Chandigarh, Hon'ble NGT and Hon'ble Supreme Court of India w.r.t. mining projects.
8. Unit will deposit balance CTO fee if found pending at on later stage as per prescribed schedule.
9. The unit will plants sufficient Nos. of trees within & outside the premises during coming monsoon season as per mining plan.
10. The unit will keep the parameter within limits throughout the year
11. The standards prescribed under environmental laws by MoEF&CC/ CPCB are followed by the Board.
12. Unit will not exceed production 5.8 MTPA and comply all conditions of Environmental

KRISHAN KUMAR
Digitally signed by KRISHAN KUMAR
Date: 2023.09.11 21:58:29 +05'30'

Clearance.

Regional Officer, Charkhi Dadri
Haryana State Pollution Control Board.

HARYANA STATE


OPPO A15s


OPPO A15s


OPPO A15


©PPO A15s


OPPO A15s

FOREST DEPARTMENT GOVT. OF HARYANA
O/o Divisional Forest Officer, Bhiwani

Meham Road, Vidya Nagar, Bhiwani, Tel. No. 01664-242430, E-mail:-dfo.bhiwani@yahoo.com

क्रमांक/ ..... 1820 ..... दिनांक/ 20-11-2018

सेवा मेः– **M/s. Ridhi Sidhi KSM Resources-JV,**
Khatoni number 1049, Behind Mejban,
Loharu road, Charkhi Dadri, Haryana.

विषयः **NOC/Clarification regarding the applicability of forest laws on Non-forest land for Kalali and Kalyana stone along with associated minor minerals mining project of M/s. Ridhi Sidhi KSM Resources-JV over an area of 64.40 hectares falling in Khasra No. 223 min.224 to 228 and 72 of Village Kalali & Kalyana in Tehsil & Distt. Charkhi Dadri.**

संदर्भः **आपका प्रार्थना पत्र दिनांक 10.9.2018 के संदर्भ में।**

––000––

संदर्भांकित पत्र के विषय में अवगत करवाया जाता है कि गांव कलाली/कलियाणा तहसील व जिला चरखी दादरी स्थित खसरा नं0 223 min, 224 To 228 and 72 का कुल क्षेत्र 64.40 हैक्टेयर अरावली पौधारोपण क्षेत्र में नहीं आता व किसी प्रकार की वन भूमि (Forest Land) का पार्ट भी नहीं हैं। अतः रिकार्ड अनुसार वन विभाग द्वारा गांव कलाली–कलियाणा गैर मुमकीन पहाड़ के खसरा नं0 223 min, 224 To 228 and 72 के कुल 64.40 हैक्टेयर ऐरिया में खनन से सम्बन्धित गतिविधियां चलाने की अनुमति निम्न शर्तों के आधार पर दी जाती हैः–

1. मौका पर भारतीय वन संरक्षण अधिनियम 1980 की पालना सुनिश्चित करनी होगी तथा अरावली पौधारोपण क्षेत्र/वन भूमि को गैर वन वानिकी उद्देश्य हेतु प्रयोग करने से पूर्व नियमानुसार वन विभाग से अनुमति लेनी होगी।
2. खनन ऐरिया सैक्शन–4 (सामान्य) के तहत आता है। इसलिये मौका पर पंजाब भू–संरक्षण अधिनियम 1900 तथा भारतीय वन अधिनियम 1927 की पालना सुनिश्चित करनी होगी।
3. मौका पर खनन क्षेत्र के साथ लगते हुये अरावली पौधारोपण को कोई हानि नहीं पहुंचाई जाएगी।
4. यूजर एजेंसी द्वारा मौका पर खनन क्षेत्र में लगवाये गये पिल्लरों पर जी0पी0एस0 कोर्डिनेट अंकित करवाये जायेंगे व इन पिल्लरों के भीतर ही खनन कार्य किया जायेगा।
5. भारतीय वन्य प्राणी अधिनियम 1972 की सभी शर्तों की पालना की जाएगी।

इसके अतिरिक्त मौका पर उपरोक्त शर्तों के अलावा पर्यावरण को क्षति पहुंचाने की कोई भी गतिविधि/उल्लंघना पाई गई तो वन विभाग द्वारा यह अनापत्ति प्रमाण पत्र रद्द किया जा सकता।

वन मण्डल अधिकारी,
भिवानी ।

पृ0क्रमांक : दिनांकः

इसकी एक प्रति वन राजिक अधिकारी दादरी को मौका पर वन अधिनियमों की पालना सुनिश्चित करने हेतु प्रेषित है।

वन मण्डल अधिकारी
भिवानी ।

Gen.Letter729

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

SaRKRle Number:	**VEL/RKR/A/01**	**Report No.:**	**VEL/A/2403/07/001**
Name & address of Project:	**M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**12/03/2024**
		Period of Analysis:	**07/03/2024 to 12/03/2024**
		Receipt Date:	**07/03/2024**
SaRKRle Description :	**Ambient Air Quality Monitoring**		

General Information:-

SaRKRle collected by	: Vardan Enviro Lab Representative
SaRKRling Location	: **Near Mine Site**
Instrument Used	: RDS & FPS with all Accessories
Instrument Code	: VEL/RDS-FPS/21
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **05/03/2024 to 06/03/2024**
Time of Monitoring	: 09:00 AM to 09:10 AM
Ambient TeRKRerature (°C)	: Min. 20.0°C, Max. 35.0°C
Surrounding Activity	: Human, Mining & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
SaRKRling & Analysis Protocol	: **IS:5182 & CPCB Guidelines**
Parameter Required	: $PM_{2.5}$, PM_{10}, NO_2, SO_2

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	**Particulate Matter ($PM_{2.5}$)**	IS:5182 (P-24)	**44.52**	$\mu g/m^3$	60
2.	**Particulate Matter (PM_{10})**	IS:5182 (P-23)	**85.89**	$\mu g/m^3$	100
3.	**Nitrogen Dioxide (NO_2)**	IS:5182 (P-6)	**18.45**	$\mu g/m^3$	80
4.	**Sulphur Dioxide (SO_2)**	IS:5182 (P-2)	**8.90**	$\mu g/m^3$	80
5.	**#Carbon Monoxide (as CO)**	IS:5182 (P-10) NDIR Method	**0.70**	$\mu g/m^3$	4.0

*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.

(Checked By)

(Approved By)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

SaRKRle Number:	**VEL/RKR/A/02**	**Report No.:**	**VEL/A/2403/07/002**
Name & Address of Project:	**M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**12/03/2024**
		Period of Analysis:	**07/03/2024 to 12/03/2024**
		Receipt Date:	**07/03/2024**

SaRKRle Description : **Ambient Air Quality Monitoring**

General Information:-

SaRKRle collected by	: Vardan EnviroLab Representative
SaRKRling Location	: **500Mtr: From Mine Site**
Instrument Used	: RDS & FPS with all Accessories
Instrument Code	: VEL/RDS-FPS/22
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **05/03/2024 to 06/03/2024**
Time of Monitoring	: 09:20 AM to 09:25 AM
Ambient TeRKRerature (°C)	: Min. 20.0°C, Max. 35.0°C
Surrounding Activity	: Human &Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
SaRKRling & Analysis Protocol	: **IS:5182 & CPCB Guidelines**
Parameter Required	: $PM_{2.5}$, PM_{10}, NO_2, SO_2

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	**Particulate Matter ($PM_{2.5}$)**	IS:5182 (P-24)	**59.87**	$\mu g/m^3$	60
2.	**Particulate Matter (PM_{10})**	IS:5182 (P-23)	**89.65**	$\mu g/m^3$	100
3.	**Nitrogen Dioxide (NO_2)**	IS:5182 (P-6)	**16.52**	$\mu g/m^3$	80
4.	**Sulphur Dioxide (SO_2)**	IS:5182 (P-2)	**15.10**	$\mu g/m^3$	80
5.	**#Carbon Monoxide (as CO)**	IS:5182 (P-10) NDIR Method	**0.74**	$\mu g/m^3$	4.0

*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.

(Checked By)

(Approved By)

Test Report

SaRKRle Number:	**VEL/RKR/A/03**	**Report No.:**	**VEL/A/2403/07/003**
Name & Address of Project:	**M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**12/03/2024**
		Period of Analysis:	**07/03/2024 to 12/03/2024**
		Receipt Date:	**07/03/2024**
SaRKRle Description :	**Ambient Air Quality Monitoring**		

General Information:-

SaRKRle collected by	: Vardan EnviroLab Representative
SaRKRling Location	: **Kaliyana Village**
Instrument Used	: RDS & FPS with all Accessories
Instrument Code	: VEL/RDS-FPS/23
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **06/03/2024 to 07/03/2024**
Time of Monitoring	: 09:45 AM to 09:40 AM
Ambient TeRKRerature (°C)	: Min. 20.0°C, Max. 35.0°C
Surrounding Activity	: Human &Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
SaRKRling & Analysis Protocol	: **IS:5182 & CPCB Guidelines**
Parameter Required	: $PM_{2.5}$, PM_{10}, NO_2, SO_2

TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	**Particulate Matter ($PM_{2.5}$)**	IS:5182 (P-24)	**43.33**	$\mu g/m^3$	60
2.	**Particulate Matter (PM_{10})**	IS:5182 (P-23)	**82.10**	$\mu g/m^3$	100
3.	**Nitrogen Dioxide (NO_2)**	IS:5182 (P-6)	**19.45**	$\mu g/m^3$	80
4.	**Sulphur Dioxide (SO_2)**	IS:5182 (P-2)	**11.26**	$\mu g/m^3$	80
5.	**#Carbon Monoxide (as CO)**	IS:5182 (P-10) NDIR Method	**0.55**	$\mu g/m^3$	4.0

*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.

(Checked By)

(Approved By)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: VEL/RKR/AN/01
Name & Address of Project: M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt-CharkhiDadri, Haryana.
Sample Description: AMBIENT NOISE LEVEL MONITORING

Report No.: VEL/AN/2403/07/001
Format No.: 7.8 F-01
Party Reference No.: NIL
Reporting Date: 12/03/2024
Receipt Date: 07/03/2024

General Information:-

Sample collected by	: Vardan EnviroLab Representative
Sampling Location	: **Near Mine Site**
Instrument Used	: Sound Level Meter
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **05/03/2024 to 06/03/2024**
Time of Monitoring	: 06:00 AM to 06:00AM
Surrounding Activity	: Human, Vehicular & Mining Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if Any	: No any
Sampling & Analysis Protocol	: **IS-9989**
Sampling Duration	: 24 Hours
Parameter Required	: Lmax, Lmin & Leq

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

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	**87.8**	**72.6**	dB(A)
2.	L_{min}	IS 9989	**59.0**	**46.9**	dB(A)
3.	L_{eq}	IS 9989	**72.8**	**62.4**	dB(A)
4.	**#DGMS Limits in dB(*A) Leq (Mining Area)**	-	**75.0**	**70.0**	dB(A)

(Checked By)

(Approved By)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: VEL/RKR/AN/02
Name & Address of Project: M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.
Sample Description: AMBIENT NOISE LEVEL MONITORING

Report No.: VEL/AN/2403/07/002
Format No.: 7.8 F-01
Party Reference No.: NIL
Reporting Date: 12/03/2024
Receipt Date: 07/03/2024

General Information:-

Sample collected by	: Vardan EnviroLab Representative
Sampling Location	: **500Mtr from Mine site**
Instrument Used	: Sound Level Meter
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **05/03/2024 to 06/03/2024**
Time of Monitoring	: 06:00 AM to 06:00 AM
Surrounding Activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if Any	: No any
Sampling & Analysis Protocol	: **IS-9989**
Sampling Duration	: 24 Hours
Parameter Required	: Lmax, Lmin & Leq

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	**74.9**	**67.9**	dB(A)
2.	L_{min}	IS 9989	**52.6**	**40.2**	dB(A)
3.	L_{eq}	IS 9989	**69.45**	**68.20**	dB(A)
4.	#**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..

(Checked By)

(Approved By)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: VEL/RKR/AN/03
Name & Address of Project: M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.
Sample Description: AMBIENT NOISE LEVEL MONITORING

Report No.: VEL/AN/2403/07/003
Format No.: 7.8 F-01
Party Reference No.: NIL
Reporting Date: 12/03/2024
Receipt Date: 07/03/2024

General Information:-

Sample collected by	: Vardan EnviroLab Representative
Sampling Location	: **Kaliyana Village**
Instrument Used	: Sound Level Meter
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: **06/03/2024 to 07/03/2024**
Time of Monitoring	: 06:00 AM to 06:00 AM
Surrounding Activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Control measure if Any	: No any
Sampling & Analysis Protocol	: **IS-9989**
Sampling Duration	: 24 Hours
Parameter Required	: Lmax, Lmin & Leq

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	**61.2**	**57.3**	dB(A)
2.	L_{min}	IS 9989	**39.5**	**34.2**	dB(A)
3.	L_{eq}	IS 9989	**48.63**	**38.22**	dB(A)
4.	#**DGMS Limits in dB(*A) Leq (Residential Area)**	-	**55.0**	**40.0**	dB(A)

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

(Checked By)

(Approved By)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: VEL/RKR/W/01
Name & Address of Project M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.

Report No.: VEL/W/2311/09/001
Format No.: 7.8 F-01
Party Reference No.: NIL
Reporting Date: 14/11/2023

Period of Analysis: 09/11/2023 to 14/11/2023
Receipt Date: 09/11/2023
Sampling Date: 09/11/2023

Sample Description: Ground Water Sample
Type of Sampling: Grab
Sampling Location: Near Mine Site
Sampling Quantity: 2.0Ltr.
Sample Collected by Vardan Enviro Lab Representatives
Preservation: Icebox
Sampling & Analysis Protocol: APHA, 23rd Edition 2017
Parameter Required: As per Work Order

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)	IS 3025 :Part 11:1983(Electrode Method)	7.78	--	6.5 to 8.5	No Relaxation
2.	Colour	IS:3025 :Part-4:1983(Visual Comparison Method)	1.0	Hazen	5	15
3.	Turbidity	IS: 3025:P-10:1984(Nephlometric Method)	*BLQ (**LOQ-1.0)	NTU	1	5
4.	Odour	IS: 3025:P-5:1983	Agreeable	--	Agreeable	Agreeable
5.	Taste	IS: 3025:P-8: 1984	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025:P-21:2009(EDTA Titrimetric Method)	295.56	mg/l	200	600
7.	Calcium as Ca	IS: 3025 (P-40): 1991(EDTA Titrimetric Method)	64.33	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS:3025 :Part 23:: 1986(indicator Method)	283.65	mg/l	200	600
9.	Chloride as Cl	IS:3025 (Part 32):1988(Argentometric Method)	66.00	mg/l	250	1000
10.	Cyanide as CN	IS:3025 (P-27/Sec1):2021,Pyridin Barbituric Acid Method	*BLQ (**LOQ-0.02)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA 23rd Edition2017: 3500 Mg B	23.52	mg/l	30	100
12.	Total Dissolved Solids	IS: 3025:P-16:1984(Gravimetric Method)	370.00	mg/l	500	2000
13.	Sulphate as SO_4	IS:3025 (P-24/Sec-1): 2022 Turbidity Method	33.78	mg/l	200	400
14.	Fluoride as F	APHA 23rd Edition : 2017: 4500 F-D: (SPADNS Method)	0.34	mg/l	1.0	1.5
15.	Nitrate as NO_3	APHA 23rd Edition:2017, 4500 NO3. B (Ultraviolate Screening Method)	08.47	mg/l	45	No Relaxation
16.	Iron as Fe	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	0.14	mg/l	1.0	No relaxation
17.	Aluminum as Al	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.005)	mg/l	0.03	0.2
18.	Boron	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.01)	mg/l	0.5	2.4
19.	Total Chromium as Cr	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.05	No Relaxation

(Checked By) (Approved By)

Test Report

Sample No. **VEL/RKR/W/03** | Report No **VEL/W/2311/09/001**

S. No	Parameter	Test-Method	Result	Unit	Limits of IS:10500-2012	
					Requirement (Acceptable) Limit	Permissible limit in the Absence of Alternate Source
20.	Phenolic Compounds	Clause-6 of IS 3025 (P-43/Sec-1):2022(With Chloroform Extraction Method)	*BLQ (**LOQ-0.005)	mg/l	0.001	0.002
21.	Mineral Oil	IS:3025 :Part 39: 2021(Infrared Spectroscopic Method)	*BLQ (**LOQ-0.1)	mg/l	1.0	No Relaxation
22.	Anionic Detergents as MBAS	IS:3025 :P-68: : 2019(Methylene Blue Method)	*BLQ (**LOQ-0.05)	mg/l	0.2	1.0
23.	Zinc as Zn	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	1.00	mg/l	5	15
24.	Copper as Cu	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	0.14	mg/l	0.05	1.5
25.	Manganese as Mn	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.1	0.3
26.	Cadmium as Cd	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.003	No Relaxation
27.	Lead as Pb	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.01	No Relaxation
28.	Selenium as Se	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.001)	mg/l	0.01	No Relaxation
29.	Arsenic as As	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.005)	mg/l	0.01	No Relaxation
30.	Mercury as Hg	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.0005)	mg/l	0.001	No Relaxation
31.	Total Coliform	APHA 9221 B	Absent	/100ml	Shall not be detectable in any 100 ml sample	
32.	E. Coli	APHA 9221 F	Absent	/100ml	Shall not be detectable in any 100 ml sample	

Note - *BLQ- Below Limit of Quantification, **LOQ- Limit of Quantification

(Checked By)

(Approved By)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	**VEL/RKR/W/02**	**Report No.:**	**VEL/W/2311/09/002**
Name & Address of Project	**M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**14/11/2023**
		Period of Analysis:	**09/11/2023 to 14/11/2023**
		Receipt Date:	**09/11/2023**
		Sampling Date:	**09/11/2023**
Sample Description:	**Ground Water Sample**	**Type of Sampling:**	**Grab**
Sampling Location:	**Near Village – Kaliyana**	**Sampling Quantity:**	**2.0Ltr.**
Sample Collected by	**Vardan EnviroLab Representatives**	**Preservation:**	**Icebox**
Sampling & Analysis Protocol:	**APHA, 23rd Edition 2017**	**Parameter Required:**	**As per Work Order**

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)	IS 3025 :Part 11:1983(Electrode Method)	7.48	--	6.5 to 8.5	No Relaxation
2.	Colour	IS:3025 :Part-4:1983(Visual Comparison Method)	1.0	Hazen	5	15
3.	Turbidity	IS: 3025:P-10:1984(Nephlometric Method)	*BLQ (**LOQ-1.0)	NTU	1	5
4.	Odour	IS: 3025:P-5:1983	Agreeable	--	Agreeable	Agreeable
5.	Taste	IS: 3025:P-8: 1984	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025:P-21:2009(EDTA Titrimetric Method)	220.00	mg/l	200	600
7.	Calcium as Ca	IS: 3025 (P-40): 1991(EDTA Titrimetric Method)	51.00	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS:3025 :Part 23:: 1986(indicator Method)	210.00	mg/l	200	600
9.	Chloride as Cl	IS:3025 (Part 32):1988(Argentometric Method)	77.52	mg/l	250	1000
10.	Cyanide as CN	IS:3025 (P-27/Sec1):2021,Pyridin Barbituric Acid Method	**BLQ (**LOQ-0.02)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA 23rd Edition2017: 3500 Mg B	26.69	mg/l	30	100
12.	Total Dissolved Solids	IS: 3025:P-16:1984(Gravimetric Method)	310.00	mg/l	500	2000
13.	Sulphate as SO_4	IS:3025 (P-24/Sec-1): 2022 Turbidity Method	40.10	mg/l	200	400
14.	Fluoride as F	APHA 23rd Edition : 2017: 4500 F-D: (SPADNS Method)	0.40	mg/l	1.0	1.5
15.	Nitrate as NO_3	APHA 23rd Edition:2017, 4500 NO3. B (Ultraviolate Screening Method)	10.20	mg/l	45	No Relaxation
16.	Iron as Fe	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	0.10	mg/l	1.0	No relaxation
17.	Aluminium as Al	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.005)	mg/l	0.03	0.2
18.	Boron	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.01)	mg/l	0.5	2.4
19.	Total Chromium as Cr	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.05	No Relaxation

(Checked By)

(Approved By)

Test Report

Sample No. **VEL/RKR/W/04** | Report No **VEL/W/2311/09/002**

S. No	Parameter	Test-Method	Result	Unit	Limits of IS:10500-2012	
					Requirement (Acceptable) Limit	Permissible limit in the Absence of Alternate Source
20.	Phenolic Compounds	Clause-6 of IS 3025 (P-43/Sec-1):2022(With Chloroform Extraction Method)	*BLQ (**LOQ-0.005)	mg/l	0.001	0.002
21.	Mineral Oil	IS:3025 :Part 39: 2021(Infrared Spectroscopic Method)	*BLQ (**LOQ-0.1)	mg/l	1.0	No Relaxation
22.	Anionic Detergents as MBAS	IS:3025 :P-68: : 2019(Methylene Blue Method)	*BLQ (**LOQ-0.05)	mg/l	0.2	1.0
23.	Zinc as Zn	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	1.10	mg/l	5	15
24.	Copper as Cu	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	0.20	mg/l	0.05	1.5
25.	Manganese as Mn	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.1	0.3
26.	Cadmium as Cd	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.003	No Relaxation
27.	Lead as Pb	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.01	No Relaxation
28.	Selenium as Se	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.001)	mg/l	0.01	No Relaxation
29.	Arsenic as As	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.005)	mg/l	0.01	No Relaxation
30.	Mercury as Hg	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.0005)	mg/l	0.001	No Relaxation
31.	Total Coliform	APHA 9221 B	Absent	/100 ml	Shall not be detectable in any 100 ml sample	
32.	E. Coli	APHA 9221 F	Absent	/100 ml	Shall not be detectable in any 100 ml sample	

Note - *BLQ- Below Limit of Quantification, **LOQ- Limit of Quantification

(Checked By)

(Approved By)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	**VEL/RKR/W/01**	**Report No.:**	**VEL/W/2401/09/001**
Name & Address of Project :	**M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**16/01/2024**
		Period of Analysis:	**09/01/2024 to 16/01/2024**
		Receipt Date:	**09/01/2024**
		Sampling Date:	**09/01/2024**
Sample Description:	**Ground Water Sample**	**Type of Sampling:**	**Grab**
Sampling Location:	**Near Mine Site**	**Sampling Quantity:**	**2.0Ltr.**
Sample Collected by	**Vardan EnviroLab Representatives**	**Preservation:**	**Icebox**
Sampling & Analysis Protocol:	**APHA, 23rd Edition 2017**	**Parameter Required:**	**As per Work Order**

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)	IS 3025 :Part 11:1983(Electrode Method)	7.36	--	6.5 to 8.5	No Relaxation
2.	Colour	IS:3025 :Part-4:1983(Visual Comparison Method)	1.0	Hazen	5	15
3.	Turbidity	IS: 3025:P-10:1984(Nephlometric Method)	*BLQ (**LOQ-1.0)	NTU	1	5
4.	Odour	IS: 3025:P-5:1983	Agreeable	--	Agreeable	Agreeable
5.	Taste	IS: 3025:P-8: 1984	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025:P-21:2009(EDTA Titrimetric Method)	242.63	mg/l	200	600
7.	Calcium as Ca	IS: 3025 (P-40): 1991(EDTA Titrimetric Method)	48.52	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS:3025 :Part 23:: 1986(indicator Method)	240.30	mg/l	200	600
9.	Chloride as Cl	IS:3025 (Part 32):1988(Argentometric Method)	54.25	mg/l	250	1000
10.	Cyanide as CN	IS:3025 (P-27/Sec1):2021,Pyridin Barbituric Acid Method	*BLQ (**LOQ-0.02)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA 23rd Edition2017: 3500 Mg B	27.63	mg/l	30	100
12.	Total Dissolved Solids	IS: 3025:P-16:1984(Gravimetric Method)	390.00	mg/l	500	2000
13.	Sulphate as SO_4	IS:3025 (P-24/Sec-1): 2022 Turbidity Method	37.85	mg/l	200	400
14.	Fluoride as F	APHA 23rd Edition : 2017: 4500 F-D: (SPADNS Method)	0.34	mg/l	1.0	1.5
15.	Nitrate as NO_3	APHA 23rd Edition:2017, 4500 NO3. B (Ultraviolate Screening Method)	15.63	mg/l	45	No Relaxation
16.	Iron as Fe	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	0.20	mg/l	1.0	No relaxation
17.	Aluminum as Al	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.005)	mg/l	0.03	0.2
18.	Boron	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.01)	mg/l	0.5	2.4
19.	Total Chromium as Cr	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.05	No Relaxation

(Checked By)

(Approved By)

Test Report

Sample No. **VEL/RKR/W/01**			Report No **VEL/W/2401/09/001**			
S. No	**Parameter**	**Test-Method**	**Result**	**Unit**	**Limits of IS:10500-2012**	
					Requirement (Acceptable) Limit	**Permissible limit in the Absence of Alternate Source**
20.	Phenolic Compounds	Clause-6 of IS 3025 (P-43/Sec-1):2022(With Chloroform Extraction Method)	*BLQ (**LOQ-0.005)	mg/l	0.001	0.002
21.	Mineral Oil	IS:3025 :Part 39: 2021(Infrared Spectroscopic Method)	*BLQ (**LOQ-0.1)	mg/l	1.0	No Relaxation
22.	Anionic Detergents as MBAS	IS:3025 :P-68: : 2019(Methylene Blue Method)	*BLQ (**LOQ-0.05)	mg/l	0.2	1.0
23.	Zinc as Zn	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	1.12	mg/l	5	15
24.	Copper as Cu	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	0.21	mg/l	0.05	1.5
25.	Manganese as Mn	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.1	0.3
26.	Cadmium as Cd	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.003	No Relaxation
27.	Lead as Pb	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.01	No Relaxation
28.	Selenium as Se	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.001)	mg/l	0.01	No Relaxation
29.	Arsenic as As	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.005)	mg/l	0.01	No Relaxation
30.	Mercury as Hg	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.0005)	mg/l	0.001	No Relaxation
31.	Total Coliform	APHA 9221 B	Absent	/100ml	Shall not be detectable in any 100 ml sample	
32.	E. Coli	APHA 9221 F	Absent	/100ml	Shall not be detectable in any 100 ml sample	

Note - *BLQ- Below Limit of Quantification, **LOQ- Limit of Quantification

(Checked By)

(Approved By)

Test Report

Sample Number:	**VEL/RKR/W/02**	**Report No.:**	**VEL/W/2401/09/002**
Name & Address of Project:	**M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Reporting Date:	**16/01/2024**
		Period of Analysis:	**09/01/2024 to 16/01/2024**
		Receipt Date:	**09/01/2024**
		Sampling Date:	**09/01/2024**
Sample Description:	**Ground Water Sample**	**Type of Sampling:**	**Grab**
Sampling Location:	**Village –Kaliyana**	**Sampling Quantity:**	**2.0Ltr.**
Sample Collected by	**Vardan EnviroLab Representatives**	**Preservation:**	**Icebox**
Sampling & Analysis Protocol:	**APHA, 23rd Edition 2017**	**Parameter Required:**	**As per Work Order**

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)	IS 3025 :Part 11:1983(Electrode Method)	7.12	--	6.5 to 8.5	No Relaxation
2.	Colour	IS:3025 :Part-4:1983(Visual Comparison Method)	1.0	Hazen	5	15
3.	Turbidity	IS: 3025:P-10:1984(Nephlometric Method)	*BLQ (**LOQ-1.0)	NTU	1	5
4.	Odour	IS: 3025:P-5:1983	Agreeable	--	Agreeable	Agreeable
5.	Taste	IS: 3025:P-8: 1984	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS 3025:P-21:2009(EDTA Titrimetric Method)	24.63	mg/l	200	600
7.	Calcium as Ca	IS: 3025 (P-40): 1991(EDTA Titrimetric Method)	51.25	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS:3025 :Part 23:: 1986(indicator Method)	230.47	mg/l	200	600
9.	Chloride as Cl	IS:3025 (Part 32):1988(Argentometric Method)	51.36	mg/l	250	1000
10.	Cyanide as CN	IS:3025 (P-27/Sec1):2021,Pyridin Barbituric Acid Method	*BLQ (**LOQ-0.02)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA 23rd Edition2017: 3500 Mg B	24.10	mg/l	30	100
12.	Total Dissolved Solids	IS: 3025:P-16:1984(Gravimetric Method)	430.00	mg/l	500	2000
13.	Sulphate as SO_4	IS:3025 (P-24/Sec-1): 2022 Turbidity Method	27.63	mg/l	200	400
14.	Fluoride as F	APHA 23rd Edition : 2017: 4500 F-D: (SPADNS Method)	0.40	mg/l	1.0	1.5
15.	Nitrate as NO_3	APHA 23rd Edition:2017, 4500 NO3. B (Ultraviolate Screening Method)	10.23	mg/l	45	No Relaxation
16.	Iron as Fe	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	0.16	mg/l	1.0	No relaxation
17.	Aluminium as Al	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.005)	mg/l	0.03	0.2
18.	Boron	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.01)	mg/l	0.5	2.4
19.	Total Chromium as Cr	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.05	No Relaxation

(Checked By)

(Approved By)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample No. **VEL/RKR/W/02** Report No**: VEL/W/2401/09/002**

S. No	Parameter	Test-Method	Result	Unit	Limits of IS:10500-2012	
					Requirement (Acceptable) Limit	Permissible limit in the Absence of Alternate Source
20.	Phenolic Compounds	Clause-6 of IS 3025 (P-43/Sec-1):2022(With Chloroform Extraction Method)	*BLQ (**LOQ-0.005)	mg/l	0.001	0.002
21.	Mineral Oil	IS:3025 :Part 39: 2021(Infrared Spectroscopic Method)	*BLQ (**LOQ-0.1)	mg/l	1.0	No Relaxation
22.	Anionic Detergents as MBAS	IS:3025 :P-68: : 2019(Methylene Blue Method)	*BLQ (**LOQ-0.05)	mg/l	0.2	1.0
23.	Zinc as Zn	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	1.20	mg/l	5	15
24.	Copper as Cu	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	0.09	mg/l	0.05	1.5
25.	Manganese as Mn	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.1	0.3
26.	Cadmium as Cd	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.003	No Relaxation
27.	Lead as Pb	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.002)	mg/l	0.01	No Relaxation
28.	Selenium as Se	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.001)	mg/l	0.01	No Relaxation
29.	Arsenic as As	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.005)	mg/l	0.01	No Relaxation
30.	Mercury as Hg	VEL/STP/ICP/W-01,Issue No-01,Issue Date-01/11/2021	*BLQ (**LOQ-0.0005)	mg/l	0.001	No Relaxation
31.	Total Coliform	APHA 9221 B	Absent	/100ml	Shall not be detectable in any 100 ml sample	
32.	E. Coli	APHA 9221 F	Absent	/100ml	Shall not be detectable in any 100 ml sample	

Note - *BLQ- Below Limit of Quantification, **LOQ- Limit of Quantification

(Checked By)

(Approved By)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: VEL/RKR/S/01
Name & Address of Project: M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.

Report No.: VEL/S/2403/07/001
Format No.: 7.8 F-01
Party Reference No.: NIL
Reporting Date: 12/03/2024
Period of Analysis: 07/03/2024 to 12/03/2024
Receipt Date: 07/03/2024
Sampling Date: 07/03/2024
Type of Sampling: Composite
Sampling Quantity: 2.0 Kg
Depth of Sampling: 30 cm
Packing Status: Temp Sealed

Sample Description: Soil Sample
Sampling Location: Near Mine Site
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)	7.89	--
2.	Conductivity	IS:14767	0.390	mS/cm
3.	Soil Texture	VEL/STP/EN/64, Issue No.-01, 01/11/2021	Sandy Loam	--
4.	Color	VEL/STP/EN/67, Issue No.-01, 01/11/2021	Yellowish Brown	--
5.	Water holding capacity	VEL/STP/EN/86, Issue No.-01, 01/11/2021	35.00	%
6.	Bulk density	VEL/STP/EN/59, Issue No.-01, 01/11/2021	1.74	gm/cc
7.	Chloride as Cl	VEL/STP/EN/69, Issue No.-01, 01/11/2021	40.85	mg/100g
8.	Calcium as Ca	VEL/STP/EN/72, Issue No.-01, 01/11/2021	28.63	mg/100g
9.	Sodium as Na	VEL/STP/EN/62, Issue No.-01, 01/11/2021	134.63	mg/kg
10.	Potassium as K	VEL/STP/EN/61, Issue No.-01, 01/11/2021	42.45	kg/hec.
11.	Organic Matter	IS : 2720 (P-22), Titrimetric Method	0.42	%
12.	Magnesium as Mg	VEL/STP/EN/72, Issue No.-01, 01/11/2021	19.88	mg/100g
13.	Available Nitrogen as N	IS:14684 Distillation Method	148.33	kg./hec.
14.	Available Phosphorus	VEL/STP/EN/73, Issue No.-01, 01/11/2021	23.36	kg./hec.
15.	Zinc (as Zn)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	0.94	mg/kg
16.	Manganese (as Mn)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	1.41	mg/kg
17.	Lead (as Pb)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	0.50	mg/kg
18.	Cadmium (as Cd)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	0.38	mg/kg
19.	Chromium (as Cr)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	0.20	mg/kg
20.	Copper (as Cu)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	0.74	mg/kg

*SOP-Laboratory standard operating procedure.

(Checked By)

(Approved By)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: VEL/RKR/S/02
Name & Address of Project: M/s RidhiSidhi KSM Resources, Stone Mine (Associated Minor Mineral), Producion Capacity -5.8 MTPA, at Kalai&Kalyana, Distt- CharkhiDadri, Haryana.

Report No.: VEL/S/2403/07/002
Format No.: 7.8 F-01
Party Reference No.: NIL
Reporting Date: 12/03/2024

Period of Analysis: 07/03/2024 to 12/03/2024
Receipt Date: 07/03/2024
Sampling Date: 07/03/2024
Type of Sampling: Composite
Sampling Quantity: 2.0 Kg
Depth of Sampling: 30 cm
Packing Status: Temp Sealed

Sample Description: Soil Sample
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)	7.74	--
2.	Conductivity	IS:14767	0.320	mS/cm
3.	Soil Texture	VEL/STP/EN/64, Issue No.-01, 01/11/2021	Sandy Loam	--
4.	Color	VEL/STP/EN/67, Issue No.-01, 01/11/2021	Yellowish Brown	--
5.	Water holding capacity	VEL/STP/EN/86, Issue No.-01, 01/11/2021	35.63	%
6.	Bulk density	VEL/STP/EN/59, Issue No.-01, 01/11/2021	1.40	gm/cc
7.	Chloride as Cl	VEL/STP/EN/69, Issue No.-01, 01/11/2021	31.20	mg/100g
8.	Calcium as Ca	VEL/STP/EN/72, Issue No.-01, 01/11/2021	28.85	mg/100g
9.	Sodium as Na	VEL/STP/EN/62, Issue No.-01, 01/11/2021	143.33	mg/kg
10.	Potassium as K	VEL/STP/EN/61, Issue No.-01, 01/11/2021	33.21	kg/hec.
11.	Organic Matter	IS : 2720 (P-22), Titrimetric Method	0.42	%
12.	Magnesium as Mg	VEL/STP/EN/72, Issue No.-01, 01/11/2021	11.25	mg/100g
13.	Available Nitrogen as N	IS:14684 Distillation Method	154.25	kg./hec.
14.	Available Phosphorus	VEL/STP/EN/73, Issue No.-01, 01/11/2021	14.25	kg./hec.
15.	Zinc (as Zn)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	0.91	mg/kg
16.	Manganese (as Mn)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	1.20	mg/kg
17.	Lead (as Pb)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	0.55	mg/kg
18.	Cadmium (as Cd)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	0.32	mg/kg
19.	Chromium (as Cr)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	0.21	mg/kg
20.	Copper (as Cu)	VEL/STP/HW/03, Issue No.-01, 01/11/2021	0.85	mg/kg

*SOP-Laboratory standard operating procedure.

(Checked By)

(Approved By)

CSR & EMP EXP. DETAILS FROM 2023-24 OF RIDDHI SIDDHI KSM RESOURC

S. No.	CSR Exp.
1	Health checkup
2	Staff Welfare
	Total

S. No.	EMP EXP.
1	Air Monitoring System, Pollution Monitoring & Compliances
2	Plantation Exp.
3	Drinking Water Supply
4	Water Sprinkling in Approach Road & Village
5	Water Sprinkling in Mines Area
6	Water Sprinkling for Plantation
7	Road Maintenance
	Total

:ES JV, KALALI & KALYANA CHARKHI DADRI, HARYANA

2023-24
₹ 34,000
₹ 200,223
₹ 234,223

2023-24
₹ 207,500
₹ 135,200
₹ 100,050
₹ 481,428
₹ 2,750,000
₹ 708,029
₹ 1,369,000
₹ 5,751,207

N 28°32'58.461" (LAT)

E 76°11'11.24052" (LONG)

Altitude: 307 yd a.s.l

9/26/23 8:27 AM

Location provider: Fused

Unnamed Road

Mahra 127306

Haryana

India

भारत सरकार
Govt. of India
श्रम एवं रोजगार मंत्रालय
Ministry of Labour & Employment
खान सुरक्षा महानिदेशालय
Directorate-General of Mines Safety

NO: 518416|NZ|Ghaziabad Region|Perm|2022|249460 Ghaziabad, Date: 17.08.2022

प्रेषक
खान सुरक्षा निदेशक
गाज़ियाबाद क्षेत्र, गाज़ियाबाद

सेवा में,
श्री विकास, नामित मालिक,
कलाली & कल्याणा स्टोन खान (खसरा नं.- 223min, 224 to 228 & 72),
मैसर्स- रिद्धी सिद्धि- के.एस. एम. जे.वी.
पता: खतोनी न. 1049, होटल मेजबान के पीछे, लोहारु रोड,
चरखी दादरी (हरयाणा) -127306

विषय : Relaxation under regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 to use Heavy Earth Moving Machinery in conjunction with a system of deep hole drilling and blasting at Kalali & Kalyana Stone Mine (Khara No. 223min, 224 to 228 & 72), (Mine code- 518416 & LIN- 1999199866), Nominated Owner- Shri Vikas, located at village- Kalali & Kalyana, Tehsil & District- Charkhi Dadri of state Haryana.

महोदय,

Please refer to your online application submitted vide ID: 249460, dated 24.06.2022 along with CTO, LOI and other related documents and Surface plan No. 03/21-22 dated 16.02.2022 & Danger Zone plan No. 03/21-22 dated 16.02.2022 of the mine and other relevant documents submitted in offline mode, on the above subject.

The matter has been considered in the light of information furnished by you in your online application and accompanying enclosures and plans/sections and other enclosures submitted in offline mode. By virtue of the powers conferred on the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961, and by virtue of the authorization granted to me by the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under Section 6(1) of Mines Act, 1952, I, hereby grant relaxations under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 to extract masonry stone by using Heavy Earth Moving Machines (HEMMs) in conjunction with deep hole drilling and blasting in an area bounded by change points marked as A1 ($N28^0$33'1.77", $E76^0$11'25.45"), A ($N28^0$33'1.37", $E76^0$11'23.82"), B ($N28^0$33'1.67", $E76^0$11'18.84"), C ($N28^0$32'58.32", $E76^0$11'12.07"), D ($N28^0$32'57.27", $E76^0$11'08.67"), P-23 ($N28^0$32'53.92",$E76^0$11'12.74"), P-22 (N $28^0$32'43.74", E $76^0$11'7.04") P-21 (N $28^0$32'24.69", E $76^0$10'56.12") , P-20 (N $28^0$32'14.95",E $76^0$10'48.39"), E (N $28^0$32'13.75", E $76^0$10'47.82"), F (N $28^0$32'13.27", E $76^0$10'47.84"), G (N $28^0$32'07.82", E $76^0$10'46.67"), H (N $28^0$32'05.94", E $76^0$10'45.31"), I (N $28^0$32'05.27",, E $76^0$10'47.13"), P-13 (N $28^0$32'05.67", E $76^0$10'47.29"), P-12 (N $28^0$32'05.40" ,E $76^0$10'48.47"), P-11 ($N28^0$32'13.88" ,E $76^0$10'51.87"), P-10 (N $28^0$32'17.09" ,E $76^0$10'56.77"), P-9 (N $28^0$32'22.10" ,E $76^0$11'06.50"), P-8 (N $28^0$32'39.19" ,E $76^0$11'18.06"), P-7 (N $28^0$32'41.72", E $76^0$11'22.25"), P-6 (N $28^0$32'47.47", E $76^0$11'25.66"), P-5 (N $28^0$32'55.28" E $76^0$11'28.77"), P-4 (N $28^0$32'58.49", E $76^0$11'29.46"), and A1 ($N28^0$33'1.77", $E76^0$11'25.45"), as shown on the Danger zone Plan No. 03/21-22 dated 16.02.2022 of M/s Riddhi Siddhi-KSM Resources JV, Kalali & Kalyana Stone Mine (Khara No. 223min, 224 to 228 & 72), (Mine code- 518416 & LIN- 1999199866), Nominated Owner- Shri

Vikas, located at village- Kalali & Kalyana, Tehsil & District- Charkhi Dadri of state Haryana, subject to the following conditions being strictly

1.0 General:

1.1 Except where otherwise provided for in this permission, all provisions of the Metalliferous Regulations, 1961 relating to opencast workings, use of explosives and use of machinery shall be strictly complied with.

1.2 The opencast workings shall not be extended in areas within the lease unless the land has been acquired by the mine owner and is under the owner's physical possession.

1.3 No working shall be made within 45m of any public road, railway, public works, structure, not belonging to the owner of mine without obtaining prior permission in writing from the Directorate under Regulation 109 of the Metalliferous Mines Regulations, 1961.

1.4 (a) Where any permanent building or structure of permanent nature, not belonging to owner of the mine lies within the danger zone, the aggregate maximum charge in all holes fired at one time shall not exceed 2.0 Kilograms unless a permission under Regulation 164(1B)(a) of the Metalliferous Mines Regulation, 1961 is obtained from this Directorate. If blasting is done with delay detonators or other means and there is a delay of at least half second between successive shots fired, maximum charge of two kilograms can be used in each hole.

(b) No deep hole blasting shall be conducted within 100m of any dwellings, and other important structures not belonging to the owner of the mine. The deep hole blasting in the mine shall be carried out strictly as per the stipulations laid down in Regulation 164 of the MMR, 1961.

(c) No blasting shall be conducted using SME/SMS/ANFO explosive without having valid permission obtained under Regulation 155(1) & 162(5) of Metalliferous Mines Regulations, 1961.

(e) To control flying fragments resulting out of blasting, following additional precautions shall be taken –

(i) Blasting shall be done against free face only.

(ii) Moist sand or only such stemming material that is free from pebbles and stones chips shall be used for stemming of holes.

(iii) The area falling within a distance of 100cm from the collar of each blast hole shall be cleaned of loose stones, drill cuttings, debris and other loose materials.

(iv) Shot holes shall be adequately muffled by laying wire net, tyres, rubber mates or old conveyor belting over the entire area and by placing 40-50 Kg sand bags at every 3.0 m interval.

(v) Not more than three rows shall be fired in a round of blast. The blasting patch shall be such that the length of the face is more than three times the width of the face.

(vi) Face of the blasting patch shall not be oriented in the strike direction. The initiation of a round shall start from the temple or crusher end.

(vii) Danger zone shall be kept marked in the field as well as on the plan maintained under Regulation 60.

1.5 **All the conditions stipulated in the permission granted vide this Directorate's letter No. 1922 dated 14.12.2020 under Regulation 164(1-B) (a) of the MMR, 1961 shall strictly be followed.**

No deep hole blasting shall be conducted in the area beyond the points marked by A1,A,B,C,D,P-23,P-22,P-21,P-20,E,F,G,H,I,P-13, P-12,P-11,P-10, P-9,P-8,P-7,P-6,P-5,P-4 and A1 as shown on the Danger zone Plan No. 03/21-22 dated 16.02.2022.

1.6 Precautions stipulated under Regulation 164 of the Metalliferous Mine Regulation, 1961 about posting of two persons, one in either direction at the two extreme points of such public road falling within the danger zone who have, with an efficient system of telephonic communication or hooter or loudspeakers for

Vikas, located at village- Kalali & Kalyana, Tehsil & District- Charkhi Dadri of state Haryana, subject to the following conditions being strictly

1.0 General:

1.1 Except where otherwise provided for in this permission, all provisions of the Metalliferous Regulations, 1961 relating to opencast workings, use of explosives and use of machinery shall be strictly complied with.

1.2 The opencast workings shall not be extended in areas within the lease unless the land has been acquired by the mine owner and is under the owner's physical possession.

1.3 No working shall be made within 45m of any public road, railway, public works, structure, not belonging to the owner of mine without obtaining prior permission in writing from the Directorate under Regulation 109 of the Metalliferous Mines Regulations, 1961.

1.4 (a) Where any permanent building or structure of permanent nature, not belonging to owner of the mine lies within the danger zone, the aggregate maximum charge in all holes fired at one time shall not exceed 2.0 Kilograms unless a permission under Regulation 164(1B)(a) of the Metalliferous Mines Regulation, 1961 is obtained from this Directorate. If blasting is done with delay detonators or other means and there is a delay of at least half second between successive shots fired, maximum charge of two kilograms can be used in each hole.

(b) No deep hole blasting shall be conducted within 100m of any dwellings, and other important structures not belonging to the owner of the mine. The deep hole blasting in the mine shall be carried out strictly as per the stipulations laid down in Regulation 164 of the MMR, 1961.

(c) No blasting shall be conducted using SME/SMS/ANFO explosive without having valid permission obtained under Regulation 155(1) & 162(5) of Metalliferous Mines Regulations, 1961.

(e) To control flying fragments resulting out of blasting, following additional precautions shall be taken –

(i) Blasting shall be done against free face only.

(ii) Moist sand or only such stemming material that is free from pebbles and stones chips shall be used for stemming of holes.

(iii) The area falling within a distance of 100cm from the collar of each blast hole shall be cleaned of loose stones, drill cuttings, debris and other loose materials.

(iv) Shot holes shall be adequately muffled by laying wire net, tyres, rubber mates or old conveyor belting over the entire area and by placing 40-50 Kg sand bags at every 3.0 m interval.

(v) Not more than three rows shall be fired in a round of blast. The blasting patch shall be such that the length of the face is more than three times the width of the face.

(vi) Face of the blasting patch shall not be oriented in the strike direction. The initiation of a round shall start from the temple or crusher end.

(vii) Danger zone shall be kept marked in the field as well as on the plan maintained under Regulation 60.

1.5 **All the conditions stipulated in the permission granted vide this Directorate's letter No. 1922 dated 14.12.2020 under Regulation 164(1-B) (a) of the MMR, 1961 shall strictly be followed.**

No deep hole blasting shall be conducted in the area beyond the points marked by A1,A,B,C,D,P-23,P-22,P-21,P-20,E,F,G,H,I,P-13, P-12,P-11,P-10, P-9,P-8,P-7,P-6,P-5,P-4 and A1 as shown on the Danger zone Plan No. 03/21-22 dated 16.02.2022.

1.6 Precautions stipulated under Regulation 164 of the Metalliferous Mine Regulation, 1961 about posting of two persons, one in either direction at the two extreme points of such public road falling within the danger zone who have, with an efficient system of telephonic communication or hooter or loudspeakers for

intimation of clearance of traffic to the blaster and also to warn the passersby, and whenever possible the vehicles also, if any, which have passed by such road shall be strictly followed in respect of the public roads during every blast.

1.7 Before every blast, the blaster shall ensure that all persons other than him have taken adequate shelter in a radius distance of 500m from the site of blasting in the mine. Blaster shall also take adequate shelter. The persons/employees of the nearby mines, crushers, hoppers, rest shelters, temple, dwellings, public utilities, structures etc belonging or not belonging to owner of the mine lying within 500m radial distance shall also been withdrawn outside danger zone or removed to proper blasting shelter.

1.8 The owner shall indemnify occupants/owners of the houses/ dwellings/ buildings/crushers/temple or other structures of public authority concerned, if any, against the dangers to those properties or injury to them or other persons arising out of operations conducted under this permission.

1.9 All contractor workers shall be vocationally trained as per the provisions of Mines Vocational Training Rules, 1966, before deploying in opencast working and shall be duly authorised by the manager as competent persons.

1.10 The driving license and V.T. Certificate of all the operators of the transporting machinery deployed in the mine shall remain in the safe custody of the Manager (against receipt) and the operators may carry the photo-copy with them whilst on duty.

1.11 The attendance of the operators of tippers/trucks shall be recorded every time they enter the mine boundary.

1.12 Hours and limitation of employment of contractor's employee shall be as prescribed in Section 28 to 35 of the Mines Act, 1952 in respect of above ground and opencast workings and shall be strictly complied with.

1.13 This Directorate shall be informed as soon as the mining operations are commenced in accordance this condition governing and intimation about temporary discontinuance or completion of mining operations shall also be sent promptly and in any case not later than one month thereof.

1.14 No working shall be made in any spot lying within horizontal distance of 15 m from either bank of the Canal or any stream, Nallah, etc. without obtaining permission in writing from this Directorate under Regulation 127 of the Metalliferous Mines Regulations, 1961. Adequate protection against inrush of Nallah water in the mine shall be provided and maintained.

1.15 During heavy rain, the Manager or senior most mine official present in the mine, shall go round the surface area of the mine to check vulnerable points and effectiveness of the safety measures. Standing orders for withdrawn of persons from the mine in case of apprehended danger should be framed and enforced.

2.0 Open Cast Working:

2.1 Height and Width of Benches:

(a) **The height of benches in Alluvium shall not be more than 3.0m and that in overburden, ore body or other rock formation shall not be more than the digging height of the machine used for digging, excavation or removal or 9.0 m whichever is less.**

(b) Width of any bench shall not be less than-

(i) width of the widest machine plying on the bench plus 2m, or

(ii) if dumpers ply on the bench, 3 times the width of the dumper, or

(iii) the height of the bench, whichever is more.

(c) When persons are employed within 5m of the working face, adequate precautions shall be taken to ensure their safety by dressing the sides of the bench.

(d) The quarrying operation shall be conducted from top downwards and no men and machines shall be deployed at the bottom of high benches.

(e) As there are adjoining mine, the working faces in the mine shall be so oriented that the free face for blasting is away from the adjoining mine.

3.0 Roads for Trucks and Dumpers etc:

3.1 All roads for trucks/dumpers/mobile machinery shall be maintained in good condition.

3.2 No haul road for HEMM/dumpers/trucks/tippers shall have a gradient steeper than 1 in 16 at any place.

3.3. Wherever practicable, all roads for dumpers/trucks/tippers from the opencast workings shall be arranged to provide one-way traffic. **Width of the haul road shall not be less than "2 times the width of the largest vehicle plus 3m" plying on that road. Where it is not practicable to provide for one way traffic, no road shall be of a width less than "three times the width of the largest vehicle plus 5m" plying on that road.** Definite turn-outs, crossing points, and waiting points shall be designated and demarcated by proper sign boards for the guidance of drivers of such dumpers/trucks/tippers.

3.4 All corners and bends in haul roads for HEMM/dumpers/trucks/tippers shall be so designed, made and kept maintained that the operators and drivers of vehicles plying on the road have clear view along the road, for a distance of not less than three times the braking distance of largest HEMM when plying at the rated speed, as fixed by the manager.

3.5 Where visibility for a distance as above cannot be ensured, separate lanes shall be provided at all corners and bends in haul roads of widths not less than "2 times the width of the largest vehicle plus 3m" plying on that road. The lanes shall be separated by a strong divider for up and down traffic, and the divider shall be adequately lighted and painted with fluorescent zebra-lines at its sides.

3.6 Where any part of the road exists above the level of the surrounding area, a strong parapet wall or embankment, not less than 1.0m wide at the top with sides sloping on either side, and of height not less than the diameter of the tyre of the largest dumper/truck/tipper plying on it, shall be provided and kept maintained to prevent any out of control vehicle getting off the road and rolling down. Dumping of mud or overburden shall not be treated as parapet wall.

4.0 Spoil Banks/Overburden Dumps:

4.1 (a) Spoils, overburden or debris shall be deposited at places belong ing to the mine and duly approved by the manager in writing.

4.1(b) Spoils, overburden or debris shall not be deposited, beneath transmission, telephone or power lines or near any other public structure.

4.1(c) The slope of a spoil bank face shall be determined by natural angle of repose of the material being deposited, but shall in no case exceed 37.5 degree from the horizontal. The spoil bank face shall not be retained by artificial means.

4.2 (a) The spoils, overburden or debris shall not be deposited within 45m of a railway line, public road, other public works or other structures of permanent nature, not belonging to management.

4.2 (b) A suitable fence shall be erected between any railway line, other public works or road, or buildings or structures not belonging to the management, and the toe of every active spoil bank so as to prevent un[1]authorised persons from approaching the spoil bank.

4.3 No person shall, or shall be permitted to approach the toe of an active spoil bank where he may be endangered from material rolling down the face. Suitable warning signs at conspicuous places shall also be displayed.

5.0 Supervision:

5.1 A person, possessing First Class Manager's Certificate of competency granted under the Metalliferous Mine Regulations, 1961, shall be appointed as the manager of the mine. This permission shall stand revoked as soon as the qualified manager ceases to work at the mine.

5.2 During every production shift, open cast workings shall be placed under the charge of an Assistant Manager and during maintenanace shift the workings shall be placed under the charge of a Foreman, who shall be responsible to see that all the regulations and orders made thereunder are strictly complied with.

5.3 Adequate number of supervisors including duly qualified Engineer, Foremen and Mining Mates shall be appointed in mine in each working shifts to assist the Manager. The Manager, Engineer, Foreman and Mate shall be responsible to ensure compliance of stipulations of conditions governing grant of this permission and other provisions of the Regulations, Rules, bye-laws, orders, and circulars issued from time to time, as may be applicable. They shall also supervise transport and loading operations being done by contractor(s), if any.

5.4 The Manager shall not manage more than one mine.

5.5 Manager shall in particular –

a. make frequent inspections for evidence of slides or of material that may slide or roll from the high wall (including the face and sides) or spoil-bank;

b. not allow any person to work under overhanging ledges or where there is evidence of slides, until such danger has been removed;

c. ensure that every person engaged in dressing operations on high walls/sides is provided with, and uses, a safety belt of a type approved by the Chief Inspector of Mines;

d. ensure that all loose material is removed from high wall/side before persons are engaged there; and

e. ensure that parapet walls along truck roads are of adequate size and properly maintained.

5.6 General:

a. **Manager shall frame code of practices for each operation and copy of it shall be handed over to all concerned. It shall be the duty of all statutory persons to enforce the code of practices so framed.**

b. **The deep hole drilling and blasting shall be carried out under the personal supervision of Assistant Manager. Blasting parameters of each blast with a sketch showing the drilling pattern and the holes charged shall be maintained in register kept for the purpose for each blast.**

5.7 Manager shall in particular:- Prepare "Safety Management plan" as per guidelines of DGMS Circular No. DGMS (Tech) (S&T) Circular No: 13 of 2002, DGMS (Tech) (S&T) Circular No: 02 of 2011 & DGMS (Tech) (S&T) Circular No. 05 of 2016.

6.0 Design, operation and maintenance of Shovels, Dozers, Drills and other machineries:

6.1 Every Shovel and dozer shall be so designed as to afford the operator clear and uninterrupted vision all round.

6.2 Every machinery or vehicle shall be provided with efficient warning devices, front and rear lights, and efficient brakes.

6.3 Every shovel, excavating / loading / digging machine shall be so designed as to afford the operator clear and uninterrupted vision all around and shall be provided with a retracting ladder, a portable lamp for emergency in case the machine is deployed beyond day-light hours, and suitable portable fire extinguishers.

6.4 The operator's cabin of heavy earth moving machinery shall be well designed and substantially built so as to ensure adequate protection to the operator against heat, dust, noise etc. and at the same time provided

adequate safety to the operator in the event of overturning of heavy earth moving machinery. A seat belt for the safety of the operator shall be provided.

6.5 Every shovel and dozer and drill shall be maintained in good and safe working condition and shall be provided with -

i) Efficient warning devices

ii) Front and rear lights of adequate intensity and a portable lamp for use in emergency, unless the loading equipment is not intended to be used beyond day light hours; and

iii) An approved type of fire extinguisher or other fire suppression system, conforming to DGMS (Tech) Circular No.10 of 2004, in efficient working condition so placed as to be within easy reach of the operator.

iv) Fire resistant hydraulic hoses in place of ordinary hoses to decrease the chance of fire and fire resistant sleeves and conduits where cable/wire is used; v) A retractable ladder for mounting on to the machine.

vi) Proper seat belt for operator

vii) Turbo charger guard.

6.6 The following safety features shall also be provided with every shovel and excavator:

i) All functions cut off switch

ii) Swing motor brake;

iii) Vent valve on top of hydraulic tank of such a type which is removable without any tool;

iv) A baffle plate between cold zone and hot zone;

v) Provision of limiting travel of hydraulic cylinders – stopper.

6.7 All dozers shall also be provided with roll over protection and seat belts.

6.8 All drills shall also be provided with the following safety features.

i) Each moving parts shall be guarded/fenced in effective manner;

ii) Emergency push button switch in operator's cabin' main frame, propeller pendent and rear end;

iii) Tripping device to trip the field switch

iv) Thermostat motor protection relay in winding armature and other related parts;

v) Explosive vent in transformer;

vi) Proper interlock (an electric interlock between drilling and propeller operation)

vii) High air discharge temperature switch

viii) Low lubricating oil pressure switch;

ix) Oil stop valve (electric solenoid valve in compressor lubrication line;)

x) No bump circuit

xi) Tower lock and lock check valve.

xii) Proper joystick-spring loaded type to return to neutral (dead man safety)

xiii) Disk brake and brake valve and its testing parameters;

xiv) Lock check valve for preventing creeping in drill;

6.9 The operator's cabin of every shovel, dozer, drill, and other HEMM shall be well designed and substantially built and air conditioned so as to render adequate protection to the operator against heat, dust, noise etc., A seat belt for the safety of the operator shall also be provided in the equipment/HEMM.

6.10 Truck mounted drill machines designed for tube well drilling for sources of water shall not be used and only proper type of blast hole drill machine, especially designed for mining purpose, shall be used in the mine.

6.11 Every shovel and dozer shall be under the charge of a competent person, authorized in writing by the manager, herein called the 'Operator'.

6.12 All persons employed or to be employed to operate shovel, dozer and other HEMM shall be trained and their competency shall be evaluated by a Board constituted by the management. The member of such board shall be persons who are not connected with imparting of training. However, the training officer(s) may be co-opted in the Board as observer.

6.13 Only such fitters/mechanics possessing driver's/operator's license, shall be allowed to carry our test run of the machine for work nor shall he work the machine, unless he is satisfied of its safe working order.

6.14 No person other than the operator or the manager or any person so authorised in writing by the manager shall ride on a shovel, dozer and drill.

6.15 No person shall be permitted to ride in the bucket of a shovel or pay loader.

6.16 Shovel dippers and pay loader bucket shall be lowered to the ground during greasing operations.

6.17 No shovel or pay loader shall be operated in a position, where any part of the machine or suspended loads there from are brought closer than 3m to exposed high voltage transmission lines, unless the current has been cut off from such exposed transmission, and positive means have been taken to prevent the lines from being energised. A notice of this requirement shall be posted at the operator's position.

6.18 Electrical cables, if any, shall be laid in such a manner that they are not endangered either by falling rocked or by any mobile equipment.

6.19 The shovel bucket shall be pulled out of the bank as soon as it is full.

6.20 When being operated in soft or unstable ground and every shovel shall be supported on mats, heavy planks or poles so as to distribute the load of the machinery over larger area and prevent its toppling.

6.21 When not in use, the shovel and surface miner shall be moved to and stood on stable ground.

6.22 If more than one stripping machine is in use in any area, either on the same bench or on different benches, the machines shall be so spaced that there is adequate space for safe operation of each equipment, and there is no danger from flying or falling pieces of stones etc. from one machine to the other.

6.23 The safety features recommended in equipments shall be made a part of the notice inviting tender for new procurement and the design and drawing shall be obtained from OEM for fitting the same in old equipment.

7.0 Duties of Shovel, Dozer and Drill operators:

7.1 Before any machine is put into operation, the operator shall look for any placard/tags on the machine like "OUT OF ORDER", "UNDER REPAIRS", etc. and in case such tags are seen anywhere in the entire system, the machine shall not be started.

7.2 At the commencement of his shift, the operator shall personally inspect and test the machine, paying special attention to the following details

i) That every warning device is in working order.

ii) That it is mechanically sound and in efficient working order, and

iii) That the lighting fixtures are in proper working orders, if the machine is required to work beyond daylight hours.

7.3 He shall not take out the machine for work nor shall he work the machine, unless he is satisfied of its safe working order.

7.4 The operator shall maintain a record of every inspection made in a bound paged book kept for the purpose, and shall sign every entry made therein.

7.5 The operator shall keep the cab window clean so as to ensure clear vision at all times.

7.6 The walkways in or about the cab of any shovel, dozer and surface miner shall be kept free of lose tools, grease containers or other material that might fall or give rise to tripping hazard.

7.7 The operator shall not operate the machine when persons are in such proximity as to be endangered.

7.8 The operator shall not swing the bucket over-passing the trucks/dumpers when they are being loaded. He shall swing the bucket over the body of the truck/dumpers whilst loading and not over the cab, unless the cab is protected by a substantially strong cover.

7.9 Before leaving the machine, the operator shall lower the bucket to the ground.

7.10 The operator shall not allow any unauthorised person to ride on the machine.

8.0 Maintenance of Equipment

8.1 If the engineer, mechanical foreman or other competent person making an inspection notices any defect in any machinery, the said machinery shall not be used until the defect has been remedied.

8.2 Any defect in machinery reported by its operator shall be promptly attended to.

8.3 Any machine found to be in an unsafe operating condition shall be tagged at the operator's position 'OUT OF SERVICE DO NOT USE' and its use shall be prohibited until the unsafe condition has corrected.

8.4 All repairs to a machine shall be done at a location which will provide a safe place for the persons engaged on repairs.

8.5 Except for testing, trial or adjustment which must necessarily be done while the machine is in motion, every machine shall be shut down and positive means taken to prevent its operation while any repair or manual lubrication is being done.

8.6 Power shall be disconnected when repairs are made to any electric machine.

8.7 Any machinery, equipment or part thereof which is suspended or held apart by use of slings, hoists or jacks shall be substantially blocked or cribbed before men are permitted to work underneath or between such machinery, equipment or part thereof.

8.8 All repairs of a machinery or vehicle shall be done at properly laid repair sheds and workshops so as to ensure due protection to work persons deployed at those places from the movement of heavy earth moving machinery.

8.9 Every place of drilling and earth moving machinery or equipment and every truck, dumper etc. shall be maintained in good and safe working condition.

9.0 Schedule of maintenance:

9.1 The code of instructions furnished by the manufacturers in the matter of maintenance of various machinery and vehicles and preventive maintenance schedules for each type of machinery and vehicle shall be strictly followed.

9.2 Every machine in use shall be thoroughly inspected once at least in every 24 hours by a competent person. Any damaged or worn out parts shall be replaced immediately.

9.3 A report of every inspection made shall be recorded in a bound paged book kept for the purpose and shall be signed &dated by person making the inspection.

9.4 Every machine and vehicle shall be allocated at least one day in every week for maintenance. Before the machine or vehicle is sent out for work after maintenance, it shall be thoroughly inspected by the Engineer or mechanical foreman or other competent person, appointed by the manager in writing, who shall satisfy himself that the machine or vehicle is mechanically sound and in efficient working order.

9.5 A report of every inspection made shall be recorded in a bound paged book kept for the purpose, and shall be signed and dated by the person making the inspection.

10.0 Examination of machinery and vehicle at the beginning of every shift:

10.1 At the commencement of every shift, the engineer or foreman or mechanic or other authorized competent persons shall personally inspect and test every machine and vehicle paying special attention to the following details:

a) that the brakes and the horn or other warning devices are in working order;

b) if the vehicle or machine is required to work after day light hours that the lights are in working order.

10.2 He shall not permit the vehicle or machine to be taken out for work nor shall he drive the vehicle unless he is satisfied that it is mechanically sound and in efficient working order.

10.3 He shall also maintain a record of every inspection in a bound paged book kept for the purpose. Every entry in the book shall be signed and dated by the person making the inspection.

11.0 Safety features to be provided on dumpers/tippers, excavators, dozers and drills:

11.1 Dumpers/tippers/trucks:

Following safety features shall be provided in dumpers/ tippers/trucks:

i) Efficient service brake, secondary brake, parking brake and an emergency steering in case the steering system is hydraulically operated;

ii) Efficient exhaust/retard brake to control the speed while operating down the gradient;

iii) Limiting speed device/speed governor for restricting speed of the vehicle within maximum allowable speed value;

iv) Efficient horn;

v) Rear view mirrors of adequate size on either side of the vehicle and blind spot mirror apart from the rear view mirrors to enable operator to have clear visibility of blind spot in and around dumpers;

vi) Rear vision system, as required under DGMS (Tech.) Circular No.12 of 2009;

vii) Automatically operated audio-visual alarm which gets switched on no sooner the gear lever is shifted in "reverse" position, of a type conforming to DGMS Approval No. 1 of 2010;

viii) Side indicator lights.

ix) Efficient head-lights, if the truck/dumper/equipment is required to work beyond day-light hours.

x) Proper seat with seat belt for driver or operator and seat belt reminder to alert operator for using the seat belt;

xi) A substantially strong canopy to cover the driver's/operator's cabin fully;

xii) Mechanical steering locking to prevent untoward movement of steering wheel and;

xiii) Mechanical type anti collision device in tippers and dumpers to avoid head to tail collision on haul road such as tail gate, bumper extension or any other strong device;

xiv) Fire resistant hydraulic hoses in place of ordinary hoses to decrease the chance of fire and fire resistant sleeves and conduits/wires where electric cable/ wire is used;

xv) Turbo charger guard and exhaust tube coated with heat insulated paint to decrease chance of fire;

xvi) Battery cut-off switch to decrease chance of fire;

xvii) Propeller shaft guard;

xviii) Proximity warning device;

xix) Retro reflective reflectors on all sides for visibility of trucks or dumpers during night;

xx) Provision of restricting maximum speed of the vehicle to 30kms/hour by blocking higher gear or any other automatic means;

xxi) Factory-fitted fire suppression system of a type approved by the DGMS and conforming to DGMS (Tech.) Circular No.10 of 2004;

xxii) Body lifting position locking arrangement and a hooter along with an indicator to give warning while the body in lifted position;

xxiii) Auto dipping system to reduce glaring on eyes of operator during night operation;

xxiv) Load indicated and recorded to detect and prevent over-loading.

11.2 Excavators/shovels/back-hoe & other loading/digging equipment:

Following safety feature shall be provided in excavators/shovels/back-hoe & other loading/digging equipment:

(a) All functions cut-off switch,

(b) Swing Motor brake (in case of shovels),

(c) Fire resistant hydraulic hoses,

(d) Fire-resistant sleeves/conduits housing cables/wires,

(e) Turbo-charger guard,

(f) Seat belt of a type prescribed by the manufacturer at operator's seat,

(g) Vent valve on top of hydraulic tanks,

(h) A baffle plate between hot zone and cold zone,

(i) Provisions for limiting hydraulic cylinders (stoppers),

(j) all other warning devices prescribed by the manufacturer;

(k) Front and rear lights of adequate intensity to render adequate illumination within working area of the machine if the machine is required to work beyond day-light hours,

(l) Blinking type of hazard warning lights on all sides of the HEMM which, irrespective of engine's running can be switched on in case the machine breaks down or is stopped/stationed/ parked in operational area of other HEMM,

(m) An efficient portable fire extinguisher so placed as to be within easy reach of the operator.

(n) A portable lamp for use in emergency by the operator, unless the loading equipment is not intended to be used beyond day-light hours;

11.3 Drill machines:

11.3.1 The following safety feature shall be provided:

1. Approved type of dust prevention or suppression system

2. Adequate protection guard or fencing on each moving part of the machinery

3. Emergency of Push Button in

(a) Operator's cabin

(b) Main Frame

(c) Propeller pendent

(d) Rear end.

4. Thermostat Motor protection relay in winding temperature and other related parts.

5. Explosive vent in transformer.

6. Propel interlock (an electric interlock between drilling and propeller operation).

7. High air discharge temperature switch.

8. Low lube oil pressure switch.

9. Oil stop valve (Electric solenoid valve in compressor lubrication line).

10. No bump circuit.

11. Tower lick and lick check valve.

12. Propel joystick-spring loaded type to return to neutral (dead man safety).

13. Disk-brake and brake valve and its testing parameters

14. Lock check vale for preventing creeping in drill.

15. Seat belt.

16. Fire resistant/Fire Retarder hydraulic hoses and siring near hot zone.

17 Turbo charger guard.

18 Cabin for the operator at drilling site.

11.4 Dozers & road graders:

Following safety features shall be provided in dozers & road graders:

(a) Roll-over protection,

(b) Fire resistant hydraulic hoses,

(c) Fire-resistant sleeves/conduits housing cables/wires,

(d) Turbo-charger guard,

(e) Seat belt of a type prescribed by the manufacturer at operator's seat,

(f) A baffle plate between hot zone and cold zone,

(g) Front and rear lights of adequate intensity to render adequate illumination within working area of the machine if the machine is required to work beyond day-light hours,

(h) Blinking type of hazard warning lights on all sides of the HEMM which, irrespective of engine's running can be switched on in case the machine breaks down or is stopped/stationed/ parked in operational area of other HEMM,

(i) An efficient portable fire extinguisher so placed as to be within easy reach of the operator.

(j) A portable lamp for use in emergency by the operator, unless the loading equipment is not intended to be used beyond day-light hours;

11.5 General:

11.5.1 An approved type of fire suppression system shall be provided in all equipments.

11.5.2 The stability test of HEMM shall be carried out at least once in year and after every major over haul by an independent agency.

11.5.3 All cranes and overhead crane shall be subject to proof load test and NDT test once in a year from a competent authority.

11.5.4 All pressure vessels/air receivers shall be subjected to hydraulic and NDT test and shall be carried out by a competent authority.

11.5.5 A code of practice for installation operation and maintenance of all equipment shall be prepared and implemented before putting the equipment to use in mine.

11.5.6 The layout of the workshop shall be required as per DG's Circular No. 8 of 2003.

11.6 Operation of machines:

11.6.1 (a) Every heavy earth moving machinery (dumper/tipper/truck, excavator/shovel/ back-hoe, loading/digging equipment, dozer & drill) shall be under the charge of a competent person (herein called the `operator') authorized in writing by the Manager.

(b)Operator/driver of each HEMM shall be selected from amongst persons possessing requisite qualifications. The selection process shall comprise a test to check driving/operating skill, aptitude, health and oral examination of the candidate by a competent selection committee. The selected person shall be trained and their competency shall be evaluated by a board constituted by the mining company.

(c) All operators of HEMM shall undergo regular checks to test their driving/operating skill, knowledge and health once in every five years.

11.6.2 To prevent unauthorized driving, a system shall be evolved whereby the ignition key and/or cabin key always remain with the driver/operator or with specifically designated competent person.

11.6.3 No person other than the operator or his helper if any or the manager or any person so authorized in writing by the manager shall ride on a shovel or excavator.

11.6.4 No person shall be permitted to ride in the bucket of a shovel.

11.6.5 No excavator/shovel/ back-hoe, loading/digging equipment shall be operated in a position where any part of the machine, suspended loads or lines are brought closed than 3 meters to exposed high voltage lines, unless current has been cut off and the line de-energized. A notice of this requirement shall be posted at the operator's position.

11.6.6 Electrical cables, if any, shall be laid in such a manner that they are not endangered either by falling rocks or by any mobile equipment.

11.6.7 Excavator/shovel/ back-hoe or other loading/digging equipment bucket shall be pulled out of the bank as soon as it is full.

11.6.8 When not in operation, the bucket shall be pulled out of the bank.

11.6.9 When being operated in soft or unstable ground, every excavator/shovel/ back-hoe, loading/digging equipment shall be supported by heavy planks or poles so as to distribute the load of the machine over larger area and to prevent any danger of the HEMM over-turning.

11.6.10 When not in use, the excavator/shovel/ back-hoe, loading/digging equipment shall be moved to and stood on stable ground.

11.6.11 If more than one excavator/shovel/ back-hoe, loading/digging equipment is in use in any area, either on the same bench or on different benches, the machines shall be so spaced that there is no danger or accident from flying/falling objects from one machine to the other. Preferably distance between two such loading/digging equipment shall be two times of sum of individual reach of equipments.

12.0 Duties of Machine operators:

12.1 At the commencement of every shift, the operator shall also personally inspect and test the machine, paying special attention to the following details: That brakes and every warning device are in working order; and If the machine is required to work after day-light hours, lights are in working order.

12.2 He shall not take out the machine for work nor shall he operate the machine unless he is satisfied that it is mechanically sound and in efficient working order.

12.3 The operator shall not operate the machine when persons are in such proximity as to be endangered.

12.4 He shall not swing the bucket of shovel over passing haulage units. While the trucks/ dumpers/tippers are being loaded, he shall swing over the body of the truck/dumper/ tipper and not over the cab, unless the cab is protected by a substantially strong cover.

12.5 The operator shall not allow any unauthorized person to ride on the machine.

13.0 Operation of Truck, Dumpers and other Vehicles:

13.1 Every truck/tipper/dumper and other wheeled trackless equipment shall be operated by a competent person authorized in writing by the manager herein called 'operator/ driver'.

13.2 No person other than the driver or the manager or any person authorised in writing by the manager shall ride on a truck/tipper/dumper and other wheeled trackless equipment.

13.3 No person shall or shall be permitted to, ride on the board/cabin platform of a running truck/tipper/dumper and other wheeled trackless equipment.

13.4 As far as possible, loaded trucks/tippers/dumpers shall not be reversed on gradients.

13.5 Sufficient stop blocks shall be provided at every tipping point and these shall be used on every occasion, material is dumped from the truck, dumper, or other such vehicle.

13.6 Standard Traffic Rules shall be adopted and followed during movement of all trucks and dumpers. Code of Traffic Rules framed by the Manager shall be adopted and followed during movement of all truck/tipper/dumper and other wheeled trackless equipment. They shall be prominently displayed at relevant places in the opencast workings & on truck/dumpers roads.

13.7 When not in use, every truck, tipper or dumper or other wheeled trackless machinery shall be moved to and parked at proper parking place(s) which shall be on level ground and away from working area of other mobile equipment. The truck or dumper or other wheeled trackless mach pass it safely. He shall also sound the audible warning signal before overtaking.

13.8 No person shall, or shall be permitted to, work on the chassis of a truck or dumper, with the body in a raised position unless the truck or dumper body has been securely blocked in position. The hoist mechanism shall not be depended upon to hold the body of the truck or dumper in a raised position.

13.9 No person other than those authorised shall be permitted to enter or remain in any dumping yard, loading and unloading points and turning points.

13.10 In respect of every truck/dumper or class of truck/dumper, the maximum load to be hauled shall be determined and notified to operators/drivers by the Manager. Speed limits at which such loads can be hauled shall also be determined and fixed by the Manager, depending on the road gradient, direction of movement, road construction etc., and notices/sign boards specifying the same shall be posted along the haul road at appropriate places/sections.

13.11 When not in use every truck/tipper or dumper shall be moved to and stood on proper parking places.

14.0 Duties of Truck/Tipper/Dumper Operators:

14.1 Before commencing work, the driver/operator shall personally check the dumper/ truck/tipper for oil(s), fuel & water levels, tyre inflation, and general cleanliness, and shall also test the vehicle, paying special attention to the following details:

(a) that all brakes, speed retarder, and steering system are in proper working order;

(b) that all safety features and warning devices are in working order;

(c) that automatically operated audio visual reversing alarm are in working order;

(d) blind spot mirrors and rear view mirrors are provided;

(e) that all lights including hazard lights are in working order, if the vehicle is required to work after daylight hours.

14.2(a) The driver/operator shall not take out the vehicle for work nor shall he drive the vehicle, unless he is satisfied that it is mechanically sound and in efficient working order.

(b) He shall wear the seat belt before starting the vehicle and shall also ensure that other person(s), if so authorised to ride the vehicle, are properly seated and also wear safety belts.

14.3 The driver shall keep the cab window clean so as to ensure clear vision at all times.

14.4 The driver shall ensure that parking brake is on, before stopping the engine.

14.5(a) The driver shall handle the truck/tipper/dumper carefully and keep it under control at all times. He shall negotiate downhill gradients in low gear and apply retard brakes so that minimum of braking is required.

(b) He shall not drive too fast, shall avoid distractions and shall drive defensively. He shall not attempt to overtake another vehicle unless he can see clearly area enough ahead to be sure that he can pass it safely without exceeding the speed limit, and that area ahead is free of any road intersection or junction. He shall also sound audible warning signal before overtaking and shall not attempt to pass the other vehicle until he has received a proper audible signal in reply.

(c) When approaching loading/digging equipment, the driver of the truck or dumper shall sound the audible warning signal and shall not attempt to pass the stripping equipment until he has received a proper audible signal in reply.

(d) Before crossing a road or railway line, he shall reduce his speed, look in both direct- ions along the road or railway line and shall proceed across the road or railway line only if it is safe to do so.

(e) He shall not operate the truck or dumper in reverse unless he has a clear view of the area behind the vehicle or he has the assistance of a 'spotter' duly authorized in writing for the purpose by the manager. He shall give an audible warning signal before reversing a truck or dumper.

(f) He shall not drive 'nose to tail 'particularly behind a vehicle with twin rear wheels from which a stone piece wedged between the tyres may fly back into the windscreen of his vehicle.

(g) He shall sound audible warning while approaching blind corners or any other points where person may walk in front unexpectedly.

14.6 The driver shall see that the vehicle is not overloaded.

14.7 The driver shall not allow any unauthorized person to ride on the vehicle. He shall also not allow more than the authorized number of persons to ride on the vehicle.

14.8 The driver shall not allow any person to ride on the running board of a truck/tipper or dumper.

14.9 The driver shall not attempt to overtake another vehicle unless he can see clearly far enough ahead to be sure that he can pass it safely. He shall also sound the audible warning signal before overtaking.

15.0 Duties of Mechanics, Fitters and Engineers:

15.1 At the commencement of every shift, he shall personally inspect and test every machine and vehicle paying special attention to the following details: a. that the brakes and the warning devices are in working order; b. if the vehicle or machine is required to work after day-light hours that the lights are in working order.

15.2 He shall not permit the vehicle or machine to be taken out for work nor shall he drive the vehicle unless he is satisfied that it is mechanically sound and in efficient working order.

15.3 The mechanic/fitter/engineer shall maintain a record of every inspection in a bound paged book kept for the purpose. Every entry in the book shall be signed and dated by the person making the inspection.

16.0 Additional duties of engineer in-charge of HEMM/Equipment:

16.1 During each shift, the HEMM, machines, equipments & accessories deployed in the mine, including ones deployed through contractual agencies, shall be placed under the charge of such number of qualified and experienced engineers as are adequate to effect their adequate inspection, examination, and maintenance in a safe working order.

16.2 During his shift the engineer(s) shall -

Manager shall also frame code of practices for each operation and copy of the same shall also be handed over to all concerned in a language understood by the person concerned. The Manager and the Engineer shall be responsible to ensure that all the precautions and guidelines listed in this permission are strictly followed by all concerned. It shall be the duty of all statutory persons to enforce the stipulations of this permission, and codes of practices so framed.

18.6 Manual workers shall not be employed on any bench where HEMM is deployed or on the next lower bench. Manual workers shall be employed only after withdrawal of HEMM and only at the places where benches conform to the requirement of Regulation 106(1), 106(4) and 106(5) of the Metalliferous Mines Regulations, 1961.

18.7 All the precautions and directives given in DGMS circulars issued from time to time shall be compiled with.

18.8 Garland drains of adequate size shall be provided on the surface on the periphery of the opencast working to divert rain water from flowing down the slopes. The drains shall preferably be made impervious by plastering of floor and sides to minimize seepage of water though the strata.

18.9 The layout of the workshop for maintenance of HEMM and other equipment shall be as per requirement mentioned in the DG's Circular No.8 of 2003.

19.0 Precaution while drilling:

19.1 The holes shall be drilled in the pattern proposed by the Manager on beginning of that day, in such a way that length of the face shall be more than three times the width of the face having three rows of holes, with spacing and burden as recommended for specific diameter of hole.

19.2 (i) No drilling shall be commenced in an area where shots have been fired, until the shot firer has made a thorough examination at all places, including remaining butts of old deep holes, for unexploded charges that the drill may strike.

(ii) The position of every deep hole to be drilled shall be distinctly marked by the blasting foreman so as to be readily seen by the drillers.

(iii) No drill or bore rod or pick shall be inserted in butts of old deep holes even if an examination under Clause (i) has failed to reveal presence of explosives.

19.3 (i)Drilling operations shall not be carried out simultaneously on two benches at places directly one above the other.

(ii)Drilling and charging of deep holes shall not be carried out in the same area at the same time.

19.4 At the beginning of the shift,

A. The drill operator shall examine the drilling equipment and satisfy himself that ;

(i) Crown blocks are mounted securely; Where compressed air drills are used, all hose connections are provided with Ceilings and are in order ; and

(ii) The drilling equipment is in safe working condition.

B. The drill operator shall also ensure that;

(i) Work persons keep clear of auger and drill stem while the drill is in motion, Work persons do not work under suspended tools, when tools are removed from the holes, these shall be immediately lowered on the platform; and All finished drill holes are properly plugged so as avoid possible leg injuries to any one accidentally stepping into the hole, or back filling of holes with drill cuttings.

20.0 Precaution while charging of holes:

20.1 Where there is any doubt and particularly where there are cracks and crevices reported in the hole at the time of drilling, the bottom 2.0 m length of the hole shall be filled with sand / water ampoule. In crushed / broken ground charging of the hole shall not be done.

20.2 Explosives shall be delivered first to the hole farthest from the 'Priming Station' so as to avoid persons walking among piles of explosives.

20.3 Not more than one hole shall be in the process of being charged at any one face at any one time.

20.4 All charging, stemming and connecting up shall be done while standing on the solid, that is to say, on the side of holes remote from the quarry face.

20.5 The safe explosives charge for a limiting peak particle velocity shall not exceed the limits recommended at Para 7.2 of D.G.M.S. Circular No.7 of 1997. The P.P.V. of every blast shall be measured and the records of the same shall be maintained in a bound paged book and signed by Blasting Officer and countersigned by the Manager.

20.6 The cartridges of explosive shall be lowered carefully to avoid sticking in the hole so as not to cause air/space. After inserting cartridges the length of the remaining hole shall be measured to ascertain that the cartridges are in close contact and there is no air space.

20.7 In case the length of remaining hole is not as per calculation indicate the presence of air / space attempt shall be made to push down the charge in case of slurry, cartridges. The remaining hole shall be stemmed with moist sand.

20.8 A proper record of every blast showing the pattern of shot holes and the particulars of charge and observations regarding fly rocks and ground vibrations shall be maintained and countersigned by the manager on every entry. To ascertain the efficacy of the blasting performance regular measurement of ground vibrations by suitable instrument under the supervision and guidance of a reputed scientific institute, shall be done for every blast and record thereof shall be maintained in the bound paged book.

21.0 Precaution while firing of holes:

21.1 A safe code of blasting practice shall be framed by the manager and shall be circulated to all concerned for its strict compliance.

21.2 (i)The Manager shall fix the blasting time and shall circulate it to all concerned and display it on the Notice Board.

(ii)Sufficient warning, by efficient signals or other means (siren) approved by the Manager shall be given over the entire area falling within a radius of 500m from the place of firing (hereinafter referred as the Danger Zone) and also shall be ensured that all the persons within such area have taken proper shelter.

21.3 (i) Shots shall not be fired except during the hours of day light or until adequate artificial light is provided. All holes charged on any one day shall be fired on the same day. Sleeping of holes shall not be permitted till the time specific permission in this regard is obtained.

(ii)Shots if fired beyond day light hours should be muffled so that, flying fragments from blasting cannot project beyond a distance of 10.0 m from the place of firing in this connection, attention is drawn to D.G. (Tech.) Circular No. 8 of 1976 for compliance.

(iii)As far as practicable the shot firing shall be carried out either between shifts or during the rest interval or at the end of work for the day.

(iv) PWD/Public/Panchayat road, falling within danger zone of 500m, shall be guarded with adequate number of guards during blasting hours.

(v) Power of HT line and substation falling within danger zone of 300m, shall be cut off and shall be restored after obtaining written permit from Manager or Blasting officer.

(vi) No Blasting shall be conducted within 100m of any charged HT line.

21.4 During the approach and progress of an electric storm, the following precautions shall be taken:-

(i) No explosive, particularly detonators shall be handled.

(ii) If charging operations have begun, the work shall be discontinued until the storm has passed.

(iii)If the blast is to be fired electrically all exposed wires shall be coiled up and if possible placed in the mouth of the holes, or kept covered by something other than a metal plate.

(iv)All wires shall be removed from contact with the steel rails of a haulage track so as to prevent the charge being exploded prematurely by a local strike of the lightening.

21.5 (i) Precautions with regards to taking shelter, etc., as laid down in Regulation 164 shall be complied with.

21.6 A proper record of every blast showing the pattern of shot-holes and particulars of charge and observation regarding fly rock and ground vibrations shall be maintained by the blasting in-charge and shall be countersigned by the Manager on every entry.

22.0 GENERAL LIGHTING , PROTECTIVE EQUIPMENT,DUST,NOISE ETC:

22.1 Adequate arrangements, to allay dry dust by wetting (by water) / treating (with chemicals) shall be made if, during operation of drilling, loading, unloading, crushing, dressing etc., dust is likely to be produced in such quantity as may be injurious to health of persons, as also, on roads and benches where trucks and dumpers operate. The directives contained in D.G. M. S. (Tech) Circular No.16 of 1975 shall be complied with.

22.2 All drill machines shall be provided with wet drilling arrangement. Drilling of Shot holes or any other hole shall not commence unless a jet of water having adequate pressure is directed on the drill bit.

22.3 General Lighting: Where natural lighting is insufficient, adequate general lighting as per the standards laid down in Notification No. GSR-618(E), dated 28th April, 2017, published in the Gazette of India dated 21st June, 2017, Part II Section 3(i). [reproduced in No. DGMS (Legis.) Circular No. 03 of 2017 Dhanbad, dated], issued under Regulation 148(2) shall be provided during working hours in the opencast workings and along roads, etc. For proper inspection of the high sides and benches of the opencast workings at night, suitable search lights shall be provided.

22.4 (a) Every person working in the mine shall be provided with, and shall use, a helmet, protective, Footwear, fluorescent jacket, dust masks, goggles and ear plugs/earmuffs of a type approved by the Chief Inspector of Mines.

(b) Every person permitted to work on height or at any place having inclination of 45 degrees or more, from where he is likely to slip or overbalance, shall be provided with, and shall use, a full body harness of a type possessing valid BIS license and approved by the Chief Inspector of Mines.

23.0 Precautions against Noise and Vibration in the working environment: Suitable steps should be taken by all appropriate means to reduce the exposure of workers to any excessive noise and vibration. In this connection, the requirements of D.G.(Tech) Circular No.18 of 1975 should be complied with.

24.0 Additional precautions while deploying contractor workers and machineries not belonging to the owner:

24.1 Buyers' trucks shall be parked away from the mine premises and only such number of trucks shall be allowed to enter the mine which can be accommodated in the dispatch yard and are due for loading during the shift, with due consideration of safety of persons engaged in loading operations.

24.2 Trucks/tippers and other heavy vehicles/machinery, not belonging to management (including trucks,/tippers engaged for transport of mineral from opencast workings to Crusher/Siding), shall not be

engaged or allowed in the mine premises without a valid pass issued by the manager or other competent person. Before the Pass is issued, the engineer shall ensure the road worthiness of such vehicles.

24.3 In order to check entry of unauthorized trucks, tippers and other vehicles in mine premises, properly manned check gate(s) at the mine entrance (s) shall be set up, where record of entry and exit of each vehicle shall be maintained.

24.4 At the check gate(s), driving license of the drivers shall also be checked for eliminating the possibility of unlicensed persons driving the vehicles. Entry of unauthorized persons shall also be checked and controlled at such check gate(s) which shall be manned suitably for the purpose.

24.5 Persons engaged through contractors in any work within the mine premises shall be imparted relevant training and other job-related briefings, and the drivers/operators of HEMM/trucks/tippers/vehicles belonging to contractors shall additionally been explained the salient provisions of "traffic rules".

25.0 Work by outsourcing or contractual working:-

25.A.1 Contractor's employees shall be given vocational training and job related briefing before they are deployed for works. They shall also be imparted with specialized training for working in the mine.

25. A.2 Details of Contractor's employees in suitable form shall be maintained in mine (Form B & C, D & E)

25. A.3 Contractor's employees shall be issued an identity card.

25 .A.4 Contractor's drivers shall have valid driving license and they will carry the photocopy always.

25. A.5 If Contractor's transporting Stone etc. from mine to a place outside the mine by Trucks, Tippers then photo copy of papers like registration, Road Tax, Fitness, Insurance, Driver's license etc. shall be available in mine and without these valid papers equipments and drivers shall not be allowed.

25.A.6 Contractor's equipments and HEMM shall be treated as mine equipments and all rules, regulations, conditions as applicable for mine HEMM & equipments shall be applicable for Contractor's equipments & HEMM also.

25.A.7 Contractor shall make the arrangement for shift, daily, weekly, fortnightly examination of HEMM and equipments and record shall be maintained in a bound paged register duly signed by the person making the examination and counter-signed by the supervisor/engineer. There shall be a check list for each type of examination for each type of equipment.

25.A.8 Contractor shall make arrangement for schedule/preventive maintenance of HEMM and equipments as per manufacturer's instructions and record shall be maintained in a bound paged register duly signed by the competent person and countersigned by the supervisor/engineer. There shall be a check list for each type of schedule maintenance for each type of equipment.

25.A.9 In addition to Contractor's inspection, Mine Management shall arrange for inspection of Contractor's HEMM and equipments at suitable frequency by suitable persons to ensure that they are in safe working condition. Record of such inspections shall be kept in bound paged register duly signed by the competent person and countersigned by the colliery Engineer.

25. A.10 For supervision of Contractor's workings, supervisors so appointed shall be paid by the Owner and shall be answerable to the Manager.

25. A.11 The contractor shall submit quarterly returns to DGMS indicating Name of his firm , Registration number, Name and Address of person heading the firm, Name of Work,type of deployment of work persons, number of work persons deployed, how many persons hold VT certificate , how many persons undergone IME/PME, type of medical coverage given to the work persons. For contracts of More than three years returns shall be submitted quarterly and for contracts of less than one year returns shall be submitted monthly.

26.0 Please note that this permission is subject to the following additional conditions:

26.1 Garland drains of adequate size shall be provided on the surface on the periphery of the opencast working to divert rain water from flowing down the slopes. The drains shall preferably be made impervious by plastering of floor and sides to minimize seepage of water though the strata.

26.2 In the event of any change in the circumstances connected with this permission/ exemption which is likely to endanger the life of persons employed in the mine or the mine, the mining operations for which this permission has been granted shall be stopped forthwith and intimation thereof shall be sent to this Directorate. The said mining operation shall not be resumed without express and fresh permission in writing from this Directorate.

26.3 If at any time any one of the conditions, subject to which this permission/exemption has been granted, is violated or not complied with, this permission/exemption shall be deemed to have been revoked with immediate effect.

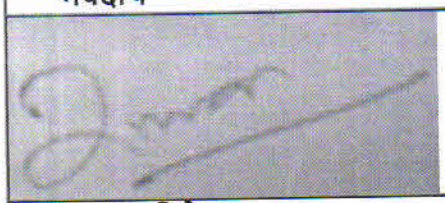
26.4 **This permission/exemption may be amended or withdrawn at any time if considered necessary in the interest of safety.**

26.5 This permission/exemption may be amended or withdrawn at any time if considered necessary in the interest of safety. Permission is being issued under Regulation 106(2)(b) of the MMR, 1961, only, without prejudice to any other provisions of law, which may be or may become applicable at any time.

26.6 This Directorate shall be informed as soon as the mining operations are commenced in accordance with the above permission/exemption. Intimation about completion of the mining operations should also be sent promptly and in any case not later than one month thereof.

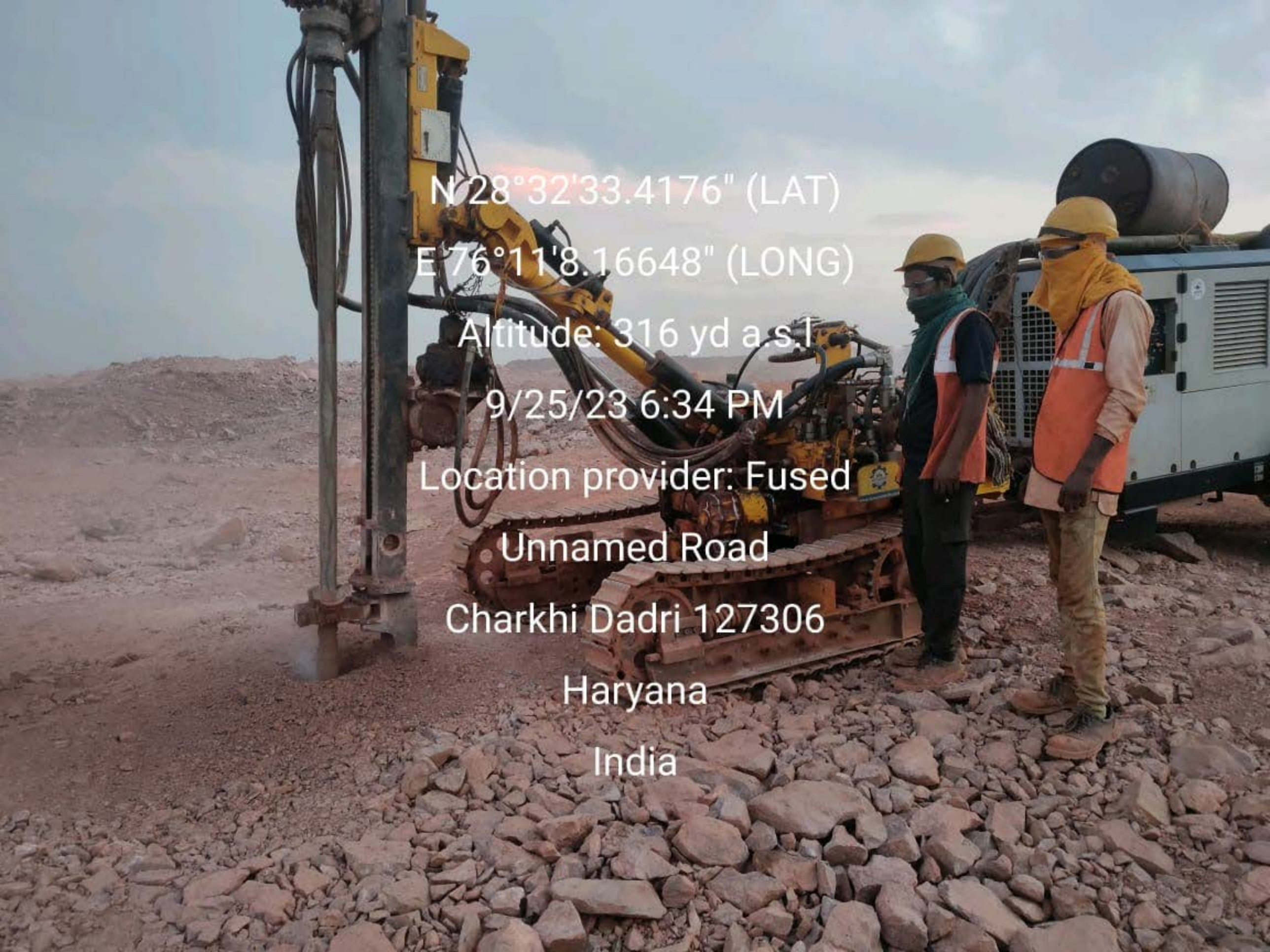
26.6 **This permission/relaxation shall remain valid for a period of 05 (five) years from the date of issue of this letter or validity of consent to operate or validity of EC or validity of the lease granted by the competent authority expires, whichever occurs earlier.**

भवदीय



खान सुरक्षा निदेशक
गाज़ियाबाद क्षेत्र, गाज़ियाबाद

THIS IS A SYSTEM GENERATED DOCUMENT, DOES NOT REQUIRE ANY SIGNATURE.


N 28°32'33.4176" (LAT)
E 76°11'8.16648" (LONG)
Altitude: 316 yd a.s.l
9/25/23 6:34 PM
Location provider: Fused
Unnamed Road
Charkhi Dadri 127306
Haryana
India


KULDEVI TRANSPORT Co PVT.LTD.
OPPO A15s


KULDEVI TRANSPORT COMPANY PVT. LTD
KULDEVI TRANSPORT Co PVT.LTD.
OPPO A15s


OPPO A15s


excel
MOUNTED
MIST CANNON
HR61C
3135

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Haryana

Date	:	**10/01/2024**
Time	:	**13:31:19 PM**
Validity upto	:	**09/01/2025**

Certificate SL. No.	:	HR08400170003796
Registration No.	:	HR844742
Date of Registration	:	30/Dec/2019
Month & Year of Manufacturing	:	May-2019
Valid Mobile Number	:	******0834
Emission Norms	:	BHARAT STAGE IV
Fuel	:	DIESEL
PUC Code	:	HR0840017
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	0.48

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://puc.parivahan.gov.in

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

Form 59

[See rules 115 (2)]

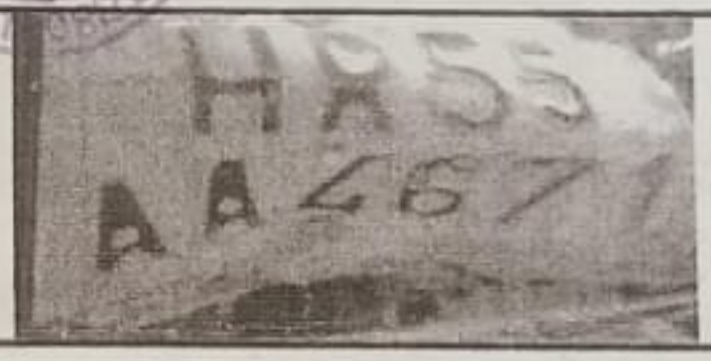
Pollution Under Control Certificate

Authorised By :
Government of Haryana

Date	:	**23/06/2023**
Time	:	**12:21:15 PM**
Validity upto	:	**22/06/2024**

Certificate SL. No.	:	HR08400170003154
Registration No.	:	HR55AA4671
Date of Registration	:	13/Jan/2017
Month & Year of Manufacturing	:	September-2016
Valid Mobile Number	:	******5563
Emission Norms	:	BHARAT STAGE IV
Fuel	:	DIESEL
PUC Code	:	HR0840017
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	0.59

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://puc.parivahan.gov.in

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

Form 59

[See rules 115 (2)]

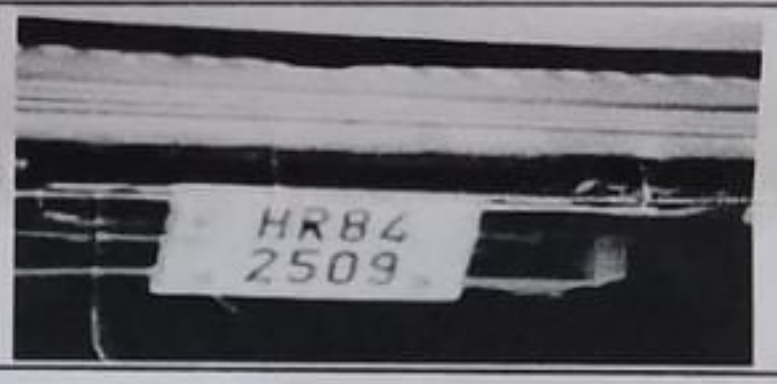
Pollution Under Control Certificate

Authorised By :
Government of Haryana

Date	:	**09/03/2023**
Time	:	**13:19:45 PM**
Validity upto	:	**08/03/2024**

Certificate SL. No.	:	HR08400260004156
Registration No.	:	HR842509
Date of Registration	:	04/Dec/2020
Month & Year of Manufacturing	:	October-2020
Valid Mobile Number	:	******6893
Emission Norms	:	BHARAT STAGE VI
Fuel	:	DIESEL
PUC Code	:	HR0840026
GSTIN	:	
Fees	:	Rs.100.00 (GST to be paid extra as applicable)
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		
	CO	percentage (%)		
High idling emissions	RPM	RPM	2500 ± 200	
	Lambda	-	1 ± 0.03	
Smoke Density	Light absorption coefficient	1/metre	0.7	0.6

Pollution Under Control * Authorised Centre D-0026

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://puc.parivahan.gov.in

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

Form 59

[See rules 115 (2)]

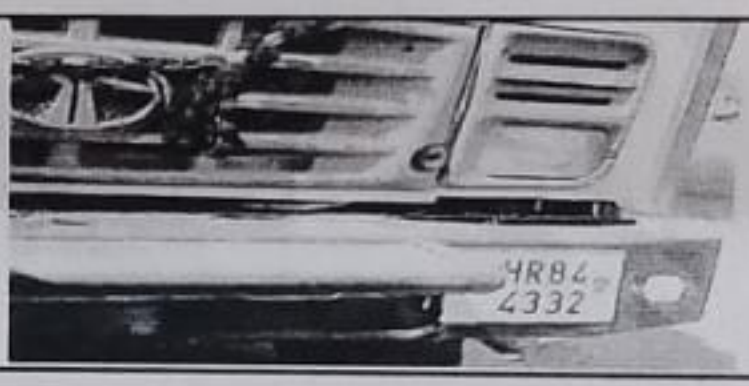
Pollution Under Control Certificate

Authorised By :
Government of Haryana

Date	:	**09/03/2023**
Time	:	**13:16:07 PM**
Validity upto	:	**08/03/2024**

Certificate SL. No.	:	HR084002600041 55
Registration No.	:	HR844332
Date of Registration	:	31/Mar/2020
Month & Year of Manufacturing	:	December-2019
Valid Mobile Number	:	******6893
Emission Norms	:	BHARAT STAGE IV
Fuel	:	DIESEL
PUC Code	:	HR0840026
GSTIN	:	
Fees	:	Rs.100.00 (GST to be paid extra as applicable)
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	0.55

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://puc.parivahan.gov.in

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

Forest Department, Government of Haryana
O/o P.C.C.F. cum Chief Wildlife Warden, Haryana
Van Bhawan, C-18, Sector-6, Panchkula-134109 Phone/Fax 0172-2561224, E-mail- apccfwl@gmail.com

No. 2316 Dated 9/10/2018

To,

M/s Ridhi Sidhi-KSM Resourcce-JV,
Khatoni No. 1049, Behind Hotel Mejban,
Loharu Road, Charkhi Dadri, Haryana.

Subject: Approval of Conservation Plan the Proposed Project of Mining of Stone along with the associated Minor Minerals over an area of 64.40 ha. in village Kallai & Kalyana, Tehsil & District Charkhi Dadri by M/s Ridhi Sidhi-KSM Resources-JV.

The project site was inspected on 20-07-2018 by a team comprising Chief Conservator of Forest (WL), Gurugram, DFO (T), Bhiwani and DWLO, Hisar:-

1 This is proposed Mining Project named M/s Ridhi Sidhi-KSM Resourcce-JV and it is located at village kalai & kalyana Tehsil and District Charkhi Dadri. The lease of an area 64.40 ha was granted by Mining Officer, for Director Mines & Geology Haryana vide Memo No. DMG/HY/ML/Kalali & Kalyana/2018/1491 dated Chandigarh, the 26.03.2018.

2 There is no National Park and Wildlife Sanctuary with in the 10 Km radius of project site and project site is outside National Park, Sanctuary, Biosphere Reserve, Tiger/Elephant Reserve or notified Eco-sensitive zones falling within territory of in Haryana boundary.

3 Main vegetation found in the area are Acacia leacophloea, Acacia nilotica Var. Indiaca, Acacia Senegal, Acacia tortilis, Ailanthus excels, Albizia lebbek, Azardiracha indica, Anogeissu pendula, Dalbergia sissoo, Eucalyptus camaldulensis, Ficusn bengalensis, Ficus religiosa, Holoptelea integrifolia, Melia azedarach, Prospis cineraria, Prosopis juliflora, Tecomella undulate, Zyziphus mouritiana etc.

4 Prominent fauna of mining area and buffer zone of 10 km. it is stated that the said area in village kalai & kalyana Tehsil and District Charkhi Dadri, Haryana is situated in the middle of a continuous chain of Aravalli hills and its surrounding Aravalli plantation area are regular habitat for Wildlife and is a part of corridor for wildlife movement on Aravalli chain. Main species found here are Chinkara, Leopard (Occasional Visitor), Hyena, Indian Fox, Jungle

Cat, Langoor, Common Monkey, Peafowl and various reptiles such as Cobra, Krait and monitor lizard etc. This area is an important ecological area as far as various flora and fauna is concerned.

5 The committee has perused the conservation plan submitted by the project proponent. The conservation plan (copy attached) prepared for Schedule-I and Schedule-II animal found in the area is in order hence acceptable as it includes all the necessary interventions required for the conservation of the local fauna included in schedule I and II of Wildlife Protection Act, 1972. The species of Schedule-I and Schedule- II includes Peafowl, Black Partridge, Leopard – (Occasional Visitor), Chinkara, Jackal, Indian Fox Jungle Cat, common Mongoose, common monkey, Langoor, Spiny tailed lizard or sanda, Indian cobra, Russell's viper, Common Indian Krait, Veranus sps, (Indian Monitor Lizard), Spiny Tailed Lizard, Common Rat snake. The interventions in the proposed area include construction of water holes (small water points) in the surrounding villages and regular filling of water, plantation and its maintenance in the buffer zone area. Besides this, habitat improvement activities, ensuring food availability for wildlife, awareness generation of labor and local people, distribution of posters, pamphlets, using signage etc. The proposed conservation plan will be implemented in a phased manner with a total cost of Rs. 325.00 lac within a period of Eighteen (18) years. You are hereby directed to deposit the conservation plan cost with DWLO, Hisar before implementation of work.

6 The mining activities at proposed site will have negative impact on the local flora and fauna. The possible adverse impact includes hampering of natural & regeneration, the tree grooves, making available water to the wild animals by taking necessary measures. cost of Plantation/trench etc.

7 The clearance of the forest related laws, rules and instructions may be obtained from the Conservator of Forests (Forests Conservation).

8 The project proponent will seek necessary/mandatory permissions from the other concerned department as applicable and will not violate the Hon'ble Court order, if any.

9 The Project Proponent shall carry out mining operations strictly in accordance with the orders of the Hon'ble Supreme Court, dated the 4th August, 2006 in the matter of T.N. Godavaman Thirumulpad Vs. Union of India in Writ Petition

(Civil) No. 202 of 1995 and dated the 21st April, 2014 in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 435 of 2012.

10 The project proponent shall furnish an undertaking on 100 rupees non judicial stamp paper regarding deposition of cost of conservation plan and other conditions mentioned in this letter. The undertaking must be duly signed by the authorized person of the firm and attested by notary.

P.C.C.F. cum
Chief Wildlife Warden,
Haryana, Panchkula.

Endst. No. Dated

A copy is forwarded to following for information & necessary action :-

1 CF (Wildlife), Gurugram
2 DWLO, Hisar
3 DFO (T), Bhiwani .

– Sd –
P.C.C.F. cum
Chief Wildlife Warden,
Haryana, Panchkula.

GPS Map Camera

Mahra, Haryana, India
Unnamed Road, Mahra, Haryana 127306, India
Lat 28.549939°
Long 76.186816°
26/09/23 03:45 PM GMT +05:30

Medical Examination Format

(FORM – O)

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

Report of medical examination under rule 29B in accordance with Form P1 of the Mines Rules 1955

Certificate No. SG/(CK1)/09/23

Certified that Shri/Shrimati* Ajay Kumar Singh S/o Sh Ram Naresh RSKSM to be employed as trade apprentice in .... trade In mines of ~~SECL~~, Form B No/ Apprenticeship registration number 02 has been examined for an initial medical examination in accordance with Form P1 of the Mines Rules 1955. He/she* appears to be 53 years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri/Shrimati*..............

(a)* is medically fit for any employment/ graduate/technician apprentice training in mines.

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

(1) any employment in mine; or

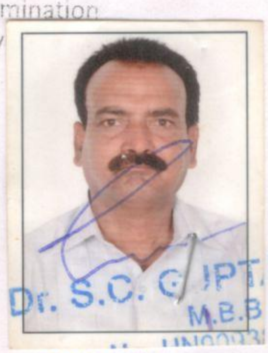
(2) any employment below ground; or

(3) any employment or work..........

©* is suffering from .... he 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/ 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 (not below the rank of assistant civil surgeon) with seal

Dr. S.C. GUPTA
M.B.B.S
Reg. No.

Place: Ch Dahi

Date:

Dr S.C. Gupta Retd SMO d IMS

Name and designation in Block letters

* Delete whatever is not applicable.

** One copy of the certificate shall be handed over to the person concerned for SECL and another copy shall be retained by the examining authority,

Report of the examining authority

(to be filled in for every medical examination whether initial or after cure/control of disability).

Annexure to Certificate No. 09/23 as result of medical examination on .....

Scar mole below the (L) eye.

Identification Mark..... Left thumb impression of the candidate

1. **General development**- Good/ Fair /Poor
2. **Height**.....Cms 5.9
3. **Weight**.....kg. 70kg

4 Eyes:

(i)Visual acuity-Distant vision (with or without glasses).

Right eye.....6/6 Left eye.....6/6 Eyglasses

(ii) Any organic disease of eyes.....Nil

(iii) Night blindness.....

(iv) Color blindness .....Nil

(v)Squint .....

(* to be tested in special cases)

(5) **Ears**

(I) Hearing: right ear.....Normal.....Left ear .....Normal.....

(II) Any organic diseases.....Nil

6. **Respiratory system**

Chest measurement:

(i) After full inspiration .....39.....cms.

(ii)After full expiration.....36.....cms.

7. **Circulatory system**:

Blood Pressure.....120/86 mmHg

Pulse..... 74/m

8. **Abdomen**:

Tenderness.....

Liver..... Nil

Spleen..... NAD

Tumor..... NAD

9. **Nervous system**:

History of fits or epilepsy..... No

Paralysis..... No

Mental health..... Normal

10. **Locomotory system** ..... NAD

11. **Skin**..... NAD

12. **Hydrocele**. ..... Nil

13. **Hernia**..... Nil

14. **Any other abnormality** ..... Nil

15. **Urine:**

Reaction..... } Nil

Albumin..... }

Sugar..... }

16. **Ski gram of chest.** NAD

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

18. **Any opinion of specialist considered necessary**. Nil

Signature and seal of the examining authority

(Not below the rank of assistant civil surgeon)

M.B.B.S

Reg. No. HR0[illegible]

Place: Ch Dadri

Name..... Dr S C Gupta

Designation ..... Ref SMO HCMS) Place of posting..... Ch Dadri

City/ Town..... Ch Dadri PO..... Ch Dadri

District..... Ch Dadri State.... Haryana

Phone /Mobile No. 9992174888

Email Address .....

JANHIT DIAGNOSTIC LAB

Rohtak Chowk, MCH Civil Hospital Road,
Charkhi Dadri - 127306
Mob. 9416516255

Name : **AJAY KUMAR**	**Date : 15/06/2023**	**Age : 53**	**Sex : M**
Ref.by : **Dr.SELF**		**Lab Ref.No. :-25**	

Test/Investigation	Patient Value	Units	Normal Value
	11.6	gm%	12.5-16.0gm%
BLOOD GROUP	**B Positive**		
Blood Sugar Random	**108**	mgm/dl	60 - 160 mgm/dl
Blood Urea	**32.1**	mgm/dl.	15-50 mgm/dl.
S.Creatinine	**0.80**	mg%	0.5-1.5 mg%
S.Uric Acid	**5.10**	mg%	2.5-7.0 mg%
S. Calcium	**9.1**	mg/dl.	8.5-10.5 mg/dl.
LIPED PROFILE			
Total Cholesterol	**170**	mg/dl	125-200 mg/dl
HDL-Cholesterol	**42**	mg/dl	35-55 mg/dl
LDL - Cholesterol	**98**	mg/dl	upto 150 mg/dl
Triglycerides	**150**	mg/dl	60-170 mg/dl
V.L.D.L.	**30**	mg/dl	Upto 40 mg/dl
Serum Bilirubin			
Serum Bilirubin Total	**0.49**	mgm/dl.	0.2-1.0 mgm/dl.
Serum Bil. Conjugated	**0.19**	mgm/dl.	0.0-0.3 mgm/dl.
Serum Bil. Unconjugated	**0.30**	mgm/dl.	0.1-0.8 mgm/dl.
SERUM PROTEINS			
Serum Proteins Total	**7.5**	gm/dl.	6.0-8.3 gm/dl.
Serum Proteins Albumin	**4.5**	gm/dl.	3.2-5.0 gm/dl.
Serum Proteins Globulin	**3.0**	gm/dl.	1.8-3.6 gm/dl.
SGOT	**23.24**	U/L	5-40 U/L
SGPT	**32.11**	U/L	5-35 U/L
S.Alk.Phosphatase	**106**	U/L	25-112 IU/L

Signature

Not for Medico Legal Purpose

T3, T4, TSH, FSH, LH, PROLACTIN, PROGESTERONE, TORCH, TB GOLD, CA-125, BLOPSY, C/S

The result are reagent deponds and have own limittions, Clinical correlation is mamdatory in all the cases

SAMPLE COLLECTION AT HOME FACILITY AVAILABLE

Medical Examination Format

(FORM – O)

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

Report of medical examination under rule 29B in accordance with Form P1 of the Mines Rules 1955

Certificate No. SCL/CK 13/13/23

Certified that Shri/Shrimati* Mahinder Kumar S/o Ramdass Singh to be employed as trade apprentice in .... trade in mines of SECL , Form B No/ Apprenticeship registration number.................................. has been examined for an initial medical examination in accordance with Form P1 of the Mines Rules 1955. He/she* appears to be 26 years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri/Shrimati*.............

(a)* is medically fit for any employment/ graduate/technician apprentice training in mines.

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

(1) any employment in mine; or

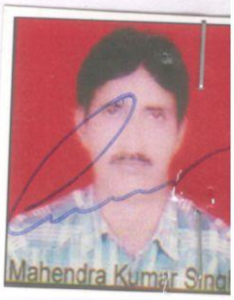
(2) any employment below ground; or

(3) any employment or work..........

©* is suffering from.. he 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 (not below the rank of assistant civil surgeon) with seal

Dr. S. S. GUPTA
M.B.B.S
Reg. No. HN00[illegible]3

Place:

Date:

Name and designation in Block letters

* Delete whatever is not applicable.

** One copy of the certificate shall be handed over to the person concerned for SECL and another copy shall be retained by the examining authority,

Report of the examining authority

(to be filled in for every medical examination whether initial or after cure/control of disability).

Annexure to Certificate No. 13/23 as result of medical examination on .....

Identification Mark..... Scar mark on the (R) Side of face.

Left thumb impression of the candidate

1. **General development**- Good/ Fair /Poor
2. **Height**.....5'6"
3. **Weight**.....kg. 52 kg

4 Eyes:

(i)Visual acuity-Distant vision (with or without glasses).

Right eye..... 6/6 Left eye..... 6/6 Total glasses

(ii) Any organic disease of eyes.....

(iii) Night blindness.....

(iv) Color blindness ..... NAD

(v)Squint .....

(* to be tested in special cases)

(5) **Ears**

(I) Hearing: right ear..... Normal Left ear ..... Normal

(II) Any organic diseases..... Nil

6. **Respiratory system**

Chest measurement:

(i) After full inspiration .....37.....cms.

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

7. **Circulatory system**:

Blood Pressure..... 120/80 mmHg

Pulse..... 72/min

8. **Abdomen**:

Tenderness..... NAD

Liver.....

Spleen.................... NAD

Tumor......................

9. **Nervous system**:

History of fits or epilepsy........................ NO

Paralysis........................... NO

Mental health....................... Normal

10. **Locomotory system** .... NAD

11. **Skin**.............................. NAD

12. **Hydrocele**. .... Nil

13. **Hernia**.............................. Nil

14. **Any other abnormality** .... Nil

15. **Urine**:

Reaction..................

Albumin.................... Nil

Sugar........................

16. **Ski gram of chest**. NAD

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

18. **Any opinion of specialist considered necessary**. Nil

Signature and seal of the examining authority

(Not below the rank of assistant civil surgeon)

Dr. S.C. GUPTA
M.B.B.S.
Reg. No. HN 009383

Place: Ch Dadri

Name.............................. Dr S C Gupta

Designation .... Place of posting........................ Ch Dadri

City/ Town.. Ch Dadri PO.. Ch Dadri

Disrtict...State.... Haryana Ch Dadri

Phone /Mobile No. 9992174888

Email Address ....

JANHIT DIAGNOSTIC LAB

Rohtak Chowk, MCH Civil Hospital Road,
Charkhi Dadri - 127306
Mob. 9416516255

Name : **MAHENDER** Date : 15/06/2023 Age : 46 Sex : M

Ref.by : Dr.SELF Lab Ref.No.:-29

Test/Investigation	Patient Value	Units	Normal Value
HB	10.7	gm%	12.5-16.0gm%
Blood Sugar Random	108	mgm/dl	60 - 160 mgm/dl
BLOOD GROUP	O Positive		
Blood Urea	29	mgm/dl.	15-50 mgm/dl.
S. Creatinine	0.78	mgm/dl.	0.6-1.4 mgm/dl.
S. Uric Acid	6.9	mg/dl	3.5 - 7.2 mg/dl
S. Calcium	9.2	mg/dl.	8.5-10.5 mg/dl.
LIPED PROFILE			
Total Cholesterol	135	mg/dl	125-200 mg/dl
HDL-Cholesterol	25	mg/dl	35-55 mg/dl
LDL - Cholesterol	137	mg/dl	upto 150 mg/dl
Triglycerides	155	mg/dl	60-170 mg/dl
V.L.D.L.	30	mg/dl	Upto 40 mg/dl
Serum Bilirubin			
Serum Bilirubin Total	0.24	mgm/dl.	0.2-1.0 mgm/dl.
Serum Bil. Conjugated	0.16	mgm/dl.	0.0-0.3 mgm/dl.
Serum Bil. Unconjugated	0.80	mgm/dl.	0.1-0.8 mgm/dl.
SERUM PROTEINS			
Serum Proteins Total	7.3	gm/dl.	6.0-8.3 gm/dl.
Serum Proteins Albumin	7.4	gm/dl.	3.2-5.0 gm/dl.
Serum Proteins Globulin	4.1	gm/dl.	1.8-3.6 gm/dl.
SGOT	24.23	U/L	5-40 U/L
SGPT	32.36	U/L	5-35 U/L
S.Alk.Phosphatase	102	U/L	25-112 IU/L

Signature

Not for Medico Legal Purpose

*** end of report ***

T3, T4, TSH, FSH, LH, PROLACTIN, PROGESTERONE, TORCH, TB GOLD, CA-125, BLOPSY, C/S

The result are reagent deponds and have own limittions, Clinical correlation is mamdatory in all the cases

SAMPLE COLLECTION AT HOME FACILITY AVAILABLE

Medical Examination Format

(FORM – O)

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

Report of medical examination under rule 29B in accordance with Form P1 of the Mines Rules 1955

Certificate No. SCS/CKD/01/23

Certified that Shri/Shrimati* Manish Kumar to be employed as trade apprentice in.. trade In mines of ~~SECL~~ RSKSM, Form B No/ Apprenticeship registration number.........42............... has been examined for an initial medical examination in accordance with Form P1 of the Mines Rules 1955. He/she* appears to be....31.... years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri/Shrimati*.............

(a)* is medically fit for any employment/ graduate/technician apprentice training in mines.

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

(1) any employment in mine; or

(2) any employment below ground; or

(3) any employment or work..........

©* is suffering from.. he 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 (not below the rank of assistant civil surgeon) with seal

Dr. S.C. Gupta

Ret SMO Class I

DR. S.C. GUPTA M.B.B.S Reg. No. UN009383

Place: Chandni

Date:

Name and designation in Block letters

* Delete whatever is not applicable.

** One copy of the certificate shall be handed over to the person concerned for SECL and another copy shall be retained by the examining authority,

Report of the examining authority

(to be filled in for every medical examination whether initial or after cure/control of disability).

Annexure to Certificate No......01/23......as result of medical examination on ....

Black mark on the ... Manish Kumar.

Identification Mark...

Left thumb impression of the candidate

1. **General development**- Good/ Fair /Poor
2. **Height**...5.4...Cms
3. **Weight**............kg. 55 kg

4 **Eyes**:

(i)Visual acuity-Distant-vision (with or without glasses).

Right eye........ 6/6 Left eye....6/6. c ... glass.

(ii) Any organic disease of eyes.....................

(iii) Night blindness..

(iv) Color blindness ....

(v)Squint ....

(* to be tested in special cases)

(5) **Ears**

(I) Hearing: right ear......Normal......Left ear ......Normal......

(II) Any organic diseases.............................

6. **Respiratory system**

Chest measurement:

(i) After full inspiration ....cms.

(ii)After full expiration..............cms.

7. **Circulatory system**:

Blood Pressure.........................120/80 mm Hg

Pulse.................................... 72/min

8. **Abdomen**:

Tenderness.................. NAD

Liver.....................

Spleen.................... NAD.

Tumor......................

9. **Nervous system**:

History of fits or epilepsy....................... NO.

Paralysis.......................... NO

Mental health....................... Normal

10. **Locomotory system** .... NAD.

11. **Skin**............................... NAD

12. **Hydrocele**. .... Nil

13. **Hernia**............................. Nil

14. **Any other abnormality** .... Nil

15. **Urine**:

Reaction..................

Albumin.................... Nil

Sugar.........................

16. **Ski gram of chest.** NAD

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

18. **Any opinion of specialist considered necessary**. NO

Signature and seal of the examining authority

(Not below the rank of assistant civil surgeon)

Place:

Name.................................. DR S C Gupta MBBS

Designation .... Ret- SMO Hearsi Place of posting......................... Ch Dadri

City/ Town... Ch Dadri PO....................................... Ch Dadri

.Disrtrict:...State.... Haryana Ch Dadri

Phone /Mobile No. .... 9992174888.

Email Address .... —

Medical Examination Format

(FORM – O)

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

Report of medical examination under rule 29B in accordance with Form P1 of the Mines Rules 1955

Certificate No. SCG/CRD/04/23

Certified that Shri/Shrimati* Rajbir S/o Sh. Rattan Singh to be employed as trade apprentice in .... trade In mines of SECL , Form B No/ Apprenticeship registration number................................ has been examined for an initial medical examination in accordance with Form P1 of the Mines Rules 1955. He/she* appears to be 55 years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri/Shrimati*..............

(a)* is medically fit for any employment/ graduate/technician apprentice training in mines.

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

(1) any employment in mine; or

(2) any employment below ground; or

(3) any employment or work..........

©* is suffering from.. he 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............ 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 (not below the rank of assistant civil surgeon) with seal

....

Place: Ch Dadri

Date:

Dr. S.C. GUPTA

DR SC Gupta Retd SMO HCMS

Name and designation in Block letters

* Delete whatever is not applicable.

** One copy of the certificate shall be handed over to the person concerned for SECL and another copy shall be retained by the examining authority,

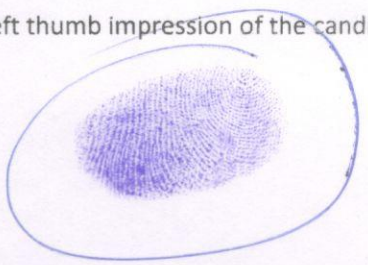
Report of the examining authority

(to be filled in for every medical examination whether initial or after cure/control of disability).

Annexure to Certificate No.....04/23.....as result of medical examination on .....

Identification Mark..... black mole on the face

Left thumb impression of the candidate



1. **General development**- ✓Good/ Fair /Poor
2. **Height**.....5'7".....Cms
3. **Weight**.....70 kg.kg.

4 Eyes:

(i)Visual acuity-Distant vision (with or without glasses).

Right eye..... 6/6 c glass Left eye.....6/6 c glass

(ii) Any organic disease of eyes.....

(iii) Night blindness.....

(iv) Color blindness .....

(v)Squint .....

(* to be tested in special cases)

(5) **Ears**

(I) Hearing: right ear..... Normal Left ear ..... Normal

(II) Any organic diseases..... Nil

6. **Respiratory system**

Chest measurement:

(i) After full inspiration .....97.....cms.

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

7. **Circulatory system**:

Blood Pressure..... 120/82 mm Hg

Pulse..... 72/m

8. **Abdomen**:

Tenderness..... /NAD

Liver.....

Spleen.....

Tumor..... NAD

9. **Nervous system**:

History of fits or epilepsy..... NO

Paralysis..... NO

Mental health..... Normal

10. **Locomotory system** ..... NAD

11. **Skin**..... NAD

12. **Hydrocele.** ..... NIL

13. **Hernia**..... NIL

14. **Any other abnormality** ..... NIL

15. **Urine:**

Reaction.....

Albumin..... > NIL

Sugar.....

16. **Ski gram of chest.** ——— NAD

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

18. **Any opinion of specialist considered necessary.** NIL

Dr. S.C. GUPTA
M.B.B.S
Reg. No. HN000383

Signature and seal of the examining authority

(Not below the rank of assistant civil surgeon)

Place: Ch Dadri

Name..... Dr. S.C. Gupta

Designation..... MBBS Medical Officer Place of posting..... CH Dadri

City/ Town..... CH Dadri PO..... CH Dadri

.Disrtrict..... CH Dadri State.... Haryana

Phone /Mobile No. 9992174888

Email Address .....

JANHIT DIAGNOSTIC LAB

Rohtak Chowk, MCH Civil Hospital Road,
Charkhi Dadri - 127306
Mob. 9416516255

Name : **RAJVEER** Date : **15/06/2023** Age : **55** Sex : **M**

Ref.by : **Dr.SELF** Lab Ref.No. :**-18**

Test/Investigation	Patient Value	Units	Normal Value
HB	**11.0**	gm%	12.5-16.0gm%
Blood Sugar Random	**169**	mgm/dl	60 - 160 mgm/dl
Blood Urea	**45**	mgm/dl.	15-50 mgm/dl.
S. Creatinine	**0.90**	mgm/dl.	0.6-1.4 mgm/dl.
S. Uric Acid	**5.2**	mg/dl	3.5 - 7.2 mg/dl
S. Calcium	**9.5**	mg/dl.	8.5-10.5 mg/dl.
LIPED PROFILE			
Total Cholesterol	**185**	mg/dl	125-200 mg/dl
HDL-Cholesterol	**44**	mg/dl	35-55 mg/dl
LDL - Cholesterol	**108**	mg/dl	upto 150 mg/dl
Triglycerides	**160**	mg/dl	60-170 mg/dl
V.L.D.L.	**35**	mg/dl	Upto 40 mg/dl
Serum Bilirubin			
Serum Bilirubin Total	**0.47**	mgm/dl.	0.2-1.0 mgm/dl.
Serum Bil. Conjugated	**0.17**	mgm/dl.	0.0-0.3 mgm/dl.
Serum Bil. Unconjugated	**0.30**	mgm/dl.	0.1-0.8 mgm/dl.
SERUM PROTEINS			
Serum Proteins Total	**7.7**	gm/dl.	6.0-8.3 gm/dl.
Serum Proteins Albumin	**4.6**	gm/dl.	3.2-5.0 gm/dl.
Serum Proteins Globulin	**2.6**	gm/dl.	1.8-3.6 gm/dl.
SGOT	**27.29**	U/L	5-40 U/L
SGPT	**31.32**	U/L	5-35 U/L
S.Alk.Phosphatase	**99**	U/L	25-112 IU/L
BLOOD GROUP	**A Positive**		

Signature

Not for Medico Legal Purpose

*** End of report ***

T3, T4, TSH, FSH, LH, PROLACTIN, PROGESTERONE, TORCH, TB GOLD, CA-125, BLOPSY, C/S

The result are reagent deponds and have own limitiions, Clinical correlation is mandatory in all the cases

SAMPLE COLLECTION AT HOME FACILITY AVAILABLE

JANHIT DIAGNOSTIC LAB

Rohtak Chowk, MCH Civil Hospital Road,
Charkhi Dadri - 127306
Mob. 9416516255

Name : **MANISH KUMAR** Date : **15/06/2023** Age : **31** Sex : **M**

Ref.by : **Dr.SELF** Lab Ref.No.:**-15**

Test/Investigation	Patient Value	Units	Normal Value
HB	**10.8**	gm%	12.5-16.0gm%
BLOOD GROUP	**AB Positive**		
Blood Sugar Random	**117**	mgm/dl	60 - 160 mgm/dl
Blood Urea	**32.1**	mgm/dl.	15-50 mgm/dl.
S.Creatinine	**0.89**	mg%	0.5-1.5 mg%
S.Uric Acid	**3.20**	mg%	2.5-7.0 mg%
S.Calcium	**9.20**	mg%	9-11 mg%
LIPED PROFILE			
Total Cholesterol	**178**	mg/dl	125-200 mg/dl
HDL-Cholesterol	**42**	mg/dl	35-55 mg/dl
LDL - Cholesterol	**106**	mg/dl	upto 150 mg/dl
Triglycerides	**150**	mg/dl	60-170 mg/dl
V.L.D.L.	**30**	mg/dl	Upto 40 mg/dl
Serum Bilirubin			
Serum Bilirubin Total	**0.42**	mgm/dl.	0.2-1.0 mgm/dl.
Serum Bil. Conjugated	**0.12**	mgm/dl.	0.0-0.3 mgm/dl.
Serum Bil. Unconjugated	**0.30**	mgm/dl.	0.1-0.8 mgm/dl.
SERUM PROTEINS			
Serum Proteins Total	**7.5**	gm/dl.	6.0-8.3 gm/dl.
Serum Proteins Albumin	**4.5**	gm/dl.	3.2-5.0 gm/dl.
Serum Proteins Globulin	**3.0**	gm/dl.	1.8-3.6 gm/dl.
SGOT	**24.25**	U/L	5-40 U/L
SGPT	**32.34**	U/L	5-35 U/L
S.Alk.Phosphatase	**102**	U/L	25-112 IU/L

Signature

Not for Medico Legal Purpose

T3, T4, TSH, FSH, LH, PROLACTIN, PROGESTERONE, TORCH, TB GOLD, CA-125, BLOPSY, C/S

The result are reagent deponds and have own limittions, Clinical correlation is mamdatory in all the cases

SAMPLE COLLECTION AT HOME FACILITY AVAILABLE

Medical Examination Format

(FORM – O)

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

Report of medical examination under rule 29B in accordance with Form P1 of the Mines Rules 1955

Certificate No.........S. CG /CK 13/ 12/23

Certified that Shri/Shrimati* Surender s/o Lt Khajjan Singh to be employed as trade apprentice in .... trade In mines of SECL , Form B No/ Apprenticeship registration number................................ has been examined for an initial medical examination in accordance with Form P1 of the Mines Rules 1955. He/she* appears to be...45... years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri/Shrimati*.............

(a)* is medically fit for any employment/ graduate/technician apprentice training in mines.

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

(1) any employment in mine; or

(2) any employment below ground; or

(3) any employment or work..........

©* is suffering from.. he 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 (not below the rank of assistant civil surgeon) with seal

Dr. S.C. GUPTA
M.B.B.S.
Reg. No. HN009383

Dr S C Gupta SMO HIMS

Place: Ch Dadri

Date:

Name and designation in Block letters

* Delete whatever is not applicable.

** One copy of the certificate shall be handed over to the person concerned for SECL and another copy shall be retained by the examining authority,

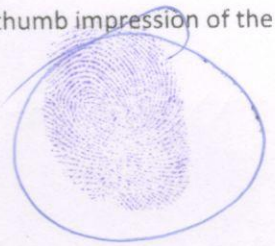
Report of the examining authority

(to be filled in for every medical examination whether initial or after cure/control of disability).

Annexure to Certificate No. 12/23 as result of medical examination on .....

Scar mark back of (R) Elbow

Identification Mark..... Left thumb impression of the candidate



1. **General development**- Good/ Fair /Poor
2. **Height**..... Cms
3. **Weight**..... kg.

4 Eyes:

(i)Visual acuity-Distant vision (with or without glasses).

Right eye..... 6/6 Left eye..... 6/6 without glass

(ii) Any organic disease of eyes.....

(iii) Night blindness.....

(iv) Color blindness .....

(v)Squint .....

(* to be tested in special cases)

(5) **Ears**

(I) Hearing: right ear..... Normal Left ear ..... Normal

(II) Any organic diseases.....

6. **Respiratory system**

Chest measurement:

(i) After full inspiration ..... cms.

(ii)After full expiration..... cms.

7. **Circulatory system**:

Blood Pressure..... 136/84 mm Hg

Pulse..... 72 bpm

8. **Abdomen**:

Tenderness.....

Liver.....

Spleen.................... NAD

Tumor.....................

9. **Nervous system**:

History of fits or epilepsy...................... NO

Paralysis.......................... NO

Mental health.................... Normal

10. **Locomotory system** .... NAD

11. **Skin**.............................. NAD

12. **Hydrocele**. .... NIL

13. **Hernia**............................ NIL

14. **Any other abnormality** .... NIL

15. **Urine**:

Reaction..................

Albumin.................... NIL

Sugar........................

16. **Ski gram of chest.** NAD

17. **Any other test considered necessary by the examining authority.** — NIL

18. **Any opinion of specialist considered necessary.** — NIL

Signature and seal of the examining authority

(Not below the rank of assistant civil surgeon)

Dr. S. C. GUPTA M.B.B.S Reg. No. HN009383

Place: Ch Dadri

Name.............................. Dr S C Gupta Retd SMO

Designation .... Retd SMO HCMS-I Place of posting......................... Ch Dadri

City/ Town.. Ch Dadri PO..................................... Ch Dadri

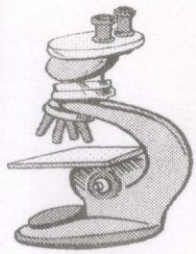
Disrtrict... Ch Dadri State...... Haryana

Phone /Mobile No. 9992174888

Email Address ....

JANHIT DIAGNOSTIC LAB

Rohtak Chowk, MCH Civil Hospital Road,
Charkhi Dadri - 127306
Mob. 9416516255



Name : SURENDER	Date : 15/06/2023	Age : 45 Sex : M
Ref.by : Dr.SELF		Lab Ref.No.:-28

Test/Investigation	Patient Value	Units	Normal Value
HB	10.2	gm%	12.5-16.0gm%
BLOOD GROUP	B Positive		
Blood Sugar Random	105	mgm/dl	60 - 160 mgm/dl
Blood Urea	35	mgm/dl.	15-50 mgm/dl.
S. Creatinine	0.76	mgm/dl.	0.6-1.4 mgm/dl.
S. Uric Acid	6.6	mg/dl	3.5 - 7.2 mg/dl
S. Calcium	9.5	mg/dl.	8.5-10.5 mg/dl.
LIPED PROFILE			
Total Cholesterol	175	mg/dl	125-200 mg/dl
HDL-Cholesterol	46	mg/dl	35-55 mg/dl
LDL - Cholesterol	139	mg/dl	upto 150 mg/dl
Triglycerides	158	mg/dl	60-170 mg/dl
V.L.D.L.	36	mg/dl	Upto 40 mg/dl
Serum Bilirubin			
Serum Bilirubin Total	0.46	mgm/dl.	0.2-1.0 mgm/dl.
Serum Bil. Conjugated	0.18	mgm/dl.	0.0-0.3 mgm/dl.
Serum Bil. Unconjugated	0.28	mgm/dl.	0.1-0.8 mgm/dl.
SERUM PROTEINS			
Serum Proteins Total	6.9	gm/dl.	6.0-8.3 gm/dl.
Serum Proteins Albumin	4.2	gm/dl.	3.2-5.0 gm/dl.
Serum Proteins Globulin	2.7	gm/dl.	1.8-3.6 gm/dl.
SGOT	22.25	U/L	5-40 U/L
SGPT	31.34	U/L	5-35 U/L
S.Alk.Phosphatase	1.1	U/L	25-112 IU/L

Signature

Not for Medico Legal Purpose

T3, T4, TSH, FSH, LH, PROLACTIN, PROGESTERONE, TORCH, TB GOLD, CA-125, BLOPSY, C/S

The result are reagent depends and have own limitations, Clinical correlation is mandatory in all the cases

SAMPLE COLLECTION AT HOME FACILITY AVAILABLE

8814027600
7419712610

Riddhi Siddhi - KSM Resources JV

Mines at Khasra No. 223 mun, 224 to 228& 72,
Kalali & Kalyana, Charkhi Dadri, Haryana - 127306

Ref. No.....To..... Date Date: 20/11/2023

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 December-2023.

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

Sir,

In accordance to the EC letter as above stated received from 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 Riddhi Siddhi KSM Resources JV

Riddhi Siddhi KSM Resources JV
Vikas
Authorised Signatory

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), Jan Bharati ParyavaranBhavan, JorBagh Road, New Delhi.

Forest & Climate Change
Indira Paryavaran Bhawan
Jorbagh Road, Aliganj
New Delhi-110003

8814027600
7419712610

Riddhi Siddhi - KSM Resources JV

Mines at Khasra No. 223 mun, 224 to 228& 72,
Kalali & Kalyana, Charkhi Dadri, Haryana - 127306

Ref. No.....To..... Date..Date: 30/11/2023.....

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 December-2023.

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

Sir,

In accordance to the EC letter as above stated received from 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 Riddhi Siddhi KSM Resources JV
Riddhi Siddhi KSM Resources JV
Vikas
Authorised Signatory
Authorised Signatory

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

01/12/23
Haryana State Pollution Control Board
C-11, Sector 6, Panchkula

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.

8814027600
7419712610

Riddhi Siddhi - KSM Resources JV

Mines at Khasra No. 223 mun, 224 to 228& 72,
Kalali & Kalyana, Charkhi Dadri, Haryana - 127306

Ref. No.....To..... Date.Date: 30/11/2023

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 December-2023.

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

Sir,

In accordance to the EC letter as above stated received from 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 Riddhi Siddhi KSM Resources JV
Riddhi Siddhi KSM Resources JV
Vikas
Authorised Signatory

Authorised Signatory

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

State Environment Impact Assessment Authority Panchkula
Date of Receipt
Received
01-12-2023

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.