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# ASD - RKC J.V.

VILLAGE - KHERI BATTAR, TEHSIL - CHARKHI DADRI, DISTT. - CHARKHI DADRI (HR.)

Ref.

Date : \_\_\_\_\_

Date: 06 April, 2022

To

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

**Sub: Submission of Six Monthly Compliance Report of Stipulated Conditions of Environment Clearance for proposed stone along with associates Minor Minerals at Kheribattar plot -2 over an area 42.01 Ha tehsil- Dadri District- Bhiwani, Haryana for Submission period of JUNE-2022.**

Ref. No. 1. SEIAA/HR/2016/875 dated: 04.10.2016  
2. 13-27/2016(ENV)/413 dated: 02.12.2019

Sir,

In accordance to the EC letter as above stated received from State Environment Impact Assessment Authority (SEIAA) vide letter **SEIAA/HR/2016/875 dated: 04.10.2016**. 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 ASD RKC JV.

Authorised Signatory,

Name - Sanjeev Kumar Singh  
Designation- Business Head  
E-mail - singh\_sanjiv@rediffmail.com  
Contact No.- +91 98330 80030



Copy to:

1. State Environment Impact Assessment Authority (SEIAA), Bay No. 55-58, Paryatan Bhavan, Sector-2, Panchkula, Haryana.
2. The Chairmen, Haryana State Pollution Control Board (HSPCB), Sector-6, Panchkula

M/s ASD RKC J.V. (Mining of Stone along with Associated Minor Minerals  
at Kheribattar Plot-2, Tehsil- Dadri, District-Bhiwani, Haryana).  
EC No. SEIAA/HR/2016/875 Dated-04.10.2016

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

**FOR**

**“Stone along with Associated Minor Minerals at Kheribattar Plot-2,  
Teshsil-Dadri, District-Bhiwani,  
Haryana.**

**SUBMITTED BY:**

**M/s ASD RKC J.V.**

**40, Laxmi Nagar, Near Sub City Centre,**

**HiranMagri, Sector-8, Udaipur,**

**Rajasthan-313002**



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# 1

## INTRODUCTION

### 1.1 About the Project

M/s ASD RKC J.V. has obtained the Environmental Clearance Letter from State Environment Impact Assessment Authority, Haryana for the Mining of “Stone along with Associated Minor Minerals” at Kheribattar Plot-2, over an area of 42.0 Ha. in Tehsil-Dadri, District-Bhiwani, Haryana Vide Ref. No. SEIAA/HR/2016/875 on dated: 04.10.2016.

The Total area of the mining site is 42.0 Ha. The total cost of the project is 4.23 Crores. The 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/Kheribattar-2/2015/478-481 dated 12.01.2016.

### 1.2 Purpose of the Report

As per the “Sub Para (j)” 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 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year” and as per compliance of condition mentioned in Environment Clearance Letter (i.e. Part B General Condition, point number IX), 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, SEIAA and HSPCB, Panchkula. Various scheduled Site Visits were conducted by a team of Experts to Monitor Pollution related parameters as defined by CPCB / HSPCB. Samples for water and soil were also collected for further analysis.

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

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

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

**1.3 Methodology 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

S. No.	Specific Conditions	Reply																		
1.	<p>This Environmental Clearance is granted for Production of Stone along with Associated Minerals as per below mentioned figures.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Bench mRL</th> <th>Production</th> </tr> </thead> <tbody> <tr> <td>First</td> <td>381, 372, 363, 354, 336, 327</td> <td>70 lakh MT</td> </tr> <tr> <td>Second</td> <td>327, 318, 309, 300</td> <td>70 lakh MT</td> </tr> <tr> <td>Third</td> <td>300, 291, 282</td> <td>75 lakh MT</td> </tr> <tr> <td>Fourth</td> <td>282 &amp; 273</td> <td>80 lakh MT</td> </tr> <tr> <td>Fifth</td> <td>264 &amp; 255</td> <td>81.66 lakh MT</td> </tr> </tbody> </table>	Year	Bench mRL	Production	First	381, 372, 363, 354, 336, 327	70 lakh MT	Second	327, 318, 309, 300	70 lakh MT	Third	300, 291, 282	75 lakh MT	Fourth	282 & 273	80 lakh MT	Fifth	264 & 255	81.66 lakh MT	<p>Agreed. Environmental Clearance was granted in favour of M/s ASD RKC J.V. for Mining of Stone along with Associated Minor Minerals at Kheribattar Plot-2, Tehsil-Dadri, District-Bhiwani, Haryana by SEIAA vide letter no. SEIAA/HR/2016/875 dated 04.10.2016. Copy of EC is enclosed as <b>Annexure- 1</b>.</p>
Year	Bench mRL	Production																		
First	381, 372, 363, 354, 336, 327	70 lakh MT																		
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Fifth	264 & 255	81.66 lakh MT																		
2.	<p>The project proponent shall obtain prior CTO under Air Act and Water Act from HSPCB and effectively implement all the conditions stipulated by the HSPCB.</p>	<p>The project proponent has obtained CTO from State Pollution Control Board, Haryana. The letter number of the CTO is <b>313100421CRDCTO12611329</b> dated-<b>07.07.2021</b> and valid up to-<b>30.09.2026</b> Copy of the same is enclosed as <b>Annexure- 2</b>.</p>																		
3.	<p>The project proponent shall carry out mining activity strictly as per the approved Mining plan.</p>	<p>Mining activity is being carrying out strictly as per the approved old Mining Plan. Vide letter no. <b>DMG/HY/MP/Kheribattar-2/2015/478-481</b> dated - <b>12.01.2016</b>. <b>And</b> approved New Mining Plan. Vide letter no. <b>DMG/HY/ Kheribattar-3900-3903</b> dated <b>04.10.2021</b> Copy of the same is enclosed as <b>Annexure- 3</b>.</p>																		
4.	<p>The project proponent shall ensure that the mining operations shall not intersect groundwater table and the mining operation should be restricted at least 3 meter above the ground water table.</p>	<p>Agreed. Mining Activity is being done as per approved mining plan Vide letter no. <b>DMG/HY/MP/Kheribattar-2/2015/478-481</b> dated - <b>12.01.2016</b> <b>And</b> approved New Mining Plan. Vide letter no. <b>DMG/HY/ Kheribattar-3900-3903</b> dated <b>04.10.2021</b>. Copy of the same is enclosed as <b>Annexure- 3</b>. and mining operation will not intersect ground water and mining will be restricted at least 3m above ground water table. Copy of the same is enclosed as <b>Annexure- 3</b>.</p>																		
5.	<p>Topsoil shall be stacked temporarily at earmarked sites only and it shall not be kept unutilized for a period more than three years; it shall be used for land reclamation and plantation in mining out areas.</p>	<p>Agreed and Complied. top soil is being used in the plantation. The top soil occurs in the form of patches with thickness of 0.5m is being be removed by dozer and is being transported to soil stack yard at the statutory barrier of the lease area. As per the year wise development plan. Total 1030 Plants/ trees have been planted in the year 2021-</p>																		

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		2022 in the presence of Forest Dept. <b>Letter of the Forest Dept. regarding plantation and Photographs of the Plantation is attached as Annexure-4 &amp;4(A)</b>
6.	The project proponent shall ensure that no natural water course/water body shall be obstructed due to any mining operations.	Agreed. Mining Activity is being done as per approved mine plan & No natural water course/water body shall be obstructed due to any mining operations. Mining Plan is attached as <b>Annexure- 3.</b>
7.	The over burden generated shall be stacked at earmarked dump site (s) only and it shall not be kept active for long period of time. The maximum height of the already existing waste dumps shall not exceed 5 meter in single terraces and the slope angle shall not exceed 28° as per norms.	Agreed. Mining Activity is being done as per approved mining plan Vide letter no. <b>DMG/HY/ Kheribattar-3900-3903 dated 04.10.2021</b> Copy of the same is enclosed as <b>Annexure- 3.</b>
8.	The dumping site selected and proposed shall be used for OB dump at the designated site within the lease area as per the approved mine plan. In no case the overburden should be dumped outside the lease area.	Agreed and complied. OB dump is designated at site as per approved mining plan. <b>Photographs of OB Dump is attached as Annexure-5.</b>
9.	The benches height and slope shall be maintained as per approved mining plan.	Agreed. The bench height and slope is being maintained as per approved mining plan. Mining Plan is attached as <b>Annexure- 3.</b>
10.	Waste dump shall be terraced. The height of the dump and its slope shall not exceed as suggested in the approved mining plan. A retaining wall shall be constructed at the toe of the dump.	Agreed. Mining is being done as per Approved mining plan. Mining Plan is attached as <b>Annexure- 3.</b>
11.	Garland drains shall be constructed to prevent the flow of the water in the dumps.	Agreed. A Garland drain has been constructed to prevent water flow as per approved mining plan. <b>Photograph is attached as Annexure - 6 .</b>
12.	Check dams shall be constructed in the seasonal rivulets to prevent the flow of fines to low lying areas during rains.	Check dams have been constructed in the seasonal rivulets to prevent the flow of fines in the low lying area during rainy season.
13.	The total waste generated in the present plan period shall be as envisaged, which shall be accommodated in old dumpsite in addition to the waste already dumped. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to HSPCB and MOEF Zonal Office, Chandigarh on six monthly bases.	Agreed & complied. There is no waste generation for present plan period. Monitoring of Pollution level is being check regularly. (Lab reports are enclosed as <b>Annexure- 7.</b> ) We are regularly submitting Compliance status report to HSPCB and MoEF Zonal Office, Chandigarh on Six monthly bases. Submission receipt of last compliance report is attached as <b>Annexure- 8.</b>
14.	Drills shall either be operated with dust extractors or equipped with water injection system.	Agreed and complied. Drilling is being carried out as per approved mining plan. Drills are equipped with water injection system. <b>Photographs of the same are attached as Annexure- 9</b>
15.	The higher benches of excavated void/mining pit shall be terraced and plantation done to stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area.	Agreed. The higher benches of mining pit will be terraced and plantation is being done to stabilize the slope. Mining Plan is attached as <b>Annexure- 3.</b> Peripheral fencing has been carried out along the excavated area.

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16.	Catch drains and siltation ponds of appropriate size shall be constructed for size shall be constructed for the working pit. OB dumps and mineral dumps to arrest flow of silt and sediment. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly de-silted, particularly after monsoon and maintained properly.	Agreed. Catch drains of appropriate size are constructed to arrest flow of silt and sediment. The collected water is being utilizing for watering the mine area, roads, green belt development etc. The drains are being maintained regularly. <b>Photograph is attached as Annexure - 6 .</b> Mining Activity is being done as per approved mining plan. Mining Plan is attached as <b>Annexure-3.</b>
17.	Garland drains; setting tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps and sump capacity shall be constructed designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate pits shall be constructed at the corners of the garland drains and de-silted.	Agreed. Garland drains; setting tanks and check dams have been constructed of appropriate size and gradient around the mine pit & dump. <b>Photograph is attached as Annexure - 6 .</b> Mining Plan is attached as <b>Annexure-3.</b>
18.	Dimension of the retaining wall at the toe of dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.	Noted
19.	Green belt should be developed as per the proposed plantation as given in the proposal. Plantation should be carried out in phased manner. The green belt should be developed in the safety zone around the mining lease by planting the native species around ML area, OB dumps, backfield and reclaimed around water body, road etc. in consultation with the local DFO/Agriculture Department.	Agreed. The Plantation has been done as per approved mining plan in consultation with local DFO/Agriculture Department. <b>Letter of the Forest Dept. regarding plantation and Photographs of the Plantation is attached as Annexure-4 &amp; 4(A)</b>
20.	Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading and unloading point and transfer points. The project proponent shall adopt water curtain technology to suppress the RPM as per the assurance given. It shall be ensured that the Ambient Air Quality Parameters conform to the norms prescribed by the CPCB.	Agreed. Regularly water sprinkling is being done on main haulage roads and loading and unloading areas with water tankers fitted sprinklers. <b>Photograph of water sprinkling is enclosed as Annexure 10.</b> Ambient Air quality reports are attached as <b>Annexure- 4.</b>
21.	The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	Agreed. Ground water level & quality is being checked regularly. Lab reports are attached as <b>Annexure- 7.</b>
22.	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease. The monitoring shall be carried out four times in a year pre-monsoon (April-May), monsoon (August), post monsoon (November); winter (January) and the data thus collected may be sent regularly to MOEF Regional Office, Chandigarh and Regional Director CGWB.	Regular monitoring of ground water level and ground water quality has been carried out in and around the mine lease. Lab reports are attached as <b>Annexure- 7.</b> Ground water Level data in and around the mine area for <b>Post monsoon (November) and Winter (January)</b> are given in <b>Table 3.11 of the chapter-3.</b>
23.	Data on ambient air quality and stack emissions shall be submitted to Haryana Pollution Control Board once in six months carried out by	Agreed. The lease holder has engaged an NABL accredited

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	MOEF/NABL/CPCB/Government approved lab.	Laboratory to conduct Monitoring and the reports being submitted to Haryana Pollution Control Board once in six months. Lab reports are attached as <b>Annexure- 4.</b>
24.	Vehicular emission shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded. The project proponent shall ensure that the vehicle must have pollution under control certificate.	Agreed. PUC certificate for the vehicles has been obtained from authorized centers. During transportation all the haulage roads including the main ramp from the mines pit will be kept wide, leveled, compacted and properly maintained and watered regularly during the operation to prevent generation of dust due to movement of trucks dumpers and other vehicles. <b>PUC Certificates of the vehicles are attached as Annexure-11</b>
25.	Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigation measures for control of ground vibrations and to arrest fly rocks and boulders shall be implemented.	Blasting is being conducted during day time as per the approved mining scheme as well as DGMS guidelines. The mitigation measures to reduce the impact due to blasting are as follows: <ul style="list-style-type: none"> <li>➤ Silencer in the machineries is being provided to reduce generation of noise.</li> <li>➤ Drilling with sharp edges bits will minimize generation of noise.</li> <li>➤ Control blasting is being done with proper charge of explosive to minimize noise during blasting.</li> <li>➤ Regular Noise monitoring is being conducted regularly at the project site. (Lab report attached as <b>Annexure- 7).</b></li> </ul> <b>Blasting Certificate (Permission) has been obtained from Competent authority and has been attached as Annexure-12.</b>
26.	The blasting operation will be carried out as per the norms of Director (Mines & Safety), Ghaziabad. Take all safety measures as per the various mining regulations.	Agreed. Blasting is being conducted in day time as per the norms of Director (Mines & Safety), Ghaziabad. The safety measures to reduce the impact due to blasting are as follows: <ul style="list-style-type: none"> <li>➤ The position of every deep-hole to be drilled is being distinctly marked by the foreman so as to be readily seen by the drillers.</li> <li>➤ No drilling has commenced in an area, where shot have been fired, until the blaster has made through examination at all places.</li> <li>➤ Shots shall not be fired except during working hours of day-light.</li> <li>➤ Siren has blown over the entire area falling within the radius of 500m from the place of firing.</li> <li>➤ Two persons posted, one in either direction at the two extreme points of the road lying within the danger zone.</li> <li>➤ The number of detonators issued to, and in the position of a blaster during his shift shall not exceed the maximum number of shots that's he is permitted to fire.</li> </ul>



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		<p>➤ Shot firing tools such as electric lamp or torch, a tool made entirely of wood suitable for charging and stemming. A scraper made of brass or wood, a knife for cutting off fuses, crimpers, picker shall be provided by the owner.</p> <p><b>Blasting Certificate (Permission) has been obtained from Competent authority and has been attached as Annexure-12.</b></p>
27.	The project proponent shall take all precautionary measures during mining operations for conservations and protection of endangered fauna. If any, spotted in the study area. A plan for conservation shall be drawn and approved by the State Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the wildlife conservation plan so prepared specific to the project site shall be effectively implemented. A copy of action plan may be submitted to the HSPCB and MOEF, Regional Office, Chandigarh within 3 months.	<p>Agreed.</p> <p>NOC of Forest has been taken from Forest Department and Letter number is <b>1938</b> date-<b>03.11.2015</b>.</p> <p>Copy of the same is enclosed as <b>Annexure- 13</b>.</p>
28.	As envisaged, the Project Proponent shall invest at least an amount of Rs. 54 lakh as cost for implementing various environmental protection measures including recurring expense per year.	<p>The total cost of project is 4.23 Crores. The project proponent has invested amount of Rs. 34,54,983 as cost for implementing various environmental protection measures including recurring expenses in year 2021-2022.</p> <p><b>Expense Details on EMP has been attached as Annexure-14</b></p>
29.	A sum of Rs. 24.5 lakh shall be earmarked by the Project Proponent for investment as on socio economic upliftment activities of the area particularly in the area of habitat, health or education, training programme of rural women & man provide the kit for employment generation. The proposal should contain provision for monthly medical camps, distributions of medicines and improvement in educational facilities in the nearby schools. Details of such activity along with time bound action plan be submitted to HSPCB/SEIAA Haryana before the start of operation.	<p>Agreed.</p> <p>Budget allocation for CSR Activities is 24.5 Lakh for five years.</p> <p>Project Proponent has Spent Rs 12,55,788 in Year 2021-2022 as CSR on socio economic upliftment activities of the area.</p> <p><b>Expense Details on CSR has been attached as Annexure-15</b></p>
30.	Budgetary provision of Rs. 08 lakh per year earmarked for the labours working in the Mine for all necessary infrastructure facilities such as healthy facility, sanitation facility, fuel for cooking, along with safe drinking water, medical camps and toilets for women, crèche for infants should be made and submitted to HSPCB at the time CTO/SEIAA Haryana. The housing facilities should be provided for mining labours.	<p>Agreed.</p> <p>Housing arrangement has been made for the labour near the site with all amenities. Whereas rest shelter, first aid facility, crèche, soak pit and other basic sanitary facilities have been developed.</p> <p>Project Proponent has Spent Rs 47,52,856 in Year 2021-2022 on it .</p> <p><b>Expense Details on it has been attached as Annexure-16</b></p> <p>All the temporary structure will be removed after the completion of the project. <b>Photographs are enclosed as Annexure -16 (A).</b></p>

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31.	A Final Mine Closure Plan along with details of corpus fund shall be submitted to the SEIAA well within the stipulated period as prescribed in the minor mineral concession rules 2012.	A final mine closure plan along with details of corpus fund has already been submitted to the SEIAA well within the stipulated period as prescribed in the minor mineral concession rules 2012.
32.	The water reservoir, which would be created/available during post closure (all pits), shall be provided with suitable benches and fencing to provide the access to the water body and safety.	Noted & Agreed. Post closure water reservoir will be provided with suitable benches and fencing to provide the access to the water body.
33.	The project proponent shall ensure that the EC letter as well as the status of compliance of EC conditions and the monitoring data are placed on company's website and displayed at the project site.	Agreed. We ensured that the EC letter as well as the status of compliance of EC condition and the monitoring data are placed on company's website ( <a href="https://www.asd-rkcjv.com/">https://www.asd-rkcjv.com/</a> ) and displayed at the project site.
34.	The project proponent shall ensure that loading in Trucks do not exceed the norms fixed by the Transport Department as per relevant rules.	Agreed. We ensure that loading in Trucks do not exceed the norms fixed by the Transport Department as per relevant rules. PUC Certificate has been taken for all the vehicles. <b>PUC Certificates are attached as Annexure-11</b>
35.	The project proponent shall ensure approach roads are widened and strengthened as per requirements fixed by PWD and district administration before the start of the work.	Agreed & is being Complied. Approach roads are widened and strengthened as per requirements fixed by PWD and district administration before the start of the work. <b>Photographs of the same are attached as Annexure-17</b>
36.	The project proponent shall ensure that all measures are taken simultaneously for safeguard and maintenance of the health of the workers.	As per the provisions, rules and regulations of Mines Act, the management will undertake all the necessary precautions. <ul style="list-style-type: none"> <li>➤ Sanitary facilities will be provided.</li> <li>➤ All necessary &amp; statutory first aid and medical facilities will be provided to the workers. Photograph is enclosed.</li> <li>➤ Preventive measures have been taken for occupational health &amp; safety of workers.</li> <li>➤ Pre-placement medical examination and periodical medical examination of workers is being conducted such as Hematological Test, Biochemical Test, Urine R/M, Spirometry, Audiometry, Vision test.</li> </ul> <b>Health Records of the workers are attached as Annexure-18.</b>  <b>First Aid room equipped with necessary requirements is present at the site Photographs of the same are attached as Annexure-18 (A).</b>
37.	The project proponent shall ensure supply of drinking water through RO.	Agreed. The project proponent has supply the RO water for drinking purpose at the mine site.

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**Part B. General Conditions**

S. No.	General Conditions	Reply
i.	Any change in mining technology/scope of working shall not be made without prior approval of the SEIAA.	Agreed.
ii.	Any change in the calendar plan including excavation, quantum of mineral and waste shall not be made.	Agreed. No change in the calendar plan including excavation, quantum of mineral and waste will be made
iii.	Periodic monitoring of ambient air quality shall be carried out for PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> monitoring. Location of the stations (minimum 6) shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring shall be decided in consultation with the Haryana State Pollution Control Board (HSPCB). Six monthly reports of the data so collected shall be regularly submitted to the HSPCB/CPCB including the MOEF, Regional Office, and Chandigarh.	Agreed. Periodic monitoring of ambient air quality is being carried out for PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> Parameters. Lab reports are enclosed as <b>Annexure- 7</b> .
iv.	Measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM etc. shall be provided with earplugs/muffs.	Following mitigation measure will be taken to reduce the noise impact in project site. <ul style="list-style-type: none"> <li>➤ All scientific blasting is proposed to reduce the vibrations and check noise pollution. An earplug is being provided to the workers.</li> <li>➤ All the machineries including transport vehicles are properly maintained to minimize generation of noise.</li> <li>➤ Drilling with sharp edges bits is provided to reduce generation of noise.</li> <li>➤ Noise source will be isolated.</li> <li>➤ Dense plantation in mining area is also reducing propagation of noise outside the core zone. (Noise reports are attached as <b>Annexure- 7</b>.)</li> </ul>
v.	Waste water (workshop and waste water from the mine) shall be properly collected & treated so as to conform to the standard prescribed under GSR 422 (E) dated 19 <sup>th</sup> May 1993 and 31 <sup>st</sup> December 1993 (amended to date). Oil and grease trap shall be installed before discharge.	Noted & Agreed.
vi.	Personnel working in dusty areas shall wear protective respiratory devices they shall also be provided with adequate training and information on safety and health aspects.	Following mitigation measures has been initiated for the workers who worked at critically dusty area. <ul style="list-style-type: none"> <li>➤ Sprinkled with water at regular intervals.</li> <li>➤ Operators and other persons near loading area are using the dust mask.</li> <li>➤ Scientific Mining has been proposed to minimize the effect of air pollution.</li> <li>➤ Wet drilling is being practiced.</li> <li>➤ Health camps are being organized on regular basis.</li> </ul> <b>Photograph of water sprinkling is enclosed as Annexure 10.</b>
vii.	Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective	Occupational health surveillance program of the workers is being undertaken periodically to observe any contractions due to exposure to dust and take

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	measures, if needed.	corrective measures. <b>Health Records of the workers are attached as Annexure-18.</b>  <b>First Aid room equipped with necessary requirements is present at the site Photographs of the same are attached as Annexure-18 (A).</b>
viii.	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the HSPCB and the Regional Office of MOEF located at Chandigarh.	Agreed & Complied. Project Proponent reported Year wise expenditure of Environment protection Measures to the HSPCB and the Regional office of MoEF located at Chandigarh.
ix.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the northern Regional Office of MOEF, the respective Office of CPCB, HSPCB and SEIAA Haryana.	We are regularly submitting six monthly compliance reports along with monitoring reports to the northern regional office of MoEF&CC, HSPCB and SEIAA Haryana. Submission receipt of last compliance report is attached as <b>Annexure- 8.</b>
x.	The SEIAA, Haryana reserve 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 component authorities is not satisfactory.	Agreed.
xi.	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.	Agreed.
xii.	The above conditions will be enforced, inter alia, under the provision of the Water (Prevention & Control of Pollution) Act, 1974 the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act 1991 (all amended till date) and rules made hereunder and also any other orders passed by the Honb'le Supreme Court of India/High Court of Haryana and other Court of law relating to the subject matter.	Agreed.
xiii.	The Project Proponent should inform the public that the project has been accorded Environment Clearance by the SEIAA and copies of the clearance letter area available with the Haryana State Pollution Control Board & SEIAA. This should be advertised within 7 days from the date of issue of the clearance letter at least in tow local newspapers that are widely circulated in the region and the copy of the same should be forwarded to SEIAA Haryana. A copy of Environment Clearance conditions shall also be put on project proponent's web site for public awareness.	Agreed & Complied. Already complied and already published Environmental Clearance conditions in two local newspapers and on website. <b>Photographs of the same are attached as Annexure-19</b>
xiv.	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.	Agreed.
xv.	That the grant of this EC is issued from the environment	Agreed.



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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.

# 3

## DETAILS OF ENVIRONMENTAL MONITORING

### 3.1 Monitoring Portfolio:

This report is prepared for the period October 2021 to March 2022 as per EC conditions. The samples were analyzed at NABL approved Environmental laboratory. Following environmental components has been monitored and analyzed.

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

### 3.2 AMBIENT AIR QUALITY MONITORING

#### 3.2.1 Ambient Air Quality Monitoring Stations

Ambient air quality monitoring has been carried out at 6 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	Near Main Office
2.	AAQ-2	100 mtr from mine site
3.	AAQ-3	Haul Road
4.	AAQ-4	Village-Kheribattar
5.	AAQ-5	Loading Area
6.	AAQ-6	Village-Kheribora

#### **AAQ-1: Near Main Office**

The sampler was placed near office was free from any obstructions. Surroundings of the sampling site represent Industrial environmental setting.

#### **AAQ-2: 100 mtr from mine site**

The sampler was placed 100 mtr. from mine site and was free from any obstructions. Surroundings of the sampling site represent Industrial environmental setting.

#### **AAQ-3: Haul Road**

The sampler was placed haul road, for estimate the pollution level due to movement of vehicles.

#### **AAQ-4: Village-Kheribattar**

The sampler was placed at Village-Kheribattar, was free from any obstructions. Surroundings of the sampling site represent residential environmental setting.

#### AAQ-5: Loading Area

The sampler was placed at loading area to estimate the pollution level due to loading activity.

#### AAQ-6: Village-Kheribora

The sampler was placed at Village-Kheribora, was free from any obstructions. Surroundings of the sampling site represent residential environmental setting.

### 3.2.2 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<sub>2</sub>)
- Nitrogen Dioxide (NO<sub>2</sub>)

The duration of sampling of PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>2</sub> were 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<sub>2.5</sub> i.e. <2.5 microns), and Respirable Dust Sampler was used for sampling Respirable fraction (<10 microns), gaseous pollutants like SO<sub>2</sub>, and NO<sub>x</sub>.

**Table 3.2 Techniques used for Ambient Air Quality Monitoring**

S. No.	Parameter	Technique	Technical Protocol
1	Particulate Matter 2.5 (PM <sub>2.5</sub> )	Fine Particulate Sampler, Gravimetric Method	#SOP No. VEL/SOP/01, Section No. SP 63
2	Particulate Matter 10 (PM <sub>10</sub> )	Respirable Dust Sampler, with cyclone separator, Gravimetric Method	IS-5182 (Part-23)
3	Sulphur dioxide (SO <sub>2</sub> )	Modified West and Gaeke	IS-5182 (Part- II)
4	Nitrogen Dioxide (NO <sub>2</sub> )	Jacob &Hochheiser	IS-5182 (Part-VI)

#SOP-As per Laboratory Standard Operating Procedure.

### 3.2.3 Ambient Air Quality Monitoring Results

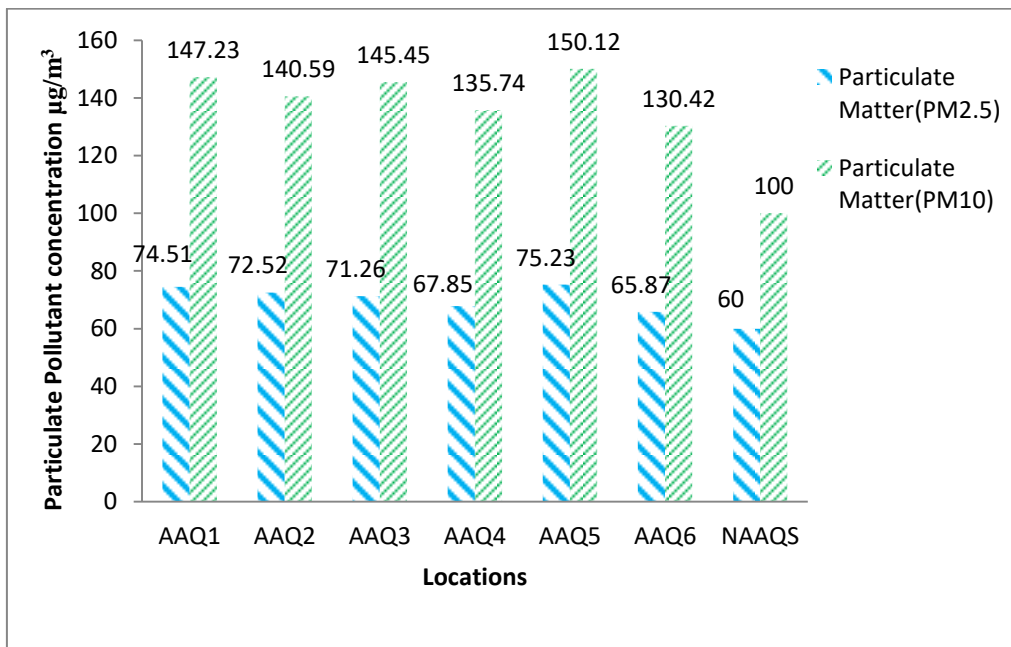
The detailed on-site monitoring results of PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub> are presented as **Table 3.3**

**Table 3.3 Ambient Air Quality Monitoring Results**  
(All results are expressed in µg/m<sup>3</sup>)

S. No.	Parameter	Test Result						NAAQS*
		AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	
1.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	74.51	72.52	71.26	67.85	75.23	65.87	60
2.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	147.23	140.59	145.45	135.74	150.12	130.42	100
3.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	24.42	22.51	23.15	19.63	25.29	18.45	80
4.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	14.74	13.56	13.44	10.74	15.25	9.56	80

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

#### Graphical Presentation of location wise variation of Ambient Air Quality



**Fig. 3.1 Graphical representation of particulate pollutant**



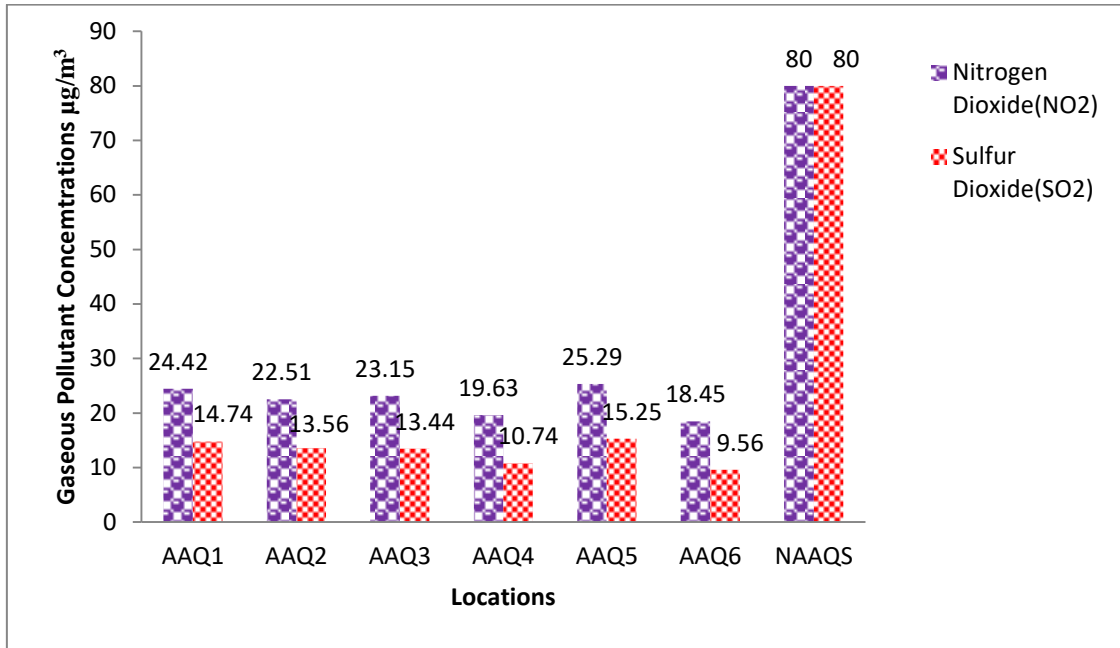


Fig.3.2 Graphical representation of gaseous pollutant

### 3.2.4 Discussion on Ambient Air Quality in the Study Area

The level of PM<sub>2.5</sub> and PM<sub>10</sub> at all locations was found to be in range of 65.87 to 75.23 µg/m<sup>3</sup> and 130.42 to 150.12 µg/m<sup>3</sup> respectively. The level of NO<sub>2</sub> and SO<sub>2</sub> at all locations was found to be in range of 18.45 to 25.29 µg/m<sup>3</sup> and 9.56 to 15.25 µg/m<sup>3</sup> respectively. All the results were found to be well within the prescribed NAAQS limits.

### 3.3 AMBIENT NOISE MONITORING

#### 3.3.1 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 6 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	Near main Office
2	N2	100 mtr from mine site
3	N3	Haul Road
4	N4	Village-Kheribattar
5	N5	Loading Area
6	N6	Village-Kheribora

#### 3.3.2 Methodology of Noise Monitoring

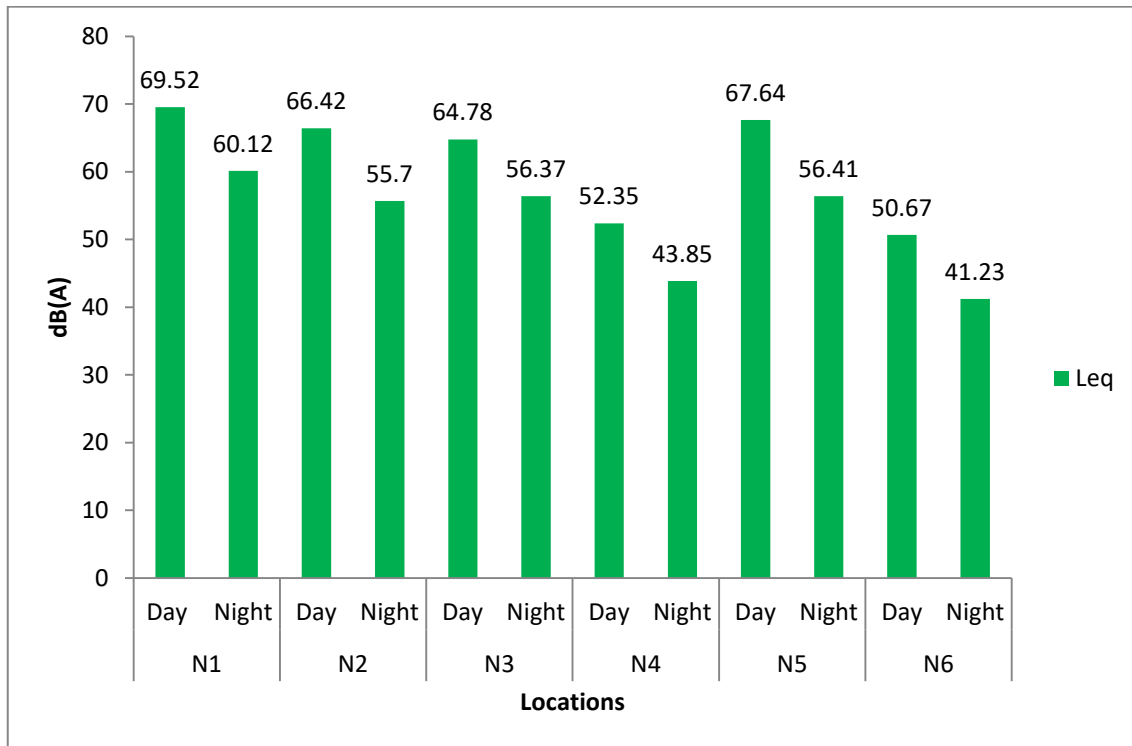
Noise levels were measured using sound level meter. Noise level monitoring was carried out continuously for 24-hours. The noise levels were monitored on working days only. During each hour Leq were directly computed by the instrument based on the sound pressure levels. Monitoring was carried out at 'A'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

#### 3.3.3 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 3.2

**Table 3.5 Location Wise variation of ambient Noise Level**

Parameter	Location Code											
	N1		N2		N3		N4		N5		N6	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
Lmax	75.3	61.9	72.5	63.6	73.4	63.7	65.6	54.6	76.8	63.6	55.9	49.6
Lmin	49.6	40.6	47.2	39.4	50.6	42.6	44.2	36.6	51.6	42.7	41.5	35.5
Leq	69.52	60.12	66.42	55.70	64.78	56.37	52.35	43.85	67.64	56.41	50.67	41.23
CPCB Limits in dB(A) Leq	75.0	70.0	75.0	70.0	75.0	70.0	55.0	45.0	75.0	70.0	55.0	45.0



**Figure 3.3 Graphical Presentation of Ambient Noise Level**

### 3.3.4 Discussion on Ambient Noise Levels in the Study Area

The Equivalent noise levels for day and night was found to be in range of 50.67 to 69.52 dB (A) and 41.23 to 60.12 dB (A) respectively. The noise levels were well within the permissible limits of NAAQS w.r.t Noise.

### 3.4 Water Quality Monitoring

#### 3.4.1 Ground Water Quality Monitoring Locations

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

Water sample was collected from the project site. The samples were analyzed for various parameters to compare with the standards for water as per IS: 10500- 2012. The details of water sampling locations are given in **Table 3.6**.

**Table-3.6 Details of Ground Water Quality Monitoring Station**

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

#### 3.4.2 Methodology of Ground Water Quality Monitoring

Sampling of ground water was carried out on November-2021 and January 2022. Samples were collected as grab sample and sampling forms are filled in as per the sampling plan. The preservative sample were properly added to preserve as per standard operating procedures (SOP) and stored immediately in ice boxes, which were ensured for appropriate temperatures. Sample for chemical analysis was collected in polyethylene carboys. Samples collected for metal content were acidified to <2 pH with 1 ml HNO<sub>3</sub>. 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**.

### 3.4.3 Ground Water Quality Monitoring Results

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

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

S. No.	Parameter	Unit	Result	Limits of IS:10500 -2012	
				Requirement (Acceptable Limits)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 °C)	--	7.55	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	*BDL (**DL 1.0 Hazen)	5	15
3.	Turbidity	NTU	*BDL (**DL 1.0 NTU)	1	5
4.	Odour	--	Agreeable	Agreeable	Agreeable
5.	Taste	--	Agreeable	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	mg/l	450.00	200	600
7.	Calcium as Ca	mg/l	133.85	75	200
8.	Alkalinity as CaCO <sub>3</sub>	mg/l	482.00	200	600
9.	Chloride as Cl	mg/l	95.50	250	1000
10.	Cyanide as CN	mg/l	*BDL (**DL 0.02 mg/l)	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	28.20	30	100
12.	Total Dissolved Solids	mg/l	733.00	500	2000
13.	Sulphate as SO <sub>4</sub>	mg/l	54.79	200	400
14.	Fluoride as F	mg/l	0.45	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	mg/l	22.43	45	No Relaxation
16.	Iron as Fe	mg/l	0.32	1.0	No relaxation
17.	Aluminum as Al	mg/l	*BDL (**DL 0.002 mg/l)	0.03	0.2
18.	Boron	mg/l	*BDL (**DL 0.01 mg/l)	0.5	2.4
19.	Total Chromium as Cr	mg/l	*BDL (**DL 0.002 mg/l)	0.05	No Relaxation
20.	Conductivity (at 25°C)	µS/cm	1128	----	----
21.	Phenolic Compounds	mg/l	*BDL (**DL 0.0004 mg/l)	0.001	0.002
22.	Mineral Oil	mg/l	*BDL (**DL 0.05mg/l)	1.0	No Relaxation
23.	Anionic Detergents as MBAS	mg/l	*BDL (**DL 0.05 mg/l)	0.2	1.0
24.	Zinc as Zn	mg/l	1.38	5	15
25.	Copper as Cu	mg/l	0.10	0.05	1.5
26.	Manganese as Mn	mg/l	*BDL (**DL 0.01 mg/l)	0.1	0.3
27.	Cadmium as Cd	mg/l	*BDL (**DL 0.002 mg/l)	0.003	No Relaxation
28.	Lead as Pb	mg/l	*BDL (**DL 0.002 mg/l)	0.01	No Relaxation
29.	Selenium as Se	mg/l	*BDL (**DL 0.001 mg/l)	0.01	No Relaxation
30.	Arsenic as As	mg/l	*BDL (**DL 0.002 mg/l)	0.01	No Relaxation
31.	Mercury as Hg	mg/l	*BDL (**DL 0.0005 mg/l)	0.001	No Relaxation
32.	Total Coliform	MPN/100ml	<2	Shall not be detectable in any	
33.	E. Coli	MPN/100ml	Absent	Shall not be detectable in any	

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

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**Table 3.8**

**Ground Water Quality Monitoring Results (November-2021, Post Monsoon) Village-Kheribora**

S. No.	Parameter	Unit	Result	Limits of IS:10500 -2012	
				Requirement (Acceptable Limits)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 °C)	--	7.66	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	*BDL (**DL 1.0 Hazen)	5	15
3.	Turbidity	NTU	*BDL (**DL 1.0 NTU)	1	5
4.	Odour	--	Agreeable	Agreeable	Agreeable
5.	Taste	--	Agreeable	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	mg/l	453.00	200	600
7.	Calcium as Ca	mg/l	142.62	75	200
8.	Alkalinity as CaCO <sub>3</sub>	mg/l	493.00	200	600
9.	Chloride as Cl	mg/l	99.41	250	1000
10.	Cyanide as CN	mg/l	*BDL(**DL 0.02 mg/l)	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	23.61	30	100
12.	Total Dissolved Solids	mg/l	763.00	500	2000
13.	Sulphate as SO <sub>4</sub>	mg/l	57.63	200	400
14.	Fluoride as F	mg/l	0.42	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	mg/l	26.96	45	No Relaxation
16.	Iron as Fe	mg/l	0.29	1.0	No relaxation
17.	Aluminum as Al	mg/l	*BDL(**DL 0.002 mg/l)	0.03	0.2
18.	Boron	mg/l	*BDL(**DL 0.01 mg/l)	0.5	2.4
19.	Total Chromium as Cr	mg/l	*BDL(**DL 0.002 mg/l)	0.05	No Relaxation
20.	Conductivity (at 25 °C)	µS/cm	1174	----	----
21.	Phenolic Compounds	mg/l	*BDL(**DL 0.0004 mg/l)	0.001	0.002
22.	Mineral Oil	mg/l	*BDL(**DL 0.05mg/l)	1.0	No Relaxation
23.	Anionic Detergents as MBAS	mg/l	*BDL(**DL 0.05 mg/l)	0.2	1.0
24.	Zinc as Zn	mg/l	1.26	5	15
25.	Copper as Cu	mg/l	0.14	0.05	1.5
26.	Manganese as Mn	mg/l	*BDL(**DL 0.01 mg/l)	0.1	0.3
27.	Cadmium as Cd	mg/l	*BDL(**DL 0.002 mg/l)	0.003	No Relaxation
28.	Lead as Pb	mg/l	*BDL(**DL 0.002 mg/l)	0.01	No Relaxation
29.	Selenium as Se	mg/l	*BDL(**DL 0.001 mg/l)	0.01	No Relaxation
30.	Arsenic as As	mg/l	*BDL(**DL 0.002 mg/l)	0.01	No Relaxation
31.	Mercury as Hg	mg/l	*BDL (**DL 0.0005 mg/l)	0.001	No Relaxation
32.	Total Coliform	MPN/100ml	<2	Shall not be detectable in any	
33.	E. Coli	MPN/100ml	Absent	Shall not be detectable in any	

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

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

S. No.	Parameter	Unit	Result	Limits of IS:10500 -2012	
				Requirement (Acceptable Limits)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 °C)	--	7.57	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	*BDL (**DL 1.0 Hazen)	5	15
3.	Turbidity	NTU	*BDL (**DL 1.0 NTU)	1	5
4.	Odour	--	Agreeable	Agreeable	Agreeable
5.	Taste	--	Agreeable	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	mg/l	370.00	200	600
7.	Calcium as Ca	mg/l	86.42	75	200
8.	Alkalinity as CaCO <sub>3</sub>	mg/l	399.00	200	600
9.	Chloride as Cl	mg/l	97.60	250	1000
10.	Cyanide as CN	mg/l	*BDL (**DL 0.02 mg/l)	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	35.08	30	100
12.	Total Dissolved Solids	mg/l	640.00	500	2000
13.	Sulphate as SO <sub>4</sub>	mg/l	51.96	200	400
14.	Fluoride as F	mg/l	0.34	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	mg/l	20.42	45	No Relaxation
16.	Iron as Fe	mg/l	0.14	1.0	No relaxation
17.	Aluminum as Al	mg/l	*BDL (**DL 0.002 mg/l)	0.03	0.2
18.	Boron	mg/l	*BDL (**DL 0.01 mg/l)	0.5	2.4
19.	Total Chromium as Cr	mg/l	*BDL (**DL 0.002 mg/l)	0.05	No Relaxation
20.	Conductivity (at 25°C)	µS/cm	984	----	----
21.	Phenolic Compounds	mg/l	*BDL (**DL 0.0004 mg/l)	0.001	0.002
22.	Mineral Oil	mg/l	*BDL (**DL 0.05 mg/l)	1.0	No Relaxation
23.	Anionic Detergents as MBAS	mg/l	*BDL (**DL 0.05 mg/l)	0.2	1.0
24.	Zinc as Zn	mg/l	1.10	5	15
25.	Copper as Cu	mg/l	0.09	0.05	1.5
26.	Manganese as Mn	mg/l	*BDL (**DL 0.01 mg/l)	0.1	0.3
27.	Cadmium as Cd	mg/l	*BDL (**DL 0.002 mg/l)	0.003	No Relaxation
28.	Lead as Pb	mg/l	*BDL (**DL 0.002 mg/l)	0.01	No Relaxation
29.	Selenium as Se	mg/l	*BDL (**DL 0.001 mg/l)	0.01	No Relaxation
30.	Arsenic as As	mg/l	*BDL (**DL 0.002 mg/l)	0.01	No Relaxation
31.	Mercury as Hg	mg/l	*BDL (**DL 0.0005 mg/l)	0.001	No Relaxation
32.	Total Coliform	MPN/100ml	<2	Shall not be detectable in any	
33.	E. Coli	MPN/100ml	Absent	Shall not be detectable in any	

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



**M/s ASD RKC J.V. (Mining of Stone along with Associated Minor Minerals  
at Kheribattar Plot-2, Tehsil- Dadri, District-Bhiwani, Haryana).  
EC No. SEIAA/HR/2016/875 Dated-04.10.2016**

**Table 3.10 Ground Water Quality Monitoring Results(January 2022 Winter) Village- Kheribora**

S. No.	Parameter	Unit	Result	Limits of IS:10500 -2012	
				Requirement (Acceptable Limits)	Permissible limit in the Absence of Alternate Source
1.	pH (at 25 <sup>0</sup> C)	--	7.61	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	*BDL (**DL 1.0 Hazen)	5	15
3.	Turbidity	NTU	*BDL (**DL 1.0 NTU)	1	5
4.	Odour	--	Agreeable	Agreeable	Agreeable
5.	Taste	--	Agreeable	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	mg/l	383.00	200	600
7.	Calcium as Ca	mg/l	90.74	75	200
8.	Alkalinity as CaCO <sub>3</sub>	mg/l	407.00	200	600
9.	Chloride as Cl	mg/l	99.42	250	1000
10.	Cyanide as CN	mg/l	*BDL(**DL 0.02 mg/l)	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	38.05	30	100
12.	Total Dissolved Solids	mg/l	662.00	500	2000
13.	Sulphate as SO <sub>4</sub>	mg/l	55.96	200	400
14.	Fluoride as F	mg/l	0.36	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	mg/l	24.75	45	No Relaxation
16.	Iron as Fe	mg/l	0.18	1.0	No relaxation
17.	Aluminum as Al	mg/l	*BDL(**DL 0.002 mg/l)	0.03	0.2
18.	Boron	mg/l	*BDL(**DL 0.01 mg/l)	0.5	2.4
19.	Total Chromium as Cr	mg/l	*BDL(**DL 0.002 mg/l)	0.05	No Relaxation
20.	Conductivity (at 25 <sup>0</sup> C)	µS/cm	1019	----	----
21.	Phenolic Compounds	mg/l	*BDL(**DL 0.0004 mg/l)	0.001	0.002
22.	Mineral Oil	mg/l	*BDL(**DL 0.05 mg/l)	1.0	No Relaxation
23.	Anionic Detergents as MBAS	mg/l	*BDL(**DL 0.05 mg/l)	0.2	1.0
24.	Zinc as Zn	mg/l	1.16	5	15
25.	Copper as Cu	mg/l	0.12	0.05	1.5
26.	Manganese as Mn	mg/l	*BDL(**DL 0.01 mg/l)	0.1	0.3
27.	Cadmium as Cd	mg/l	*BDL(**DL 0.002 mg/l)	0.003	No Relaxation
28.	Lead as Pb	mg/l	*BDL(**DL 0.002 mg/l)	0.01	No Relaxation
29.	Selenium as Se	mg/l	*BDL(**DL 0.001 mg/l)	0.01	No Relaxation
30.	Arsenic as As	mg/l	*BDL(**DL 0.002 mg/l)	0.01	No Relaxation
31.	Mercury as Hg	mg/l	*BDL (**DL 0.0005 mg/l)	0.001	No Relaxation
32.	Total Coliform	MPN/100ml	<2	Shall not be detectable in any	
33.	E. Coli	MPN/100ml	Absent	Shall not be detectable in any	

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

#### **3.4.4 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 399.00 and 493.00 mg/L respectively in water samples against the prescribed limit of 200 mg/L (600 Permissible limit). Total Hardness in the water is 370.00 mg/L and 453.00 mg/L against prescribed limit of 200 mg/L but it is within the permissible limit of 600mg/L. However, remaining parameters are within the CPCB prescribed limits.

#### **3.4.5 Ground Water Level in and around the mine site**

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

**Table 3.11 Ground Water level in and around the mine site**

<b>Sample. Number</b>	<b>Village Name</b>	<b>Location</b>	<b>Pre monsoon (May 2021)</b>	<b>Monsoon (August 2021)</b>	<b>Post monsoon (November 2021)</b>	<b>Pre-Monsoon (March 2022)</b>
W1	Near Mine Site	28°33'43.25"N 76°10'32.89"E	59.30	58.10	57.15	59.5
W2	Kaliyana	28°33'7.55"N 76°12'1.14"E	33.45	32.55	31.8	33.22
W3	Asawari	28°32'31.65"N 76° 8'36.32"E	25.65	24.32	23.82	24.82
W4	Kalali	28°31'21.66"N 76°11'1.54"E	28.51	27.13	26.55	28.35
W5	Kheri Bura	28°35'22.68"N 76°11'56.23"E	17.73	15.96	15.24	17.48

### 3.5 SOIL MONITORING

#### 3.5.1 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 project site for studying soil characteristics, the location of which is listed in Table 3.12

**Table 3.12 Details of Soil Quality Monitoring Location**

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

#### 3.5.2 Methodology of Soil Monitoring

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

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

#### 3.5.3 Soil Monitoring Results

Single sample of soil is collected from the project 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 3.13, 3.14**.

**Table 3.13 Physico-Chemical Characteristics of Soil in the Study Area (Near Project Site)**

S. No.	Parameter	Test-Method	Unit	Result
1.	pH (at 25 °C)	IS : 2720 (P-26) by pH Meter	--	7.68
2.	Conductivity	IS:14767 by Conductivity meter	mS/cm	0.269
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	%	32.52
6.	Bulk density	SOP , SP-80,Issue No.-01& Issue Date-14/02/2013	gm/cc	1.49
7.	Chloride as Cl	SOP , SP-85,Issue No.-01& Issue Date-14/02/2013	mg/100g	32.42
8.	Calcium as Ca	SOP , SP-82,Issue No.-01& Issue Date-14/02/2013	mg/100g	25.35
9.	Sodium as Na	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	mg/kg	46.15
10.	Potassium as K	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	kg/hect.	128.41
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method	%	0.36
12.	Magnesium as Mg	SOP , SP-83,Issue No.-01& Issue Date-14/02/2013	mg/100g	11.86
13.	Available Nitrogen as N	IS:14684 Distillation Method	kg./hect.	126.87
14.	Available Phosphorus	SOP , SP-86,Issue No.-01& Issue Date-14/02/2013	kg./hect.	18.11
15.	Zinc (as Zn)	USEPA 3050B	mg/kg	0.98
16.	Manganese (as Mn )	USEPA 3050B	mg/kg	4.32
17.	Lead (as Pb)	USEPA 3050B	mg/kg	0.53
18.	Cadmium (as Cd )	USEPA 3050B	mg/kg	0.47
19.	Chromium (as Cr)	USEPA 3050B	mg/kg	0.23
20.	Copper (as Cu )	USEPA 3050B	mg/kg	1.01

\*SOP -Laboratory standard operating procedure

**Table 3.14 Physico-Chemical Characteristics of Soil in the Study Area (Village- Kheribora)**

S. No.	Parameter	Test-Method	Unit	Result
1.	pH (at 25 °C)	IS : 2720 (P-26) by pH Meter	--	<b>7.70</b>
2.	Conductivity	IS:14767 by Conductivity meter	mS/cm	<b>0.350</b>
3.	Soil Texture	IS : 2720 (P-22, RA2003)	--	<b>Sandy loam</b>
4.	Color	SOP , SP-78,Issue No.-01& Issue Date-14/02/2013	--	<b>Brownish Black</b>
5.	Water holding capacity	SOP , SP-81,Issue No.-01& Issue Date-14/02/2013	%	<b>34.18</b>
6.	Bulk density	SOP , SP-80,Issue No.-01& Issue Date-14/02/2013	gm/cc	<b>1.43</b>
7.	Chloride as Cl	SOP , SP-85,Issue No.-01& Issue Date-14/02/2013	mg/100g	<b>36.74</b>
8.	Calcium as Ca	SOP , SP-82,Issue No.-01& Issue Date-14/02/2013	mg/100g	<b>32.47</b>
9.	Sodium as Na	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	mg/kg	<b>41.25</b>
10.	Potassium as K	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	kg/hect.	<b>134.56</b>
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method	%	<b>0.43</b>
12.	Magnesium as Mg	SOP , SP-83,Issue No.-01& Issue Date-14/02/2013	mg/100g	<b>16.42</b>
13.	Available Nitrogen as N	IS:14684 Distillation Method	kg./hect.	<b>142.65</b>
14.	Available Phosphorus	SOP , SP-86,Issue No.-01& Issue Date-14/02/2013	kg./hect.	<b>26.47</b>
15.	Zinc (as Zn)	USEPA 3050B	mg/kg	<b>1.00</b>
16.	Manganese (as Mn )	USEPA 3050B	mg/kg	<b>4.45</b>
17.	Lead (as Pb)	USEPA 3050B	mg/kg	<b>0.50</b>
18.	Cadmium (as Cd )	USEPA 3050B	mg/kg	<b>0.46</b>
19.	Chromium (as Cr)	USEPA 3050B	mg/kg	<b>0.22</b>
20.	Copper (as Cu )	USEPA 3050B	mg/kg	<b>1.10</b>

\*SOP -Laboratory standard operating procedure.

#### **3.5.4 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.

3.6 SITE PHOTOGRAPHS



Project Site



Ambient Air Monitoring





**Noise Monitoring**



Soil Sampling



**Water Sprinkling**



**Plantation**





**Plantation**



**Plantation**





Garland Drain



Retention Wall



**Labors Colony**



**Personal Protective Equipment's for workers**



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

No. SEIAA/HR/2016/ 375

Dated: 04-10-2016 ✓

To

M/s ASD RKC JV  
40.1 axmi Nagar, Near Sub City Centre,  
Hiran Magri, Sector-8, Udaipur,  
Rajasthan-313002.

**Subject: Environmental Clearance for proposed Stone along with Associated Minor Minerals at Kheribattar Plot 2, over an area of 42.0 Ha Tehsil-Dadri District-Bhiwani, Haryana.**

This has reference to your application no. nil dated 30.11.2015 addressed to M. S. SEIAA Haryana received online on 30.11.2015 and subsequent letter dated 26.07.2016 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-I, Pre-feasibility report, copy of approved Mining Plan, EIA/EMP on the basis of approved TOR 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 21.08.2015, in its meetings held on 13.01.2016 and 03.08.2016.

[2] The SEAC has examined the application and noted that the proposal is for Mining of Stone along with Associated Minor Minerals at Kheribattar Plot 2, over an area of 42.0 Ha at Tehsil- Dadri District-Bhiwani, Haryana, Khasra no.139, 140 & 141 min. The Letter of Intent (LOI) dated 21.10.2015 has been granted for an area of 42.0 Ha having Village- Kheribattar Plot 2. The validity of Mining Scheme in the Mining plan is for 5 years. The project proponent has submitted copy NOC from Forest Department. The SEAC appraised this project under category 1(a) as category B-1 project as other mine lease area is also located within 500 meter. The project proposal has been appraised as per proper procedure of EIA Notification i.e. approval of TOR and Public hearing.

**Brief details of the project:**

1. Category/Item no. (in schedule):	1 (a) B-1
2. Location of Project	Village- Kheribattar Plot 2, Tehsil-Dadri District-Bhiwani, Haryana over an area of 42.0 Ha.
3. Project Details Khasra No.	Mining of Stone along with Associated Minerals "Kheribattar Plot 2", over an area of 42.0 Ha Khasra no.139, 140 & 141 min
4. Production capacity	81,66,000 MT/Year (27220 Ton/day)
4. Project Cost	4.23 Crores

5.	Water Requirement & Source	10 KLD through Tankers		
		Dust suppression & Wet Drilling	4 KLD	
		Plantation	4 KLD	
		Drinking	2 KLD	
6.	Environment Management Plan Budget	54 lakh		
7.	CSR Activates Budget	24.5 Lakh		
8.	Production (Year wise)	<b>Year</b>	<b>Bench mrl</b>	<b>Production</b>
		First	381,372,363,354,336,327	70 lakh MT
		Second	327, 318, 309, 300	70 lakh MT
		Third	300, 291, 282	75 lakh MT
		Fourth	282 & 273	80 lakh MT
		Fifth	264 & 255	81.66 lakh MT
9.	Green belt plantation	<b>Year of Plantation</b>	<b>Proposed Plantation</b>	
		I Yr.	700 Trees	
		II Yr.	700 Trees	
		III Yr.	700 Trees	
		IV Yr.	700 Trees	
		V Yr.	700 Trees	
10.	Machinery required	Excavator, Dozer Crawler Mounted, Wagon Drill with inbuilt Compressors, Air Compressor, Rock Breaker, Diesel Operated Pump, Explosive Van		

The SEIAA in its 95<sup>th</sup> meeting held on 26.08.2016 decided to agree with the recommendations of SEAC to accord Environment Clearance to this project by imposing the following conditions.

**SPECIFIC CONDITIONS:**

- [1] This Environment Clearance is granted for Production of Stone along with Associated Minerals as per below mentioned figures.

Year	Bench mrl	Production
First	381,372,363,354,336,327	70 lakh MT
Second	327, 318, 309, 300	70 lakh MT
Third	300, 291, 282	75 lakh MT
Fourth	282 & 273	80 lakh MT
Fifth	264 & 255	81.66 lakh MT

- [2] The project proponent shall obtain prior CTO under Air Act and Water Act from HSPCB and effectively implement all the conditions stipulated by the HSPCB.
- [3] The project proponent shall carry out mining activity strictly as per the approved Mining Plan.
- [4] The project proponent shall ensure that the mining operations shall not intersect groundwater table and the mining operation should be restricted at least 3 meter above the ground water table.

- [5] Topsoil shall be stacked temporarily at earmarked sites only and it shall not be kept unutilized for a period more than three years; it shall be used for land reclamation and plantation in mined out areas.
- [6] The project proponent shall ensure that no natural water course/water body shall be obstructed due to any mining operations.
- [7] The over burden generated shall be stacked at earmarked dump site (s) only and it shall not be kept active for long period of time. The maximum height of the already existing waste dumps shall not exceed 5 meter in single terraces and the slope angle shall not exceed 28° as per norms.
- [8] The dumping site selected and proposed shall be used for OB dump at the designated site within the lease area as per the approved mine plan. In no case the overburden should be dumped outside the lease area.
- [9] The benches height and slope shall be maintained as per approved mining plan.
- [10] Waste dump shall be terraced. The height of the dump and its slope shall not exceed as suggested in the approved mining plan. A retaining wall shall be constructed at the toe of the dump.
- [11] Garland drains shall be constructed to prevent the flow of the water in the dumps.
- [12] Check dams shall be constructed in the seasonal rivulets to prevent the flow of fines to low lying areas during rains.
- [13] The total waste generated in the present plan period shall be as envisaged, which shall be accommodated in old dumpsite in addition to the waste already dumped. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self sustaining. Compliance status shall be submitted to HSPCB and MOEF Zonal Office, Chandigarh on six monthly bases.
- [14] Drills shall either be operated with dust extractors or equipped with water injection system.
- [15] The higher benches of excavated void/mining pit shall be terraced and plantation done to stabilize the slopes. The slop of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area.
- [16] Catch drains and siltation ponds of appropriate size shall be constructed for the working pit, OB dumps and mineral dumps to arrest flow of silt and sediment. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly de-silted, particularly after monsoon and maintained properly.
- [17] Garland drains: setting tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps and sump capacity shall be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area



adjoining the mine site. Sump capacity shall also provide adequate pits shall be constructed at the corners of the garland drains and de-silted.

- [18] Dimension of the retaining wall at the toe of dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.
- [19] Green belt should be developed as per the proposed plantation as given in the proposal. Plantation should be carried out in phased manner. The green belt should be developed in the safety zone around the mining lease by planting the native species around ML area, OB dumps, backfilled and reclaimed around water body, road etc. in consultation with the local DFO/Agriculture Department.
- [20] Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading and unloading point and transfer points. The project proponent shall adopt water curtain technology to suppress the RPM as per the assurance given. It shall be ensured that the Ambient Air Quality Parameters conform to the norms prescribed by the CPCB.
- [21] The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.
- [22] Regular monitoring of ground water level and quality shall be carried out in and around the mine lease. The monitoring shall be carried out four times in a year-pre monsoon (April-May), monsoon (August), post monsoon (November); winter (January) and the data thus collected may be sent regularly to MOEF Regional Office, Chandigarh and Regional Director CGWB.
- [23] Data on ambient air quality and stack emissions shall be submitted to Haryana Pollution Control Board once in six months carried out by MOEF/NABI/CPCB/Government approved lab.
- [24] Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded. The project proponent shall ensure that the vehicle must have pollution under control certificate.
- [25] Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigation measures for control of ground vibrations and to arrest fly rocks and boulders shall be implemented.
- [26] The blasting operation will be carried out as per the norms of Director (Mines & Safety), Gaziabad. Take all safety measures as per the various mining regulations.
- [27] The project proponent shall take all precautionary measures during mining operations for conservation and protection of endangered fauna, if any, spotted in the study area. A plan for conservation shall be drawn and approved by the State

Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the wildlife conservation plan so prepared specific to the project site shall be effectively implemented. A copy of action plan may be submitted to the HSPCB and MOEF, Regional Office, Chandigarh within 3 months.

- [28] As envisaged, the Project Proponent shall invest at least an amount of Rs. 54 lakh as cost for implementing various environmental protection measures including recurring expenses per year.
- [29] A sum of Rs. 24.5 lakh shall be earmarked by the Project proponent for investment as CSR on socio economic up-liftment activities of the area particularly in the area of habitat, health or education, training programme of rural women & man provide the kit for employment generation. The proposal should contain provision for monthly medical camps, distributions of medicines and improvement in educational facilities in the nearby schools. Details of such activity along with time bound action plan be submitted to HSPCB/SEIAA Haryana before the start of operation.
- [30] Budgetary provision of Rs. 08 lakh per year earmarked for the labours working in the Mine for all necessary infrastructure facilities such as health facility, sanitation facility, fuel for cooking, along with safe drinking water, medical camps and toilets for women, crèche for infants should be made and submitted to HSPCB at the time of CTO/SEIAA Haryana. The housing facilities should be provided for mining labours.
- [31] A Final Mine Closure Plan along with details of corpus fund shall be submitted to the SEIAA well within the stipulated period as prescribed in the minor mineral concession rules 2012.
- [32] The water reservoir, which would be created/available during post closure (all pits), shall be provided with suitable benches and fencing to provide the access to the water body and safety.
- [33] The project proponent shall ensure that the EC letter as well as the status of compliance of EC conditions and the monitoring data are placed on company's website and displayed at the project site.
- [34] The project proponent shall ensure that loading in Trucks do not exceed the norms fixed by the Transport Department as per relevant rules.
- [35] The project proponent shall ensure approach roads are widened and strengthened as per requirements fixed by PWD and district administration before the start of the work.
- [36] The project proponent shall ensure that all measures are taken simultaneously for safeguard and maintenance of the health of the workers.

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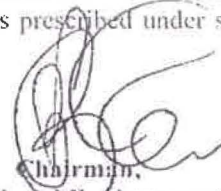
[37] The project proponent shall ensure supply of drinking water through RO.

**GENERAL CONDITIONS:**

- [i] Any change in mining technology/scope of working shall not be made without prior approval of the SEIAA.
- [ii] Any change in the calendar plan including excavation, quantum of mineral and waste shall not be made.
- [iii] Periodic monitoring of ambient air quality shall be carried out for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> monitoring. Location of the stations (minimum 6) shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring shall be decided in consultation with the Haryana State Pollution Control Board (HSPCB). Six monthly reports of the data so collected shall be regularly submitted to the HSPCB/CPCB including the MOEF, Regional office, Chandigarh.
- [iv] Measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM etc. shall be provided with earplugs/muffs.
- [v] Waste water (workshop and waste water from the mine) shall be properly collected & treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May 93 and 31<sup>st</sup> December 1993 (amended to date). Oil and grease trap shall be installed before discharge.
- [vi] Personnel working in dusty areas shall wear protective respiratory devices they shall also be provided with adequate training and information on safety and health aspects.
- [vii] Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- [viii] The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the HSPCB and the Regional office of MOEF located at Chandigarh.
- [ix] The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the northern Regional Office of MoEF, the respective Office of CPCB, HSPCB and SEIAA Haryana.
- [x] 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.
- [xi] 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.
- [xii] The above conditions will be enforced, inter alia, under the provision of the Water (Prevention & Control of Pollution) Act, 1974 the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act 1991 (all amended till date) and rules made hereunder and also any other orders passed by the Hon'ble Supreme Court of India/High Court of Haryana and other Court of law relating to the subject matter.



- [xiii] The Project proponent should inform the public that the project has been accorded Environment Clearance by the SEIAA and copies of the clearance letter are available with the Haryana State Pollution Control Board & SEIAA. This should be advertised within 7 days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region and the copy of the same should be forwarded to SEIAA Haryana. A copy of Environment Clearance conditions shall also be put on project proponent's web site for public awareness.
- [xiv] 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.
- [xv] 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/2016/

Dated:.....

A copy of the above is forwarded to the following:

1. The Director (IA Division), MoEF&CC, Gol, 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.







# HARYANA STATE POLLUTION CONTROL BOARD

SCF-32, sector 13, HUDA, Bhiwani Ph. 01664-240259 Email:- hspcbrojr@gmail.com

E-mail: hspcb@hry.nic.in



No. HSPCB/Consent/ : 313100421CRDCTO12611329

Dated:07/07/2021

To.

M/s :ASD RKC J.V

KHASARA NO. 139,140,141MIN VILLAGE KHARIBATTAR, TEHSIL DADRI, BHIWANI, HARYANA

Subject: Grant of consent to operate to M/s ASD RKC J.V.

Please refer to your application no. 12611329 received on dated 2021-06-02 in regional office Bhiwani. With reference to your above application for consent to operate, M/s ASD RKC J.V is here by granted consent as per following specification/Terms and conditions.

<b>Consent Under</b>	BOTH
<b>Period of consent</b>	01/10/2021 - 30/09/2026
<b>Industry Type</b>	Mining and ore beneficiation
<b>Category</b>	RED
<b>Investment(In Lakh)</b>	788.0
<b>Total Land Area(Sq. meter)</b>	4020100.0
<b>Total Builtup Area(Sq. meter)</b>	10000.0
<b>Quantity of effluent</b>	
1. Trade	0.0 KL/Day
2. Domestic	1.5 KL/Day
<b>Number of outlets</b>	1.0
<b>Mode of discharge</b>	
1. Domestic	Septic tank
2. Trade	
<b>Domestic Effluent Parameters</b>	
1. NA	
<b>Trade Effluent Parameters</b>	
1. NA	
<b>Number of stacks</b>	1
<b>Height of stack</b>	
1. NA	
<b>Emission parameters</b>	
1. PM 10	100
2. PM 2.5	60
<b>Product Details</b>	
1. Mining of stones	27220 Metric Tonnes/day

<b>Capacity of boiler</b>	
1. NA	Ton/hr
<b>Type of Furnace</b>	
1. NA	
<b>Type of Fuel</b>	
1. Electricity	Kilowatt/day
<b>Raw Material Details</b>	
Mining of stones	27220 Metric Tonnes/Day

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

quantity, quality of the effluent, mode of discharge, treatment facilities etc.

11. The officer/official of the Board shall reserve the right to access for the inspection of the industry in connection with the various process and the treatment facilities. The consent to operate is subject to review by the Board at any time.

12. Permissible limits for any pollutants mentioned in the consent to operate order should not exceed the concentration permitted in the effluent by the Board.

13. The industry shall pay the balance fee, in case it is found due from the industry at any time later on.

14. If the industry fails to adhere to any of the conditions of this consent to operate order, the consent to operate so granted shall automatically lapse.

15. If the industry is closed temporarily at its own, they shall inform the Board and obtain permission before restart of the unit.

16. The industry shall comply all the Directions/ Rules/Instructions issued from time to time by the Board.

### **Specific Conditions :**

1. That the unit will submit the analysis report air emissions, Noise monitoring, water etc regularly as per policy of the Board and as per conditions of EC obtained.

2. That the unit will run and maintain the APCM & Green belt.

3. That the unit will apply for renewal of consent to operate before 90 days from the expiry of this CTO.

4. The said mining project will make strict compliance of EC granted by MOEF/SEIAA.

5. The said unit will submit half yearly Environment management report as per EC condition & board policy for mining projects.

6. The unit use dust suppression and APCM to overcome air emission.

7. Unit will apply for HW authorization & make agreement with board authorized agency for safe disposal of Hazardous waste as per HOWM Rules, 2016.

8. The said unit will make Dust Suppression and wet drilling by using water through sprinklers etc. (ix) unit will install AAQMS at three locations within mining lease area for EC compliance (copy of comprehensive inspection report on prescribed Performa along with photographs).

9. Unit will take all necessary clearances from all the concerned departments / agencies.

10. The unit will abide with the directions/guidelines HSPCB/CPCB/ any court decision/ direction of any competent authority.

11. This CTO is without prejudice to any action under the provisions of applicable laws / acts / notification / courts order to be taken in respect of any violation at any stage without any claim of the unit. If the unit fails to comply the provisions of EC/CTE/CTO, various applicable provisions of concerned departments / agencies / authorities / any relevant decision of court, the consent to operate so granted shall be revoked automatically without giving any notice.

12. If the unit is found not complying the conditions of CTO so granted at any stage, the unit will be liable for legal action, closure action as per the provisions of Environmental Acts/laws and for lavvy of Environment Compensation on the basis of polluter pay principle as per the directions of Hon'ble NGT / EPCA/CPCB/ HSPCB issued from time to time.

*Regional Officer, Bhiwani*  
*Haryana State Pollution Control Board.*





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

**IN VILLAGE: Kheribattar-2  
(Area-42.01 Hectares), Production: 120 lac  
DISTRICT: CHARKHI DADRI  
STATE: HARYANA.**

**T/Annum**  
Department of Mines and Geology  
Haryana, Panchkula  
**APPROVED**  
With Conditions  
शर्तों के अन्तर्गत  
Vide Letter No. DMG/HY/Kheribattar  
3900 to 3903  
Dated.....  
4/19/2021  
Sanjay  
Mining Engineer



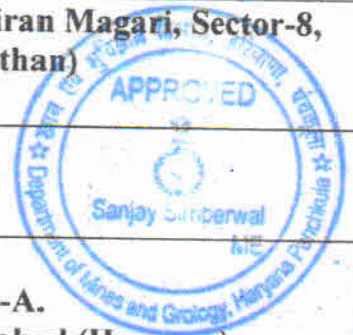
**APPLICANT**

MAY-2021

M/s ASD-RKC JV, 40, Laxmi Nagar, Hiran Magari, Sector-8,  
Udaipur-313002 (Rajasthan)

**PREPARED BY**

S.N. Sharma  
RQP/DDN/0135/2001-A.  
House No. 282; Sector 11-D Faridabad (Haryana)



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

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

**IN VILLAGE: KHERIBATTAR PLOT-2**

**(AREA-42.01 HECTARES)**

**DISTRICT: BHIWANI.**

**STATE: HARYANA.**

**APPLICANT**

**M/S ASD-RKC JV**

**UDAIPUR (RAJASTHAN)**



**PREPARED BY**

**S.N. Sharma**

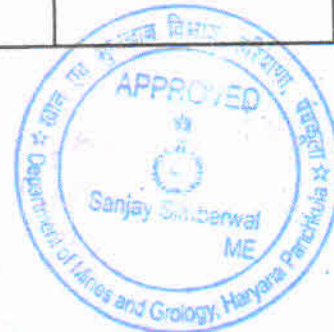
**RQP/DDN/0135/2001-A.**

**House No. 282; Sector 11-D Faridabad (Haryana)**



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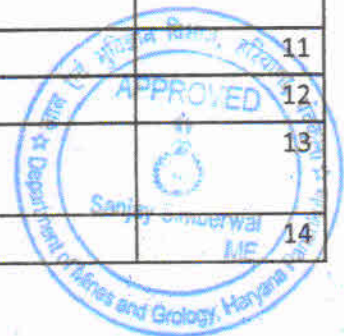
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## Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum

### CHAPTER -1 INTRODUCTION

#### 1.0 Introduction

M/S ASD-RKC JV, 40, Laxmi Nagar, Near Sub City Centre, Hiran Magari, Sector-8, Udaipur-313002 (Rajasthan) stood the highest bidder in respect of minor mineral mine of "Stone along with associated minor minerals" for the auction of the Kheribattar-2, Tehsil: Dadri, District : Bhiwani (Haryana) held on 07-10-2015 and 08-10-2015.

The Letter of intent has been issued to M/s. ASD-RKC JV by Director of Mines & Geology, State Govt. of Haryana, Chandigarh vide Memo No. DMG/HY/ML/Kheribattar-2 /2015/8562 dated 21/10/2015 for Mining of " Stone along with Associated minor minerals in Kheribattar-2 over an area of 42.01 hectares in Tehsil Dadri district Bhiwani, Haryana for a period of 12 years (Annexure - I).

The project proponent got approved Mining Plan & Progressive Mine Closure Plan for Kheri-battar-2 stone mine for 81.66 lakh T/Annum vide letter no. DMG/HY/MP/Kheri-battar-2/2015/478-481 dated 12.01.2016 from the Director, Mining & Geology, Government of Haryana and started the mine operations with effect from December-2016 after getting the Environmental Clearance from SEAC/SEIAA Haryana. Project proponent has also submitted separately Total Station Survey Report of the lease hold area in response to Memo No. DMG/HY/ML/Kheribattar-2/1279/ dated Chandigarh, the 14.05.2020.

Now, project proponent proposes to enhance the production capacity of mine up to 120 lac T/Annum from 81.66 lac T/Annum.

The objective of preparation of this Modified Mining Plan and Progressive Mine Closure Plan is to fulfil the conditions stipulated by the Department of Mines & Geology, Haryana required under Haryana Minor Mineral Concession Rules, 2012 for the enhanced capacity i.e. 120 lac T/Annum.

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 modified 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.



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**CHAPTER -2  
GENERAL DETAILS**

**1.0. General:**

1.1 Name of the Applicant: M/S ASD-RKC JV, 40, Laxmi Nagar, Near Sub City Centre, Hiran Magari, Sector-8, Udaipur-313002

1.2 Status of the Applicant:- It is a Private Limited Company (Joint Venture Company).

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

"Stone along with Associated Minor Minerals"

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

District: Charkhi Dadri

State: Haryana.

Taluka: Dadri.



Village	Khasra no.	Area in hect.
Kheribattar-2	139,140 & 141 min.	42.01 hectares

The Lease area lies between Latitude  $28^{\circ} 33' 15.5''$  to  $28^{\circ} 33' 43.2''$  and Longitude  $76^{\circ} 10' 26''$  to  $76^{\circ} 10' 56.8''$  (Plate no. 2)

Boundary Pillar Co-Ordinates

S.NO	LATITUDES	LONGITUDES
A	N $28^{\circ} 33' 43.2''$	E $76^{\circ} 10' 26''$
B	N $28^{\circ} 33' 43.2''$	E $76^{\circ} 10' 54.2''$
C	N $28^{\circ} 33' 33.3''$	E $76^{\circ} 10' 54.7''$
D	N $28^{\circ} 33' 23.4''$	E $76^{\circ} 10' 56.8''$
E	N $28^{\circ} 33' 23.4''$	E $76^{\circ} 10' 51.9''$
F	N $28^{\circ} 33' 19.4''$	E $76^{\circ} 10' 51.9''$
G	N $28^{\circ} 33' 19.4''$	E $76^{\circ} 10' 49.4''$
H	N $28^{\circ} 33' 18.3''$	E $76^{\circ} 10' 49.4''$
I	N $28^{\circ} 33' 18.3''$	E $76^{\circ} 10' 47''$
J	N $28^{\circ} 33' 15.5''$	E $76^{\circ} 10' 38''$
K	N $28^{\circ} 33' 18.5''$	E $76^{\circ} 10' 39.5''$
L	N $28^{\circ} 33' 21.9''$	E $76^{\circ} 10' 37.8''$
M	N $28^{\circ} 33' 21.9''$	E $76^{\circ} 10' 39.6''$
N	N $28^{\circ} 33' 28.4''$	E $76^{\circ} 10' 39.6''$
O	N $28^{\circ} 33' 28.4''$	E $76^{\circ} 10' 34.7''$



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

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

- 1.5 Period for which mining lease is granted: 12 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 First (Earlier) Mining Plan and Progressive Mine Closure Plan vide letter no. DMG/HY/MP/Kheri-battar-2/2015/478-481 dated 12.01.2016 from the Director, Mining & Geology, Government of Haryana
- 1.7 Environmental Clearance (EC) for the Kheri battar-2 mine was accorded by State Environmental Impact Assessment Authority, Haryana vide letter no. SEIAA/HR/2016/875 dated 04.10.2016 for 81.66 lac T per annum. The mine operations were commenced since December-2016.

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

The applicant assigned the work of preparation of Mining Plan to

S.N.Sharma(Consent letter enclosed as Annexure -2)

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



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**2.0. Location and accessibility**

The mine is located in the revenue estates of villages Kheribattari n district Charkhi Dadri, Haryana and is about 8Kms from CharkhiDadri. 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 metaled road upto village Kheribattar and is easily approachable from CharkhiDadri, 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(H43W2) (Plate no. 2)the area is marked on the enclosed key map. The deposit lies between Latitude 28 33'15.5" to 28<sup>o</sup> 33'43.2"and Longitude76<sup>o</sup>10'26" to76<sup>o</sup>10'56.8"(Plate no. 2)

**Infrastructure facilities are as detailed below**

Nearest railway station	CharkhiDadri (8 km)
Police station	CharkhiDadri
Post office	Charkhidadri
Medical facilities	CharkhiDadri 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 CharkiDadri, 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 Kheribattar is connected with metaled roadwhich is further joins the Dadri and nearby villages.





PART-A

CHAPTER -3  
GEOLOGY, LITHOLOGY & RESERVES



3.0 GEOLOGY, LITHOLOGY & RESERVES:

3.1.1 Physiographic, Drainage and Climate

There is no perennial river passing through the district. Physiographically 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.

3.1.2 Hydrogeology

The geological formation met within the district are ferruginous schist associated argillaceous rocks of Aravalli group, Alwar quartzite of Delhi system, Malani suite of volcanics of lower Vindhyanage, 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 under water table conditions whereas in the deeper zones, confined/semi-confined condition exist, hard rocks 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.

3.1.3 CLIMATE & RAINFALL:

The climate of Charki Dadri 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

**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

starts from mid-March to last week of the June followed by the south- west monsoon which lasts up to September. The transition 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:	41°C (May & June)
Normal Rain days:	22



**3.2 REGIONAL GEOLOGY OF THE AREA**

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

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

**3.3 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 )



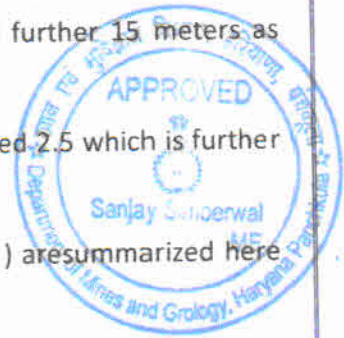




**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

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 is put under proved category.
- 3) The entire reserves of quartzite are put under proved category above valley level and up to 50 meters below ground. Next 30 meters are considered as probable and further 15 meters as possible.
- 4) The bulk density of road metal and masonry stone (quartzite) is considered 2.5 which is further multiplied by volume to arrive at the tonnage
8. The Section wise reserves for road metal and masonry stone( quartzite ) are summarized here below: -



Cross section line	Cross sectional area	influence length(m)	Bulk Density	Proved Reserves	Probable Reserves	Possible Reserves
				MT (UNFC Code No. 111)	MT (UNFC Code No. 121)	MT (UNFC Code No. 211)
A-A'	68090 22500 11250	160	2.5	27236000	9000000	4500000
B-B'	74670 19500 9750	200	2.5	37335000	9750000	4875000
C-C'	40360 13140 6570	225	2.5	22702500	7391250	3695625
D-D'	20900 11610 5805	210	2.5	10972500	6095250	3047625
Category-wise reserves				98246000	32236500	16118250
Total Reserves				146600750		

**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**Revised Reserves & Revised Production**

Total Geological Reserves = 146600750 MT

= 1466.00750 lakh T

Proved Deposit = Above ground level + 50 mt below Ground level

Probable Deposit = 30mt below from proved contact

Possible Deposit = 15mt below from probable contact

Mineable Reserves (90% of Geological Reserves) = 1319.40675 lakh T

Depletion of reserves in last 3 years = 196.43 lakh T

Net Mineable Reserves Available: 1122.9767 lakh T

Remaining life of the mine : 09 years





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

*Proposed Mining Schedule :*

*The Remaining lease period/life of the mine as on 01.12.2019 is 9 years. The proposed production schedule shall be as follows:-*

<i>I Year (Jan 2020 to Dec 2020)</i>	<i>: 105 lakh T</i>
<i>II Year (2021)</i>	<i>: 120 lakh T</i>
<i>III Year (2022)</i>	<i>: 120 lakh T</i>
<i>IV Year (2023)</i>	<i>: 115 lakh T</i>
<i>V Year (2024)</i>	<i>: 115 lakh T</i>



*Consider Maximum Production of 120 Lakh T per Annum for revised EC purpose.*

## CHAPTER 4

### MINING

#### 4.1 Site Appreciation

Since project proponent desires to enhance the production levels of mine, our experts (Geologist, Mining Engineer) visited the mine site on 16-17 October, 2019 for latest physical assessment of the mine with respect to its working and found that the allotted area comprised of long and narrow hill range. Two shallow excavated old pits exist in the allotted area revealing that the area has been worked for building stone in the past and during present working these areas are not worked.

Presently the mine working is being done from 381mRL to 282 mRL covering depth of about 99 m and spread over in 11 working mine benches. Still the mine working is above the ground level.

Despite depletion of the mineral, still there is sufficient availability of mineable reserves (**Net Mineable Reserves Available: 1122.9767 lakh T**) as explained in Chapter-3 above. And therefore, in rest of the 09years, enhanced production to the tune of 120lakh T/ Annum can be achieved and for which this modified Mining Plan is being prepared.

It is proposed to undertake systematic and scientific mining for excavation of road metal and masonry stone/building stone during the lease period.

#### 4.2 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 has already been developed. Access roads / haul roads from topmost bench to benches at lower levels have been developed gradually. As mining operations advance to lower levels, larger face lengths and width shall be available. As observed from the present working 60 to 120 m bench length is available with 9 m bench height and more than 6 m width of benches. 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 for the enhanced production also.



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**4.3 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
  - I) Primary Blasting
  - II) Secondary Blasting
- c) Loading of blasted material by deploying hydraulic excavators
- d) 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.

**Present breakup of land use in the lease area**

Sr.no	Details	Area in hectares
1	Pits (Broken Area)	16.88
2	Dump	0
3	Road	2.29
4	Plantation	0.5
5	Infrastructure	0.09
6	Un-disturbed	22.25
	Total area	42.01





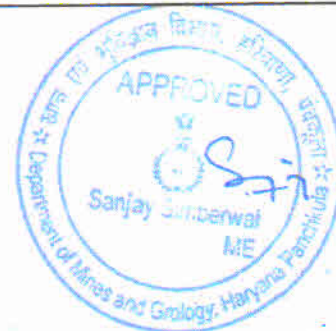
**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**4.1 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 hydraulic excavator and dumper combination. The rate of production is proposed 1,20,00,000 MT/year 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 <sup>o</sup>
4	Bench Alignment and bench slope	Parallel to each other; 80 <sup>o</sup>
5	Face length	All along the strike length
6	Depth of pit	Up to 165 mRL
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.



**4.1.i Ultimate pit slope: -**

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

**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

slope at a maximum of 49 degree to avoid collapse of the pit sides. There is very less overburden/thin soil cover. Entire mineral produced will be useful.

**4.1.ii 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° or less in the ultimate pit position.

**4.1. iii Face length :-**

The following parameters have been followed to arrive at the face length to facilitate the required production of 1, 20, 00,000MT mineral per year

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 existing face length has already attained the maximum length of around 120 m.

**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 95 m below the valley level are proposed to be worked. The surface level reserves will not be depleted during the next 9 years with the year of inception of mine. The workings started at 381 MRL and presently reached at 282 mRL and will reach up to 210MRL at the end of 5th year as detailed in the year wise plans Plate no.5-9 and Sections plate no.12.

**4.3 Development during the First five years:**

Certain required pre-production development work has already been done in last 3 years workings. The construction of garland parapet, wire fencing etc is continuous process and shifted along with the





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development of pit. A mineral dump yard (100mx90m) area is ear marked. Soil stack yard (70mx50m) is proposed to stack the soil generated during the mining.

Stacking yard shall be located at the ground 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.12.

Year	Toe wall around dumps	Drain around dumps	Fencing at the end of 5 <sup>th</sup> year
At the end of 5th year	576 m	576 m	7000 m

Dump yard size = 100mx90 m

Temporary Mineral StackYard=140x100

Working area occupied at the end of 5th year will be= 34.41 Hectares

Approach road from mine to mineral stack yard, soil stack yard and dump yard and site services has already been made.

**4.4 Year wise Production for the first five years**

It is proposed to work the mine from top to down ward for which a mine road is proposed between 252 MRL to 360 MRL. The following table indicates the production from benches of 9 m height and shows the levels of working.

Year	Bench Level	Production(lakh M.T)
1 <sup>st</sup> (Jan-2020 to Dec-2020)	Maximum RL :381	105
	Minimum RL : 273	
2 <sup>nd</sup> (2021)	Maximum RL :381	120
	Minimum RL : 246	
3 <sup>rd</sup> (2022)	Maximum RL: 381	120
	Minimum RL 237	
4 <sup>th</sup> (2023)	Maximum RL :381	115
	Minimum RL : 228	
5 <sup>th</sup> (2024)	Maximum RL :381	115



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Minimum RL :210

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.

**4.4.2 Proposed rate of production when the mine fully developed**

The proposed rate of production of 1,20,00,000 MT/year shall be achieved in the second year.

**4.4.3 Mine able Reserves and Anticipated Life of the mines**

As discussed in the chapter of geology, the insitu geological reserves are calculated 14, 66, 00,750 MT.As per the proposed method of mining and occurrence of mineral 90 % geological reserves (1, 12, 29,767 MT), after depletion of minerals in last 3 years, are mineable. The life of the mine is therefore assessed as 09 Years at the proposed rate of 1, 20, 00000tons of mineral / year.

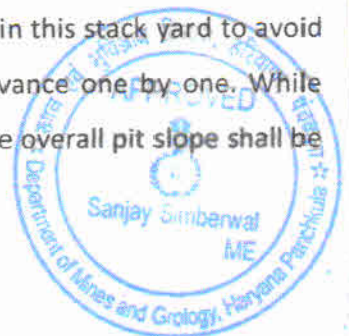
**4.4.4 Proposed Method of Mining**

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. 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° the mineral bearing rocks being hard and compact.

**4.5 Conceptual Mine Plan Parameter**

The detailed mining plan has been prepared with a project life of 09 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 behavior 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 –





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- 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

**Present & at the end of 5<sup>th</sup> year breakup of land use in the lease area (In Hectares)**

Sr.no	Details	Existing land use (ha )	At the end of 5th year ( ha)
1	Pits(Broken Area)	16.88	34.41
2	Dump	0	1.25
3	Road/buildings	2.29	0.96
4	Plantation	0.5	2.3
5	Infrastructure	0.09	0.09
	Undistrbed area	22.25	3
	Total Area	42.01	42.01

**4.5.0 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 = 1, 20, 00,000 MT per Annum

Working days per annum = 300

Production per day = 40,000 MT

**4.5.1 Drilling**

a) Tonnage of mineral excavated per hole =  $9\text{m} \times 4\text{m} \times 5\text{m} \times 2.5 = 450\text{ T}$

b) No. of holes required per day =  $40,000\text{ T}/450\text{ T} = 89$

c) Total meter age of drilling/day =  $88\text{ holes} \times 9\text{m} = 792\text{ m}$

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



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

e) Hence no of drill machines= Drilling required per day/capacity of drilling per day =  
 $792/120 = 6.6$  say 7 Nos of drill machine

Thus, It is proposed to use drill machines of 100 - 110mm dia. As per the production target of about 40,000 MT (16,000 M<sup>3</sup>per day), It is estimated that about 89 holes of 9 m depth per day (801 m per day) will be required to maintain the proposed production targets.

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	801 m
3	Total no of machines required per day	7
4	20% consideration for maintenance and spare capacity	1.4
5	Total no of machines required ( 8.14 say 9)	9

**4.5.2 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 <sup>3</sup>
B	Fill Factor	90%
C	Tonnage Factor	2.5
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



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BD = Blasted Mass = 1.4

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

Thus Q =  $3.2 \times 0.9 \times 3600 \times 1.4 \times 0.90/45 = 290$  T per Hour

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

Therefore No of Excavators required = Total Handling per day/Handling by excavator per day =  $40,000 / 3480 = 11.49$  say 12 Nos and considering 20% spare capacity, actual requirement of excavators will be 15 numbers.

**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 48Nos 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 58 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	15
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	58
4	Drill Machine with compressor of 365 cfm capacity.	100-110mm	9
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





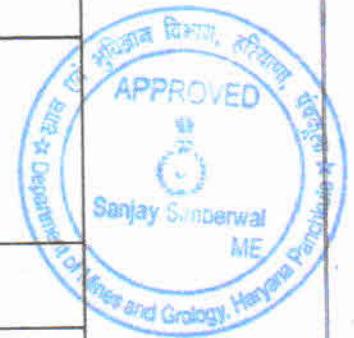
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10	Mobile Maintenance van		1
11	Tractor	50hp	1
12	Tractor mounted compressor		1

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.)/per day
1	Dumper	(Considering diesel consumption by the dumper is 3 km / ltr.) Total Diesel consumption / 40Dumper = 50 x 58 = 2000ltr.	2900
2	Excavator	Hourly Consumption = 15ltr / Shovel/ excavator 10hour diesel consumption = 15x 15x10= 2250ltr.	2250
3	Dozer & Payloader	Diesel consumption 12ltr / hr 10 hrs diesel consumption = 12 x10 = 120ltr x2= 240	240
4	Wagon Drill/ Air Compressor	No. of Compressor- 9 Diesel consumption by 9 compressors in 10 hour working = 9 x15 x 10 = 1050 ltr.	1350
6	Explosive Van	-	40
7	Maintenance Van	-	60
8	Water Tanker	-	60
9	Light Vehicles	-	30
		<b>Total Diesel requirements</b>	<b>6930 ltr/day</b>



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**CHAPTER 5  
BLASTING**

**5.1 Drilling and blasting Parameters:-**

**5.1 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 34,000 MT (13,600 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)	9
Hole depth (m) (including sub-grade drilling)	10
Burden (m)	4
Spacing (m)	5
Volume (m <sup>3</sup> )	4x5x9= 180m <sup>3</sup>
Tonnage yield (t)	180x2.5=450 T
Powder Factor (assumed)	8t/kg of explosive
Charge per hole (kg)	450 T/8 = 56.25 Kg
Total quantity of rock to be Broken per day (ton)	1,20,00,000 t/ 300 days = 40,000 TPD
Explosive required for blasting per day	40,000/8 =5,000 kg
Blasting Frequency ( Every day )	1
Explosive required per blast per day	5000 kg
No. of holes per day	40,000 t (Production/day)/450 t (Tonnage per hole)=76 say 89 Holes
No of holes per blast	89



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**5.2 Type of Explosives**

High Explosives : Primer charge (20% of charge per hole)

ANFO/Emulsion column charge 80 % of charge per hole

**5.2.1 Initiation System and minimum charge per delay**

Delay milliseconds delay detonators

Drilling pattern staggered

Firing pattern V pattern



**5.3 Secondary Blasting**

Large sized fragments should be reduced to acceptable size by drilling shallow holes (0.75-1.2m). The pattern will be as follows

Depth of hole 0.75 -1.2m

Diameter of holes 38 mm

Diameter of explosive 25 mm

Quantity of explosive 65 gms

Firing pattern Instantaneous

Secondary blasting is proposed but it will be minimized or rather eliminated by deploying hydraulic rock breaker for breaking large size stone/boulders.

**5.4 Storage of explosive**

Both primary / mass blast and secondary blasting will be carried out in the mines. 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 a 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

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**Relevant Provisions under MMR-1961 regarding blasting**

**Regulation 160. 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 manager 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 from the 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 to fire under sub -regulation (5).

**Regulation: 161 Shotfiring tools –**

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 and, 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.





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- f No tool or appliance other than that provided as above shall be used by blaster.
- Regulation 162. Drilling, charging, stemming and firing of shotholes –
- 1 No drill shall be used for boring a shothole 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 shothole shall be charged before it is thoroughly cleaned.
  - 3 Before any shothole 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 used. 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 shothole 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 shothole is over-charged or under-charged, having regard to the task to be performed.
  - 7 No shothole shall be fired by a fuse less than 1.2 metres in length.
  - 8 Every shothole shall be stemmed with sufficient and 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 shothole, no metallic tool, scraper or rod shall be used; and 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 shothole.
  - 12 All surplus explosives shall be removed from the vicinity of a shothole 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 shothole shall be charged except those which are to be fired in that round; and all shot holes which have been charged shall be fired in one round.

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- 17 Where a large number of shots has to be fired, a shotfiring 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 any detonator lead or remove any explosive from any charged shot hole.

Regulation 163 Electric Shotfiring.— 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 shotfiring 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 shotfiring 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 in once at least in every three months, be cleaned and thoroughly overhauled by a competent person.

2 No current from a signaling, 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 or lighting 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; and before doing so, see that all persons in the vicinity have taken proper shelter as provided under regulation 164; and





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- (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 fired 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 apparatus specifically designed for the purpose and after the provisions of regulation 164 have been complied with; and
  - (d) The cable to the shotfiring apparatus shall be connected last.





CHAPTER 6  
MINE DRAINAGE

6.1 GENERAL:

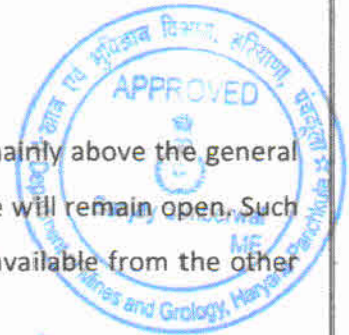
Open cast mining projects requires effective arrangements for drainage and provision of adequate dewatering capacity in the pits under mining. In the area under mining water can reach the workings from surface drainage, rainwater and due to seepage through joints and fissures. Therefore, the problem 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.

6.2 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 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.



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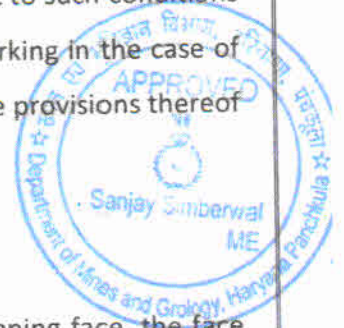
5) Following measures shall be taken to prevent fall of side as per mine statute.

**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, morrum, 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 and 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 and 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 60 days 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





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commenced or 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 be taken against the danger 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 beadequately 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 beallowed 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.

**6.3 DEWATERING:**

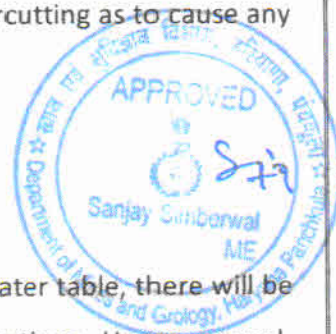
Since the depth of mining proposed is well above the valley level and water table, there will be no chance of encountering the ground water table during the mining operations. Hence normal-pumping operations will be required during the monsoon season only. The water accumulates within the pits will be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

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

6.4.1 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.

6.4.2 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.

6.4.3 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.





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6.4.5 Based on the Rainfall data it is proposed to have a diesel engine operated water pump of 15 H.P which may dewater 50m<sup>3</sup>/hour from the pit. The discharged will be drained out from the mine. This water will finally go into the natural nallah.



CHAPTER 7

STACKING OF MINEAL REJECTS AND DISPOSAL OF WASTE

7.1 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.

7.2 Maximum Height and Slope of Dumps

The area ear - marked for the stacking the soil mixed finer material of stone is 9000 M2 Plate no 5-9 which can accommodate around 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 will be around 2000 tones and shall be used for plantation and as a upper layer on the dumps. The dump may attain a maximum height of 8 mtr with gentle slopes of 39°. Tow walls and drains around dumps are proposed to safeguard the dumps

7.3 Dump Yard for mineral

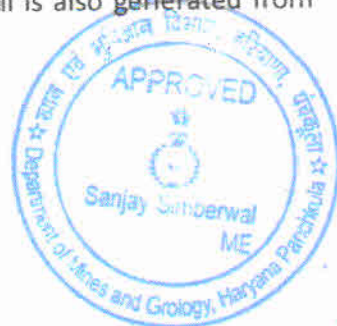
Around 25% of material shall be used in the crusher installed at site and rest of the material will be supplied to near bycrushers those are in the close vicinity of the lease hold area.

Thus whole material excavated shall be crushed but still it is proposed to have a dump yard for mineral (Size 100 m x 90 m), which will be used in the event of less demand or any other emergent reasons to stack the mineral in the stack yard.

The height of the stackyard may attain a maximum of 8 mtrs with moderate slope of 39 degrees. This can accommodate about 1,50,000 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. 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.



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





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**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.



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**CHAPTER 9**

**MINERAL BENEFICIATION & PROCESSING**

In view of the availability of direct market for building stone, 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 and part of it will be crushed at site..

It is therefore proposed to crush around 25% of the mineral 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
Rate of crushing	300 tones per hour.



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 pressure 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. Two crushing units of 300 TPH is proposed to be installed, whenever it is required.

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.

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**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 of 25 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 CharkhiDadri. However, we propose to build kacha road with the increase of production from the mine (around 1360 trucks per day of 25 T capacity) which will bypass the village and there by will not create any sort of problem to the near bye villagers.



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**CHAPTER -11**

**SITE SERVICE**

**11.0 Site Services:-**

**11.1 Manager's Office:-**

As detailed in the preceding chapter the mines are designed to produce 120 lakhton of building stone per annum. 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 appropriate size which shall also provide accommodation for key supervisory staff as well.

**11.2 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 has been made of 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.

**11.3 Store**

Since the mining operation will involve heavy earth moving machinery, a small storeroom will be provided for day to day operations. There is provision of workshop for undertaking the repair/maintenance of mine machineries.

**11.4 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 over the Govt. Hospitals is there at the CharkhiDadri which is just 8 km. From the mine and necessary medical aid can be provided from there.





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**11.5 Crèche :**

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

**11.6 V.T. Centre**

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

**11.7 Magazine:**

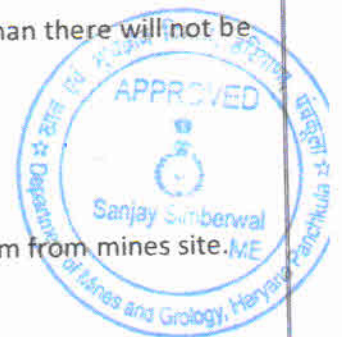
Magazine of the required sizes (for 10 T capacity) will be provided to fulfill the requirement of blasting of mineral as detailed in the chapter of Blasting. The Magazine shall be erected as shown in the enclosed plate no 5-9. The design of the magazine shall be as per approval of the chief controller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

**11.8 Electricity Supply:**

The electricity connection has been taken from the nearby point which is just 0.5 Km from mines site.

**11.9 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 Govt. The water from supply tube well is used for the entire village Kheribattar. 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 1000 liters capacity.





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**CHAPTER 12  
EMPLOYMENT POTENTIAL**

**12.1 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.

**12.2 Man power requirement and its distribution.**

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

Managerial and Operative Staff:

TotMa

S.No.	Designation	Category	Nos
1	Project Manager / I Class Mines Manager	Highly skilled	1
2	Assistant Managers (Shift Manager)	Highly skilled	3
3	Mining Foreman	Highly Skilled	3
3	Mining Mate cum Blaster	Highly skilled	3
4	Mechanical Engineer	Highly Skilled	1
5	Mechanical Foreman	Highly skilled	2
7	Diesel hydraulic shovel operator	Highly skilled	30
8	Front End Loader Operator	Highly skilled	1
9	Rear dumpers operators	Highly skilled	116
10	Drill operators	Highly skilled	11
11	Track chain Dozer operators	Highly skilled	1
(a)	Sub-total		172



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Operative Staff :

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
(b)	Sub total		61



Thus total requirement of manpower ( a + b ) = 233

The statutory personnel shall be deployed as per provisions of Mines Act, 1952 and latest DGMS circulars.

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



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**CHAPTER- 13**

**ENVIRONMENT IMPACT ASSESSMENT AND ENVIRONMENT MANAGEMENT PLAN**

**13.1 Base line information**

13.1.i Existing & at the end of 5<sup>th</sup> Year Land Use Pattern :- The area is almost barren.

Present & at the end of 5<sup>th</sup> year breakup of land use in the lease area (In Hectares)

Sr.no	Details	Existing land use (ha)	At the end of 5th year (ha)
1	Pits(Broken Area)	16.88	34.4154
2	Dump	0	1.25
3	Road/buildings	2.29	0.9639
4	Plantation	0.5	2.3722
5	Infrastructure	0.09	0.09
	Undistrbed area	22.25	3.00845
	Total Area	42.01	42.01

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

**13.1.ii Water Regime**

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





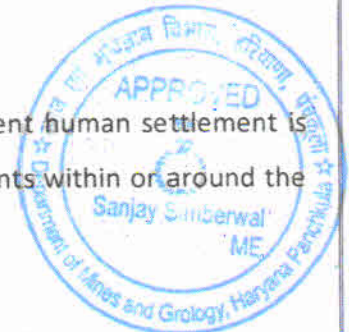
**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**13.1.iii Human Settlement :** Area covered under mining plan is uninhabited. The nearest village is around 1.0 km.

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

**13.1.iv Public Building , Places and Monuments :**

There are no permanent public buildings within the lease area. The permanent human settlement is about 1 km from the lease area. There are no other public places or monuments within or around the lease area.



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**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:**

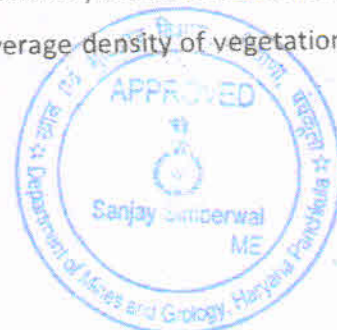
A Govt. Hospital is available at CharkhiDadri which is Just 8 Km from the Mine site. All the nearby villages have Middle schools & Sub Post Office. College, I.T.I and other facilities are available at CharkhiDadri.

**13.1.v Quality of water**

There are no water sources in the leaseareaexcept dry nallahs (rivulets). The precipitated water flows along the slope of quartzite. The water table in the area is about 63mtr below the ground level. No water samples could be collected in absence of any well/tube well in the lease area.

**13.1.vi 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 then 3mtrs. In the neighboring 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 Average density of vegetation is 50/hect, which are mainly xerophytes.





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**13.2 Environment Impact Assessment Statement**

**13.2A Land Environment:**

**13.2.A.i Land Scape**

Presently the broken area including the old pits is around 16.88 ha. The dwelling houses of the nearby villages are about 1 km away from the lease area.

**13.2.A.ii 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.

**13.2.A.iv Agriculture.**

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

**13.2.A.v 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.

**13.2.A.vi 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





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places. Since the present vegetation is of very poor quality the adverse impact will be negligible. However the proposed plantation will ameliorate the vegetation.

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

**13.2.A.vii Public Buildings, places and Monuments.**

As already described at 13.1.IV. There are no permanent buildings, places or monuments in the lease area

**13.2.B Water Environment :**

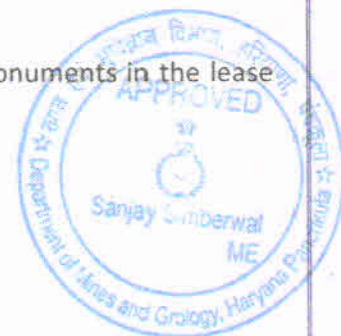
**13.2.B.i Surface Water and Ground Water.**

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 63m below 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 63 mtrs below the ground surface.



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**13.2.C. Baseline Environment**

**13.2.C.i Noise :**

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 act sound barriers.

**13.2.C.ii Air**

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 High explosives, ANFO/Emulsions, ordinary detonators & substitutes. The proposed mining will not deteriorate the air quality except generation of dust. The dust with air borne will be controlled through wet drilling and sprinkling of water on haul roads.

**Dust**

The dust generation during drilling will be reduced by wet drilling. The dust generated during blasting will be minimized by water spray 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.





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**13.2.C.iii 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:	41°C (May & June)
Normal Rain days:	22



The general direction of wind in summer season is west to east and in winter it is northwest to southeast.

**13.2.D Socio Economic Environment**

**13.2.D.i DEMOGRAPHIC STRUCTURE**

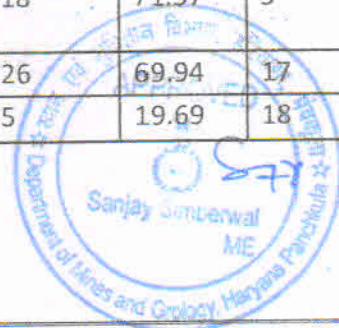
Details of the Charkhi Dadri District primary census Abstract has been given in table.



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**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	49.72	66.9	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	19.9	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	25.7	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	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





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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	1.9	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.

**13.2.D.ii 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.

**13.2.D.iii 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.



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**13.3 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.

**13.3.i 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 8 mtrs 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 meter at top and 1 meter at the bottom. Further plantation of grass is proposed on the surface of the dump slopes to improve its quality and to restrict soil erosion.

**13.3.ii 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





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

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 10 to 20 cm thickness 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.

**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 outside 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 20795 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	4159	2911	Neem, Peepal, Ber, Shisham, Sirish, Babool, Gulmohar	Along the roads, in barren area, surrounding office & rest shelter and other social forestry programme.
II	4159	2911		
III	4159	2911		
IV	4159	2911		
V	4159	2911		
<b>Total</b>	<b>20795</b>	<b>14555</b>		



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

The tree plantation is proposed at spacing of 3m x 3 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 4159no. of trees will be planted year wise during plan period:-

**Post plantation care:**

This will include the following measures:-

- a) Protection from grazing and fires.
- b) Watering at least once a week during dry spells.
- c) Manu ring
- d) Weeding and soil working.
- e) Mulching
- f) Replacement of causalities.
- g) Protection form pests.

**The maintenance 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.





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**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 labor will be deployed as and when necessary.

**13.3.iii Program of A Forestation**

The 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 2.30 ha land. About 4159 trees per year will be planted on the above area. The annual area covered will be 0.48 hectares. The survival rate is expected 70% therefore the saplings / plats which dies will be replace in addition to the plants proposed above.

**13.3.iv Stabilization and Vegetation of Dumps :-**

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

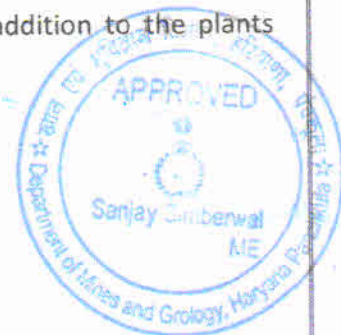
**13.3.v Treatment and Disposal of water from Mine :-**

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 discharging water through the natural nallah around 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.

**13.3.vi 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 ground water at a faster rate.





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**13.3.vii 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.

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

**Air Pollution:**

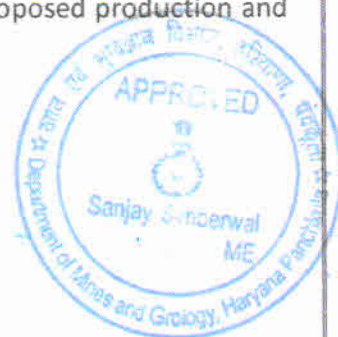
Emission of gases and dust takes place due to movement of vehicles. Spraying of water and plantation along the road side prevents the spread of dust. Plantation also acts as barrier for restricting pollution. Impact on air environment has been assessed taking in to consideration the proposed production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



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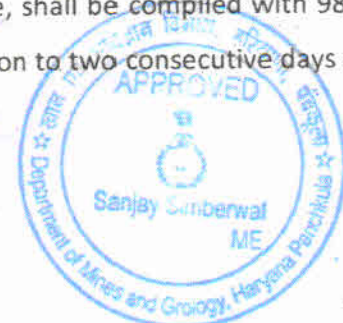
**National Ambient Air Quality Standards**

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 <sub>2</sub> ), µg/m <sup>3</sup>	Annual*	50	20
		24 hours**	80	80
2	Nitrogen Dioxide (NO <sub>x</sub> ), µg/m <sup>3</sup>	Annual*	40	30
		24 hours**	80	80
3	Particulate Matter (Size less than 10 µm) or PM <sub>10</sub> , µg/m <sup>3</sup>	Annual*	60	60
		24 hours**	100	100
4	Particulate Matter (Size less than 2.5 µm) or PM <sub>2.5</sub> , µg/m <sup>3</sup>	Annual*	40	40
		24 hours**	60	60
5	Ozone (O <sub>3</sub> ), µg/m <sup>3</sup>	8 hours**	100	100
		1 hours**	180	180
6	Lead (Pb), µg/m <sup>3</sup>	Annual*	0.5	0.5
		24 hours**	1	1
7	Carbon Monoxide (CO), mg/ m <sup>3</sup>	8 hours**	2	2
		1 hours**	4	4
8	Ammonia (NH <sub>3</sub> ), µg/m <sup>3</sup> -	Annual*	100	100
		24 hours**	400	400
9	Benzene (C <sub>6</sub> H <sub>6</sub> ), µg/m <sup>3</sup>	Annual*	5	5
10	Benzo(O) Pyrene Particulate Phae only ng/ m <sup>3</sup>	Annual*	1	1
11	Arsenic (As), ng/ m <sup>3</sup>	Annual*	6	6
12	Nickel (Ni), ng/ m <sup>3</sup>	Annual*	20	20

\* 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 18<sup>th</sup> November 2009)





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**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.

**13.5 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.

**13.6 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
2	Surveillance programme of the workers	2





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

3	Insurance cover of workers	5
4	Assistance to local schools, scholarship to students	2.5
5	Sanitations and drinking water facilities	5
6	Vocational training to persons for income generation	2.5
7	Assistance to self help groups	5
<b>Total</b>		<b>25</b>

**13.7 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.

**13.8 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
2	Pollution abatement – Water sprinkling	3
3	Wire fencing at plantation sites	1
4	Plantation including maintenance	1
5	Rainwater harvesting	5
6	Haul road and other roads repair and maintenance	2.5
<b>Total</b>		<b>16.5</b>

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



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**PART –II**

**PROGRESSIVE MINE CLOSURE PLAN**

**1.0 Introduction:-**

Vide notification GSR330(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 project proponent is proposing to enhance the production of mine up to 120 lakh T per Annum from the existing capacity of mine of 81.66 lakh T per Annum. Therefore "Modified Mining Plan along with Progressive Mine Closure Plan is being prepared and submitted for it's approval. 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 ASD-RKC JV, 40, Laxmi Nagar, Near Sub City Centre, Hiran Magari, Sector-8, Udaipur-313002

**(B) LOCATION OF THE LEASE AREA**

District: Charkhi Dadri  
State: Haryana  
Taluka: Dadri  
Village: Kheribattar



**(C) EXTENT OF THE LEASE AREA**

The mine is located in the revenue estates of Villages Kheribattar in Distt. Charkhi Dadri, Haryana and is about 8 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 total lease area granted is 42.01 hectares (valid for 12 years from date of Environmental Clearance or One Year from the date of issue of LOI, whichever is earlier).



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

The details of extent of area is as follows –

The Lease area lies between Latitude 28°33'15.5" to 28°33'43.2" N and Longitude 76°10'26" to 76°10'56.8"E (Plate no. 2). Details of Khasra areas follows:

Village	Khasra no.	Area in hect.
Kheribattar-2	139,140 & 141 min.	42.01hectares

The lease area is located on the katcha road and then a metalled road upto village Kheribattar and is easily approachable from CharkhiDadri, Bhiwani and other important towns.

**(D) PRESENT & AT THE END OF 5<sup>th</sup> YEAR LAND USE PATTERN**

Details are given below:

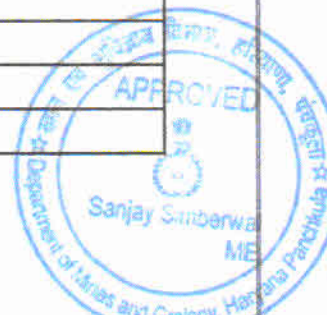
**Present & at the end of 5<sup>th</sup> year breakup of land use in the lease area (In Hectares)**

Sr.no	Details	Existing land use (ha)	At the end of 5th year (ha)
1	Pits(Broken Area)	16.88	34.41
2	Dump	0	1.25
3	Road/buildings	2.29	0.96
4	Plantation	0.5	2.3
5	Infrastructure	0.09	0.09
6	Undistrbed	22.25	3
	Total Area	42.01	42.01

**(E) METHOD OF MINING:**

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

The present mining operations are being 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° as the mineral bearing rocks being hard and compact.





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**(F) MINERAL PROCESSING OPERATION:**

Building stone product is proposed to be sold in the form of lumps to the crusher owners. However, a part of ROM (about 25%) is proposed to be crushed at site through a crushing & screening plant proposed to be installed at project site as per details and flow sheet shown in Chapter 9.

**1.1 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 on his 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.

**1.2 Statutory Obligations:**

The lessee is bound to submit the Progressive Mine Closure Plan either with Mining plan or Scheme of Mining. Lessee is bound to follow the terms and conditions as will be stipulated in the lease deed /LOI. In addition to it the rules pertaining to the Protection of Environment, 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 Metalliferous Mines Regulation 1961 and RMMCR, 1986 will be followed.

**1.3 Closure plan preparations**

Name, address and registration number of the recognized 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.



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**2.0 MINE DESCRIPTION**

**2.1 General Geology and Local Geology**

**2.1.1 Regional Geology**

(Details are given in the Chapter 3 of main mining plan)

**2.1.2 Local Geology**

(Details are given in the Chapter 3 of main mining plan)

**2.2 Reserves**

(Details are given in the Chapter 3 of main mining plan)

**2.3 Mining Method:**

Mining method to be followed is described in Chapter 4 of mining plan

**2.4 Mineral Beneficiation**

(Details are given in the Chapter -9 of this mining plan)



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**3 Review of implementation of mining plan including five years progressive closure plan up to the final closure plan**

Mining Plan and Progressive mine closure plan are being submitted for the proposed enhancement of production of mine up to 120 lakh T per annum from existing capacity of mine of 81.66 lakh T per annum. It will be reviewed after five years and review of implementation will be given with next mining scheme.





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

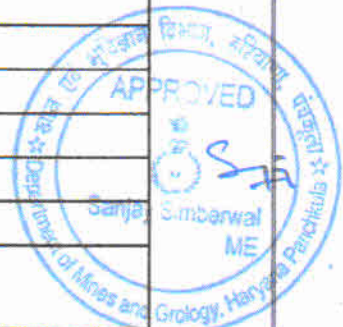
**4.0 CLOSURE PLAN**

**4.1 Mined - out land**

At the end of mining plan period, about 35.80 ha area will be mined out. Land use at various stages is given in the table below:

**Table 11: Land Use at Present, at the end of 5<sup>th</sup> year and at the end of plan period (In Hectares)**

Sr.no	Details	Existing land use (ha)	At the end of 5th year (ha)	At the End of Plan Period
1	Pits(Broken Area)	16.88	34.41	--
2	Dump	0	1.25	--
3	Road/buildings	2.29	0.96	0.96
4	Plantation	0.5	2.3	21.14
5	Infrastructure	0.09	0.09	0.09
6	Undisturbed	22.25	3	--
7	Area under Water Body	--		19.82
	<b>Total Area</b>	<b>42.01</b>	<b>42.01</b>	<b>42.01</b>



**4.2 Water quality management**

There are no water courses in the area except first order dry nullahs. The precipitated water also flows along the depressions formed in between the outcrop of country rocks. The water table in the area is about 63 mtrs 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 in the pit which will be drained out and finally it will be sent to natural drain. A settling tank will be provided so that the finer sediments are settled down. There will be no intersection of water table as working will be carried above the water level which is 63 m below the general surface of area. Some wells are located in the agriculture fields where water table was recorded around 63 m.

**4.3 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 personal protective equipment like face mask, ear plug/ muffs, for air pollution management at the progressive mine. At the closure of mine, greenbelt will be developed to prevent and control air pollution.

**4.4 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.

**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**4.5 Top Soil Management**

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

**4.6 Tailing dam management**

There is no proposal of beneficiation of mineral. No tailing dam is envisaged.

**4.7 Infrastructure:**

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

**4.8 Disposal of mining machinery:**

It is proposed to deploy heavy earth moving machineries in the mine and a crusher is to be installed in the lease hold area for in-house crushing of mineral. As this plan is for a 5-year period and hence during the 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.

**4.9 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, MMR 1961, Mines Rules 1955.
- ii. Provisions of MMR 1961 shall be followed strictly and all roads shall be 12m wide 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, ear-plugs/ 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 entrances.
- vii. Danger signs shall be displayed near the excavations.
- viii. Security guards will be posted.
- ix. In the event of temporary closure, approaches will be fenced off and notice displayed.



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**4.10 Disaster Management and Risk Assessment:**

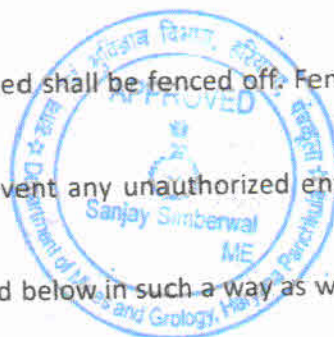
This should deal with action plan for high risk accidents like landslides, subsidence, flood, inundation in underground mines, fire, seismic activities, tailing dam failures etc. and emergency plan proposed for quick evacuation, ameliorative measures to be taken etc. The capability of lessee to meet 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, RMMCR 1986 and other laws applicable to mine will strictly be complied with.
- During monsoon season 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.

**4.11 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:





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

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 is granted for a period of 12 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.



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**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.



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**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.)	4159	4159	4159	4159	4159	@100 Rs per sapling Including maintenance	20,79,500	
Plantation cost	4,15,900	4,15,900	4,15,900	4,15,900	4,15,900			
Wire fencing (500meter)	60,000	60,000	60,000	60,000	60,000	@ of 120Rs per meter	3,00,000	
Toe walls (m)576 m	5,76,000	-	-	-	-	@ Rs 1000/m	5,76,000	
Drain(m) 576 m	5,76,000	-	-	-	-	@ Rs 1000/m	5,76,000	
	Total							35,31,500





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**8.0 FINANCIAL ASSURANCE**

As per the Rule 71(6) of Haryana Mining Mineral Concession, Stocking, Transportation of Minerals & Prevention of Illegal Mining Rules, 2012, the mineral concession holder shall furnish financial assurance amounting to Rs. 15,000/- per hectare of the area granted under the mineral concession and put to use for mining and allied activities subject to minimum of one lakh rupees in the form and manner as defined. Thus for Kheri battar-2 (Stone along with associated minor minerals), the financial assurance is comes out to Rs. 6,30,150/- for lease area of 42.01 ha at the rate of Rs. 15,000/- per ha which will be deposited in the form of Surety bond/ Bank Guarantee to the Director Mines & Geology, Haryana.



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**9.0 CERTIFICATE**

It is enclosed with the report.



**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**10.0 PLAN AND SECTION**

Plan and section are prepared and enclosed with the modified Mining Plan and Progressive Mine Closure Plan.





**Modified Mining Plan for Capacity Enhancement of Kheri battar-2 stone mines to 120 lac T/Annum from existing capacity of 81.66 lac T/Annum**

**Certificate.**

The Modified Mining plan and Progressive Mine Closure Plan complies all Statutory Rules, Regulations, orders made by the Central or State Government, statutory organizations, court etc. have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities. It is also undertaken that all the measures proposed in the Modified Progressive Mine Closure Plan will be implemented in a time bound manner as proposed.

S.N. Sharma



RQP/DDN/0135/2001-A.



Mines and Geology Department,  
Haryana

Speed Post  
From

The Director General,  
Mines and Geology, Haryana,  
1<sup>st</sup> Floor, 30-Bays Building, Sector-17, Chandigarh-160 017

To

M/s ASD-RKC J.V.,  
40 Laxmi Nagar, Near Sub City Centre,  
Hiran Magari, Sector No. - 8, Udaipur - 313 002 (Rajasthan)



Memo No. DMG/HY/ML/Kheribattar-2/2015/8562  
Dated Chandigarh, the 21.10.2015

Subject: Acceptance of the highest bid in respect of minor mineral mine of "Stone alongwith Associated minor minerals" of "Kheribattar-2" having tentative area of 42.01 hectares in Tehsil Dadri, district Bhiwani, offered in e-Auction held on 07.10.2015 & 08.10.2015 and issuance of Letter of Intent (LoI) - regarding.

You participated in the in the e-Auction held on 07.10.2015 & 08.10.2015 on the State Government web portal <https://haryanaeprocurement.gov.in> after accepting the terms and conditions of the auction notice No. DMG/HY/e-Auction/MGR/Bhi/2015/7879 dated 04.09.2015 in order to obtain mining lease of minor mineral mine in village "Kheribattar", District Bhiwani. You offered the highest bid of Rs. 41,05,00,000/- [Rupees Forty One Crores Five Lacs only] per annum, against the Reserve Price of Rs. 36,87,00,000/- per annum, for obtaining the Mining Lease of Minor Mineral mine namely "Kheribattar Plot No.-2" for extraction of "Stone alongwith Associated minor minerals" having tentative area of 42.01 hectares falling in khasra no. 139, 140, 141min.

2. You are hereby informed that the State Government has accepted the highest bid of Rs. 41,05,00,000/- [Rupees Forty One Crores Five Lacs only] per annum, offered by you in respect of the above said minor mineral mine of "Kheribattar Plot No.-2" under the provisions of the Haryana Minor Mineral Concession, Stocking, Transportation of Minerals & Prevention of Illegal Mining Rules-2012 (State Rules). Accordingly, you have become the successful bidder in respect of "Kheribattar Plot No. 2" mine of the district Bhiwani.

3. The State Government having accepted the aforementioned highest bid offered by you, the Department is pleased to issue this Letter of Intent (LoI) in your favour being



**Mines and Geology Department,  
Haryana**

successful bidder in respect of the Mine/area namely "Kheribattar Plot No. 2" of "Stone along with Associated Minor Minerals" subject to the following terms and conditions:-

- (i) The period of lease shall be 12 years and the same shall commence with effect from the date of grant of environmental clearance by competent authority as required under EIA notification dated 14.09.2006 and as amended from time to time by the MoEF, GoI or on expiry of a period of 12 months from the date of this communication of acceptance of highest bid/ issuance of "Letter of Intent", whichever is earlier;
- (ii) You may note that the area of the mining lease is tentative and was notified on "as where is basis" (refer condition no. 4 of the notice). In case of any inadvertent mistake, if any, the same would be rectified/ corrected before execution of the lease deed/agreement (refer condition no. 3 of the notice);
- (iii) No request regarding reduction in bid amount on account of reduction in land/area of the Mining lease, on any account including that of change in description of khasra numbers / location etc. at any stage will be entertained . This shall also include any loss/reduction of area for actual mining for want of compliance of applicable laws/restrictions for mining or part of the leased area had already been operated in the past. Needless to state that this also includes the changes, if any, as per condition no. (3) of auction notice;
- (iv) The amount of the highest bid i.e. Rs. 41,05,00,000/- [Rupees Forty One Crores Five Lacs only] per annum shall be the "Annual dead rent" payable by you in the manner prescribed in the lease deed/agreement to be executed on form ML-1 appended to the State Rules;
- (v) The above said annual dead rent shall be increased @ 25% on completion of each block of three years. Accordingly, the year-wise amount of the annual lease money shall be as per details given below:

Sr. No.	Year of the Lease Period	Annual Dead Rent (In INR)
1.	First Year	41,05,00,000/-
2.	Second Year	41,05,00,000/-
3.	Third Year	41,05,00,000/-
4.	Forth Year	51,31,25,000/-
5.	Fifth Year	51,31,25,000/-
6.	Sixth Year	51,31,25,000/-
7.	Seventh Year	64,14,06,250/-
8.	Eighth Year	64,14,06,250/-
9.	Ninth Year	64,14,06,250/-
10.	Tenth Year	80,17,57,820/-
11.	Eleventh Year	80,17,57,820/-
12.	Twelfth Year	80,17,57,820/-





**Mines and Geology Department,  
Haryana**

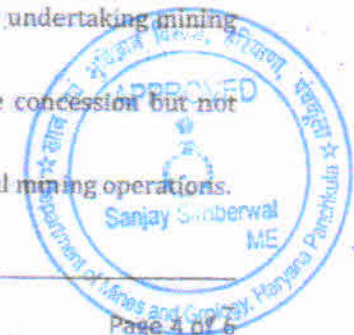
- (vi) As per the terms and conditions of the grant, you are liable to deposit Rs. 10,26,25,000/- i.e. equal to 25% of the annual bid amount as "security deposit" and Rs. 3,42,08,350/- on account of one month's advance dead rent. Out of which you have already deposited an amount of Rs. 4,10,50,000/- i.e. equal to 10% of the annual bid amount as 'initial bid security' after the conclusion of e-Auction. The balance amount of Rs. 6,15,75,000/- of the bid security i.e. 15% of the annual bid amount along with Rs. 3,42,08,350/- on account of one month's advance dead rent shall be deposited before commencement of the mining operations or before expiry of the period of 12 months, whichever is earlier;
- (vii) You shall have to execute Lease Deed in Form ML-1 appended to the Haryana Minor Mineral Concession, Stocking, Transportation of Minerals & Prevention of Illegal Mining Rules-2012 (the State Rules 2012) within a period of 90 days from the date of issuance of this communication/ grant of Lol;
- (viii) It may be pointed out that as per existing applicable rates the contract agreement had to be executed on **Non Judicial Stamp papers worth Rs. 3,55,01,850/- (Rs. Three Crores Fifty Five Lacs One Thousand Eight Hundred Fifty only)**. However, you are aware that M/s Om Minerals, one of the Lol holders (who participated in the auctions held in December 2013) has filed a CWP No. 7991 of 2014, before the Hon'ble Punjab & Haryana High Court. Further a few other similarly situated Lol holders have also filed separate CWP's before the Hon'ble Punjab and Haryana High Court challenging demand/ levy of Stamp Duty on execution of 'Contract Agreement/Lease Deed'. The said matter is still pending for adjudication. Accordingly, the present auction was conducted subject to outcome of said cases. **Therefore, the charging of stamp duty for the execution of contract agreement/Lease Deed shall be as per final outcome of the said CWP's.**
- (ix) The Lease Deed would also be required to be got registered on payment of the applicable Registration fee;
- (x) In case you fail to execute the Lease Deed within the prescribed period of 90 days, this Lol shall be deemed to have been revoked and the amount of initial bid security deposited at the time of auction shall be forfeited. Further, the balance amount of 15% towards the bid security, amounting to Rs. 6,15,75,000/- being the 15% of the annual bid amount, shall be recovered as arrears of land revenue and, you as the Lol holder/defaulters, shall be debarred from participation in any future auctions for a period of 5 years;
- (xi) You shall also furnish a solvent surety for a sum equal to the amount of the annual bid for execution of the lease deed/agreement. In case the surety offered by the lessee during the subsistence of the lease is not found solvent, the lessee shall offer another solvent surety and a supplementary deed shall be executed to this effect;
- (xii) After execution of Lease Deed, either before commencement of the mining operation or before expiry of the period of 12 months from the date of issuance of this Lol, whichever is earlier, in case of failure to deposit the balance 15% amount towards security [as required under clause (vi) above] the acceptance of bid/issuance of Lol/execution of agreement shall be deemed to have been revoked and 10% amount



**Mines and Geology Department,  
Haryana**

deposited towards as initial bid security at the time of auction shall stand forfeited. Further, un-paid 15% amount towards security shall be recovered as arrears of land revenue and you shall be debarred from participation in any subsequent bids for a period of 5 years;

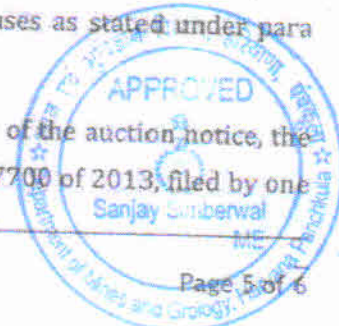
- (xiii) You shall be liable to deposit the Dead Rent in advance at monthly intervals as per provisions of lease deed/agreement i.e. from the date of commencement of the lease deed;
- (xiv) You shall be liable to pay dead rent as determined through open auction or shall pay royalty in respect of each of the minor minerals extracted or removed or consumed by you or by your agent, manager, employee etc., whichever is more. The royalty shall be payable at the rates prescribed in the First Schedule appended to the State Rules and as may be revised by the State Government from time to time.
- (xv) You shall also deposit/pay an additional amount equal to 10% of the due Dead Rent/Royalty, along with along with the monthly installments towards the 'Mines and Minerals Development, Restoration and Rehabilitation Fund'.
- (xvi) You shall also be liable to pay advance income tax as per provisions of Section 206(c) of income tax act in addition to contract money, payable as per terms and conditions of the Lease Deed.
- (xvii) On enhancement of the annual dead rent with the expiry of every three years period, you shall deposit the balance amount of security so as to upscale the security amount equal to 25% of the revised annual dead rent as applicable for one year with respect to the next block of three years. No interest, whatsoever, shall be payable on the security amount deposited under the prescribed security head of the government;
- (xviii) You shall prepare a Mining Plan along with the Mine Closure Plan (Progressive & Final) as per chapter 10 of the State Rules for the "Mining site" 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, mines & Geology, in this behalf.
- (xix) Further, the actual mining will be allowed to be commenced only after prior Environmental Clearance is obtained by you as the Loi holder/lessee for the mining lease area from the Competent Authority as required under EIA notification dated 14/9/2006 as amended from time to time by the Ministry of Environment, Forest & Climate Change, Govt. of India and guidelines/ circulars issued in this behalf;
- (xx) The Mining lessee to whom the mining rights have been granted through this lease would also be liable to pay the following to the landowners for undertaking mining operation:-
- (a) Annual rent in respect of the land area blocked under the concession but not being operated, and
  - (b) Rent plus compensation in respect of the area used for actual mining operations.





**Mines and Geology Department,  
Haryana**

- (xxi) The amount of annual rent and the compensation shall be settled mutually between the landowner and the lessee. In case of non-settlement of the rent and compensation, the same shall be decided by the District Collector concerned in accordance with the provisions contained in Chapter 9 of the State Rules;
- (xxii) The total mineral excavated and stacked by the lease holder within the area granted on mining lease shall not exceed two times of the average monthly production as per approved Mining Plan at any point of time;
- (xxiii) The lessee shall not stock any mineral outside the concession area granted on mining lease, without obtaining a valid mineral dealer license as per provisions contained in Chapter 14 of the State Rules;
- (xxiv) The lessee shall not carry out any mining operations in any reserved/ protected forest or any area prohibited by any law in force in India, or prohibited by any authority without obtaining prior permission in writing from such authority or officer authorized in this behalf. In case of refusal of permission by such authority or officer authorized in this behalf, lessee(s) shall not be entitled to claim any relief in payment of contract money on this account;
- (xxv) A safety margin of two meters (2m) shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf.
- (xxvi) The lessee shall not undertake any mining operations in the area granted on mining lease without obtaining requisite permission from the competent authority as required for undertaking mining operations under relevant laws;
- (xxvii) The lessee shall be under obligation to carry out mining in accordance with all other provisions as applicable under the Mines Act, 1952, Mines and Minerals (Development and Regulation) Act, 1957, Indian Explosives Act, 1884, Forest (Conservation) Act, 1980 and Environment (Protection) Act, 1986 and the rules made there under, Wild Life (Protection) Act, 1972, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981;
4. Accordingly, for the time being, you are advised to submit the Draft Mining Lease deed/agreement on **Form ML-I (in Five copies)**, appended to the State Rules, 2012, on **plain papers** along with other requisite documents including a solvent surety(s) for a sum equal to the amount of the annual bid for execution of the agreement, within a period of 90 days from the date of issue of this bid acceptance letter and the Lol. You should also furnish an affidavit to the effect that you will immediately deposit the requisite stamp duty as per outcome of the related court cases as stated under para 3(viii) above.
5. You are further informed that as per condition No. 34 of the auction notice, the auction was conducted subject to final outcome of CWP No. 27700 of 2013, filed by one Sanjayumberwal





**Mines and Geology Department,  
Haryana**

Sh. Rajbir Singh before the Hon'ble Punjab & Haryana High Court challenging (i) commencement of lease period after 12 months from the date of acceptance of highest bid/issuance of "Letter of Intent" or from date of obtaining of environmental clearance from competent authority whichever is earlier and (ii) payment of rent and compensation to surface right holder/land owners from where mining operations are to be carried out. Now the said case stands disposed of as the Hon'ble Punjab and Haryana High Court vide its order dated 19.10.2015 has dismissed the said writ petition.

21/10

21/10  
Mining Engineer,  
for Director General, Mines & Geology,  
Haryana

Endst. No. DMG/HY/ML/Kheribattar-2/2015/8563

Dated: 21.10.2015

A copy is forwarded to the following for information and necessary action:-

1. The Chairman Haryana State Pollution Control Board, Sector-6, Panchkula.
2. The Deputy Commissioner, Bhiwani.
3. The Mining Officer, Mines and Geology Department, Bhiwani.

21/10

21/10  
Mining Engineer,  
for Director General, Mines & Geology,  
Haryana





Phone +91-294-2483638  
+91-294-2486274  
Fax +91-294-2483830

# ASD - RKC J.V.

VILLAGE - KHERI BATTAR, TEHSIL - CHARKHI DADRI, DISTT. - BHIWANI (HR.)

Ref.

Date: \_\_\_\_\_

**Annexure -2**

## CONSENT LETTER FROM APPLICANT

The Mining Plan & Progressive Mine Closure Plan in respect minor mineral mine of "Stone along with associated minor minerals" of Kheribattar-2 in village Kheribattar having area of 42.01 Hectares in Tehsil : Dadri, District- Bhiwani, State-Haryana is being prepared by Recognized Qualified Person, S.N. Sharma having registration no. RQP/DDN/0135/2001-A.

I request The Director General, Mines and Geology, Haryana to make further correspondence regarding modification of the Mining Plan & Progressive Mine Closure Plan with the said RQP on the following address:-

S.N. Sharma  
282, First Floor, Sector-11D, Faridabad (Haryana)  
09560848579  
(RQP/DDN/0135/2001-A.)



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

I hereby undertake that the Mining Plan & Progressive Mine Closure Plan in respect of the said 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: 24 February, 2020

*S.N. Sharma*  
Signature of the applicant





Renewed/नवीनीकृत up to 29/3/2021



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

*Sanjay*  
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

पत्न्य श्री. के. सी. शर्मा

नियोजी हाउस 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 एतद्वारा खनन  
योजना तैयार करने हेतु योग्य व्यक्ति के रूप में मान्यता प्रदान की जाती है।

खननका पंजीयन क्रमांक

RAP/DDN/135/2001/A

यह मान्यता दिनांक 29.03.2011

को समाप्त



होने वाली अवधि की अवधि के लिए वैध है।

स्वतः देहरादून

दिनांक : 30.03.2001

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



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

**IN VILLAGE: Kheribattar-2  
(Area-42.01 Hectares)  
DISTRICT: BHIWANI,  
STATE: HARYANA.**

खनन विभाग, गण्डियाद  
Haryana, Chandigarh  
Geology,  
**APPROVED**  
With Conditions  
शर्तों के साथ अनुमोदित  
File letter No. DMS/HY/ME/Kheribattar-2/2015/478  
दिनांक / Dated: 12-01-2016  
481  
राज्य खनन अभियन्ता  
State Mining Engineer



**APPLICANT**

**M/s ASD-RKC JV, 40, Laxmi Nagar, Hiran Magari, Sector-8, Udaipur-313002 (Rajasthan)**

**PREPARED BY**

**S.N. Sharma  
RQP/DDN/0135/2001-A.  
House No. 282; Sector 11-D Faridabad (Haryana)**

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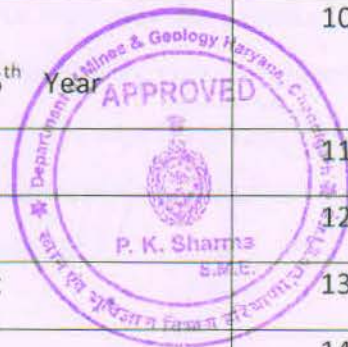


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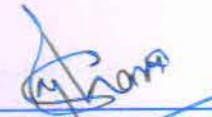




**Certificate.**

The Mining plan and Progressive Mine Closure Plan complies all Statutory Regulations, orders made by the Central or State Government, statutory organizations, court etc. have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities. It is also undertaken that all the measures proposed in the Progressive Mine Closure Plan will be implemented in a time bound manner as proposed.

S.N. Sharma



S.N. SHARMA  
RQP/DDN/0135/2001A  
SUPERVISOR (RQP)  
INDIAN BUREAU OF MINES (IBM)  
RQP No. RQP/DDN/135/2001/A  
VALID UPTO : 29TH MARCH 2021





# ASD- RKC J.V.

40, Laxmi Nagar , Near Sub City Centre, Hiran Magri, Sector- 8,  
Udaipur- 313002 ( Rajasthan)

Email ID: rkckalyana@hotmail.com , info@rkcarriers.com

Annexure -2

## CONSENT LETTER FROM APPLICANT

The Mining Plan & Progressive Mine Closure Plan in respect minor mineral mine of "Stone along with associated minor minerals" of Kheribattar-2 in village Kheribattar having tentative area of 42.01 Hectares in Tehsil : Dadri, District- Bhiwani, State -Haryana is being prepared by Recognized Qualified Person, S.N. Sharma having registration no. RQP/DDN/0135/2001-A.

I request The Director General, Mines and Geology, Haryana to make further correspondence regarding modification of the Mining Plan & Progressive Mine Closure Plan with the said RQP on the following address:-

S.N. Sharma

282, First Floor, Sector-11D, Faridabad (Haryana)

09560848579

(RQP/DDN/0135/2001-A.)

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

I hereby undertake that the Mining Plan & Progressive Mine Closure Plan in respect of the said 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: 25/11/2015

*K. Sharma*

Signature of the applicant



Renewed/नवीनीकृत up to 29/3/2021



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

*P. K. Sharma*  
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. शर्मावसुद श्री के सी शर्मापिवासी हाउस 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 एतद्वारा खनन  
योजना तैयार करने हेतु योग्य व्यक्ति के रूप में मान्यता प्रदान की जाती है।

उनका पंजीयन क्रमांक

RAP/DDN/135/2001/A

है।

यह मान्यता दिनांक 29.03.2011 को समाप्तहोने वाली ~~दस्तावेजों~~ की अवधि के लिए वैध है।स्थान : देहरादूनदिनांक : 30.03.2001

*P. K. Sharma*  
क्षेत्रीय खान नियंत्रक  
भारतीय खान ब्यूरो  
Regional Controller of Mines  
भारतीय खान ब्यूरो  
Indian Bureau of Mines







सेवामे

दिनांक 22 /07 /2021

M/S ASD RKC JV

खेरीबतर स्टोन माइन -2

चरखी दादरी हरीयाणा

हम सत्यापित करते है कि वर्ष 2021 -22 के लिए M /S ASD RKC JV के द्वारा पौधरोपण का कार्य माह जून और जुलाई 2021 के दौरान वन विभाग के अधिकारियो कि देख रेख में किया गया है एवं कुल 1030 पौधे लगाए गए ह जो कि अलग अलग प्रकार / प्रजाति के है तथा सभी पौधे माइनिंग क्षेत्र / लीज क्षेत्र में लगाए गए है

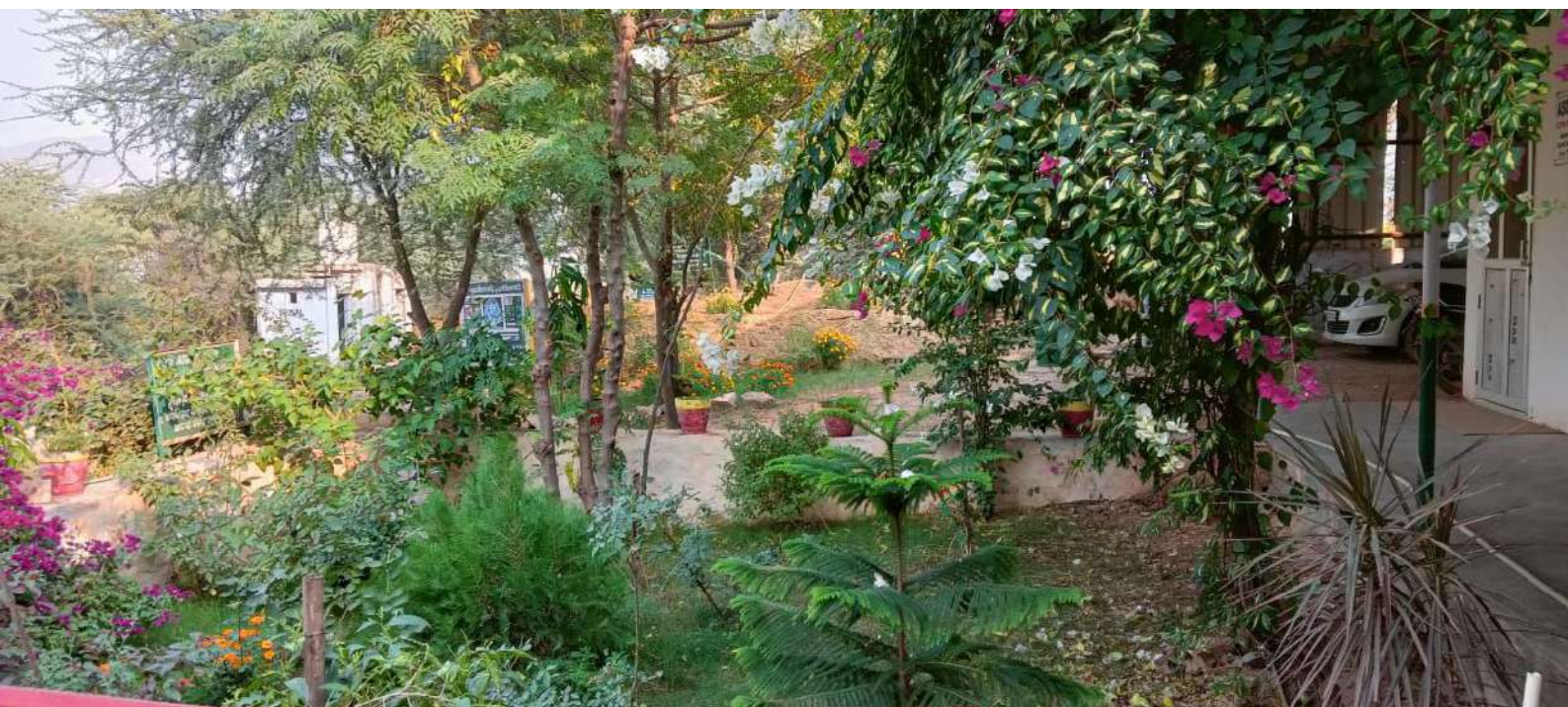
  
**Block Forest Officer**  
**Jhojhu Kalan (Ch Dadri)**  
वन विभाग हरीयाण

**ASD-RKC J V**  
**KHERI BATTAR STONE MINES-2**  
**CHARKHI DADRI**





















































































































































































**GARLAND  
DRAIN**

(ASD-RKC-TV)

Width - 1.5m

Height - 2.0m

Length - 2.5m

Shot on Y50  
AI Quad camera





## Test Report

<b>Sample Number:</b>	<b>VEL/ASD/AA/01</b>	<b>Report No.:</b>	<b>VEL/A/2203/16/001</b>
<b>Issued To:</b>	<b>M/s ASD RKC J.V.</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
	<b>40, Laxmi Nagar, Near Sub City Centre,</b>	<b>Party Reference No.:</b>	<b>NIL</b>
	<b>Hiran Magri, Sector-8, Udaipur,</b>	<b>Reporting Date:</b>	<b>19/03/2022</b>
	<b>Rajasthan-313002.</b>	<b>Period of Analysis</b>	<b>16/03/2022to 19/03/2022</b>
<b>Name &amp; address of Project :</b>	<b>Stone Mine (Associated Minor Mineral),</b>	<b>Receipt Date:</b>	<b>16/03/2022</b>
	<b>Kheribattar Plot-2, Tehsil-Dadri, District-</b>		
	<b>Bhiwani, Haryana.</b>		
<b>Sample Description :</b>	<b>Ambient Air Quality Monitoring</b>		

### General Information:-

<b>Sample collected by</b>	: Vardan Enviro Lab Representative
<b>Sampling Location</b>	: <b>Near Mine Site</b>
<b>Instrument Used</b>	: RDS & FPS with all accessories
<b>Instrument Code</b>	: VEL/RDS-FPS/11
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>14/03/2022to 15/03/2022</b>
<b>Time of Monitoring</b>	: 09:15 AM to 09:15 AM
<b>Ambient Temperature (°C)</b>	: Min 16°C, Max 30°C
<b>Surrounding Activity</b>	: Human, Vehicular & Mining Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Sampling &amp; Analysis Protocol</b>	: <b>IS:5182 &amp; CPCB Guidelines</b>
<b>Parameter Required</b>	: PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> & SO <sub>2</sub>

### TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	Particulate Matter (PM <sub>2.5</sub> )	#SOP No. VEL/SOP/01, Section No. SP 63	<b>74.51</b>	µg/m <sup>3</sup>	60
2.	Particulate Matter (PM <sub>10</sub> )	IS: 5182 (P-23) Gravimetric Method	<b>147.23</b>	µg/m <sup>3</sup>	100
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182 (P-6) Jacob & Hochheiser	<b>24.42</b>	µg/m <sup>3</sup>	80
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182 (P-2) Modified West and Gaeke	<b>14.74</b>	µg/m <sup>3</sup>	80
5.	Carbon Monoxide (CO)	IS: 5182 (P-10) Gas Chromatography, RA:2003	<b>0.84</b>	mg/m <sup>3</sup>	4

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

# SOP-As per Laboratory Standard Operating Procedure



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

[www.vardan.co.in](http://www.vardan.co.in)

Tel : 0124-4343750, 4343752, 4343753 | [lab@vardanenvirolab.com](mailto:lab@vardanenvirolab.com) | [lab@vardanenvirolab.com](mailto:lab@vardanenvirolab.com)



## Test Report

<b>Sample Number:</b>	<b>VEL/ASD/AA/02</b>	<b>Report No.:</b>	<b>VEL/A/2203/15/002</b>
<b>Issued To:</b>	<b>M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, Hiran Magri, Sector-8, Udaipur, Rajasthan- 313002.</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
<b>Name &amp; Address of Project:</b>	<b>Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District- Bhiwani, Haryana.</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Sample Description</b>	<b>Ambient Air Quality Monitoring</b>	<b>Reporting Date:</b>	<b>19/03/2022</b>
		<b>Period of Analysis</b>	<b>15/03/2022to 19/03/2022</b>
		<b>Receipt Date:</b>	<b>15/03/2022</b>

### General Information:-

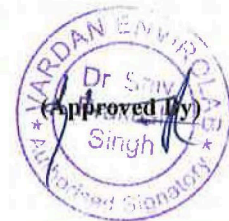
<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: <b>100 mtr from mine site</b>
<b>Instrument Used</b>	: RDS & FPS with all accessories
<b>Instrument Code</b>	: VEL/RDS-FPS/12
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>14/03/2022to 15/03/2022</b>
<b>Time of Monitoring</b>	: 09:25 AM to 09:25 AM
<b>Ambient Temperature (°C)</b>	: Min 16°C, Max 30°C
<b>Surrounding Activity</b>	: Human, Vehicular & Mining Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Sampling &amp; Analysis Protocol</b>	: <b>IS:5182 &amp; CPCB Guidelines</b>
<b>Parameter Required</b>	: PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> & SO <sub>2</sub>

### TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	Particulate Matter (PM <sub>2.5</sub> )	#SOP No. VEL/SOP/01, Section No. SP 63	<b>72.52</b>	µg/m <sup>3</sup>	60
2.	Particulate Matter (PM <sub>10</sub> )	IS: 5182 (P-23) Gravimetric Method	<b>140.59</b>	µg/m <sup>3</sup>	100
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182 (P-6) Jacob & Hochheiser	<b>22.51</b>	µg/m <sup>3</sup>	80
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182 (P-2) Modified West and Gaeke	<b>13.56</b>	µg/m <sup>3</sup>	80
5.	Carbon Monoxide (CO)	IS: 5182 (P-10) Gas Chromatography, RA:2003	<b>0.78</b>	mg/m <sup>3</sup>	4

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

# SOP -As per Laboratory Standard Operating Procedure



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## Test Report

<b>Sample Number:</b>	<b>VEL/ASD/AA/03</b>	<b>Report No.:</b>	<b>VEL/A/2203/15/003</b>
<b>Issued To:</b>	<b>M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, Hiran Magri, Sector-8, Udaipur, Rajasthan-313002.</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
<b>Name &amp; Address of Project:</b>	<b>Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District-Bhiwani, Haryana.</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Sample Description:</b>	<b>Ambient Air Quality Monitoring</b>	<b>Reporting Date:</b>	<b>19/03/2022</b>
		<b>Period of Analysis</b>	<b>15/03/2022to 19/03/2022</b>
		<b>Receipt Date:</b>	<b>15/03/2022</b>

### General Information:-

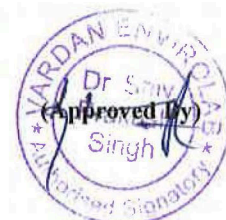
<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: <b>Haul Road</b>
<b>Instrument Used</b>	: RDS & FPS with all accessories
<b>Instrument Code</b>	: VEL/RDS-FPS/13
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>14/03/2022to 15/03/2022</b>
<b>Time of Monitoring</b>	: 09:45 AM to 09:45 AM
<b>Ambient Temperature (°C)</b>	: Min 16°C, Max 30°C
<b>Surrounding Activity</b>	: Human, Vehicular & Other Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Sampling &amp; Analysis Protocol</b>	: <b>IS:5182 &amp; CPCB Guidelines</b>
<b>Parameter Required</b>	: PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> & SO <sub>2</sub>

### TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	Particulate Matter (PM <sub>2.5</sub> )	#SOP No. VEL/SOP/01, Section No. SP 63	<b>71.26</b>	µg/m <sup>3</sup>	60
2.	Particulate Matter (PM <sub>10</sub> )	IS: 5182 (P-23) Gravimetric Method	<b>145.45</b>	µg/m <sup>3</sup>	100
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182 (P-6) Jacob & Hochheiser	<b>23.15</b>	µg/m <sup>3</sup>	80
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182 (P-2) Modified West and Gaeke	<b>13.44</b>	µg/m <sup>3</sup>	80
5.	Carbon Monoxide (CO)	IS: 5182 (P-10) Gas Chromatography, RA:2003	<b>0.82</b>	mg/m <sup>3</sup>	4

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

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## Test Report

<b>Sample Number:</b>	<b>VEL/ASD/AA/04</b>	<b>Report No.:</b>	<b>VEL/A/2203/15/004</b>
<b>Issued To:</b>	<b>M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, Hiran Magri, Sector-8, Udaipur, Rajasthan-313002.</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
<b>Name &amp; Address of Project:</b>	<b>Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District-Bhiwani, Haryana.</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Sample Description:</b>	<b>Ambient Air Quality Monitoring</b>	<b>Reporting Date:</b>	<b>19/03/2022</b>
		<b>Period of Analysis</b>	<b>15/03/2022to 19/03/2022</b>
		<b>Receipt Date:</b>	<b>15/03/2022</b>

### General Information:-

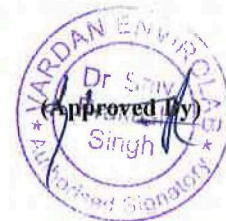
<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: Village-Kheribattar
<b>Instrument Used</b>	: RDS & FPS with all accessories
<b>Instrument Code</b>	: VEL/RDS-FPS/14
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: 14/03/2022to 15/03/2022
<b>Time of Monitoring</b>	: 10:05 AM to 10:05 AM
<b>Ambient Temperature (°C)</b>	: Min 16°C, Max 30°C
<b>Surrounding Activity</b>	: Human & Vehicular Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Sampling &amp; Analysis Protocol</b>	: IS:5182 & CPCB Guidelines
<b>Parameter Required</b>	: PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> & SO <sub>2</sub>

### TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	Particulate Matter (PM <sub>2.5</sub> )	*SOP No. VEL/SOP/01, Section No. SP 63	67.85	µg/m <sup>3</sup>	60
2.	Particulate Matter (PM <sub>10</sub> )	IS: 5182 (P-23) Gravimetric Method	135.74	µg/m <sup>3</sup>	100
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182 (P-6) Jacob & Hochheiser	19.63	µg/m <sup>3</sup>	80
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182 (P-2) Modified West and Gaeke	10.74	µg/m <sup>3</sup>	80
5.	Carbon Monoxide (CO)	IS: 5182 (P-10) Gas Chromatography, RA:2003	0.73	mg/m <sup>3</sup>	4

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

# SOP -As per Laboratory Standard Operating Procedure



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## Test Report

<b>Sample Number:</b>	<b>VEL/ASD/AA/05</b>	<b>Report No.:</b>	<b>VEL/A/2203/15/005</b>
<b>Issued To:</b>	<b>M/s ASD RKC J.V.</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
	<b>40, Laxmi Nagar, Near Sub City Centre,</b>	<b>Party Reference No.:</b>	<b>NIL</b>
	<b>Hiran Magri, Sector-8, Udaipur,</b>	<b>Reporting Date:</b>	<b>19/03/2022</b>
	<b>Rajasthan-313002.</b>	<b>Period of Analysis</b>	<b>15/03/2022to 19/03/2022</b>
<b>Name &amp; Address of Project:</b>	<b>Stone Mine (Associated Minor Mineral),</b>	<b>Receipt Date:</b>	<b>15/03/2022</b>
	<b>Kheribattar Plot-2, Tehsil-Dadri, District-</b>		
	<b>Bhiwani, Haryana.</b>		
<b>Sample Description :</b>	<b>Ambient Air Quality Monitoring</b>		

### General Information:-

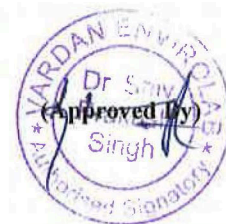
<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: <b>Loading Area</b>
<b>Instrument Used</b>	: RDS & FPS with all accessories
<b>Instrument Code</b>	: VEL/RDS-FPS/15
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>14/03/2022to 15/03/2022</b>
<b>Time of Monitoring</b>	: 10:45 AM to 10:45 AM
<b>Ambient Temperature (°C)</b>	: Min 16°C, Max 30°C
<b>Surrounding Activity</b>	: Human , Vehicular & Other Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Sampling &amp; Analysis Protocol</b>	: <b>IS:5182 &amp; CPCB Guidelines</b>
<b>Parameter Required</b>	: PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> & SO <sub>2</sub>

### TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	Particulate Matter (PM <sub>2.5</sub> )	#SOP No. VEL/SOP/01, Section No. SP 63	<b>75.23</b>	µg/m <sup>3</sup>	60
2.	Particulate Matter (PM <sub>10</sub> )	IS: 5182 (P-23) Gravimetric Method	<b>150.12</b>	µg/m <sup>3</sup>	100
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182 (P-6) Jacob & Hochheiser	<b>25.29</b>	µg/m <sup>3</sup>	80
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182 (P-2) Modified West and Gaeke	<b>15.25</b>	µg/m <sup>3</sup>	80
5.	Carbon Monoxide (CO)	IS: 5182 (P-10) Gas Chromatography, RA:2003	<b>0.85</b>	mg/m <sup>3</sup>	4

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

# SOP -As per Laboratory Standard Operating Procedure



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## Test Report

<b>Sample Number:</b>	<b>VEL/ASD/AA/06</b>	<b>Report No.:</b>	<b>VEL/A/2203/15/006</b>
<b>Issued To:</b>	<b>M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, Hiran Magri, Sector-8, Udaipur, Rajasthan-313002.</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
<b>Name &amp; Address of Project:</b>	<b>Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District-Bhiwani, Haryana.</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Sample Description :</b>	<b>Ambient Air Quality Monitoring</b>	<b>Reporting Date:</b>	<b>19/03/2022</b>
		<b>Period of Analysis</b>	<b>15/03/2022to 19/03/2022</b>
		<b>Receipt Date:</b>	<b>15/03/2022</b>

### General Information:-

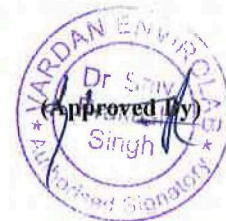
<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: <b>Village-Kheribora</b>
<b>Instrument Used</b>	: RDS & FPS with all accessories
<b>Instrument Code</b>	: VEL/RDS-FPS/16
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>14/03/2022to 15/03/2022</b>
<b>Time of Monitoring</b>	: 11:40 AM to 11:40 AM
<b>Ambient Temperature (°C)</b>	: Min 16°C, Max 30°C
<b>Surrounding Activity</b>	: Human & Vehicular Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Sampling &amp; Analysis Protocol</b>	: <b>IS:5182 &amp; CPCB Guidelines</b>
<b>Parameter Required</b>	: PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> & SO <sub>2</sub>

### TEST RESULTS

S. No.	Parameter	Protocol	Result	Unit	NAAQS* Limit
1.	Particulate Matter (PM <sub>2.5</sub> )	#SOP No. VEL/SOP/01, Section No. SP 63	<b>65.87</b>	µg/m <sup>3</sup>	60
2.	Particulate Matter (PM <sub>10</sub> )	IS: 5182 (P-23) Gravimetric Method	<b>130.42</b>	µg/m <sup>3</sup>	100
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182 (P-6) Jacob & Hochheiser	<b>18.45</b>	µg/m <sup>3</sup>	80
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182 (P-2) Modified West and Gaeke	<b>9.56</b>	µg/m <sup>3</sup>	80
5.	Carbon Monoxide (CO)	IS: 5182 (P-10) Gas Chromatography, RA:2003	<b>0.70</b>	mg/m <sup>3</sup>	4

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

# SOP -As per Laboratory Standard Operating Procedure



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## Test Report

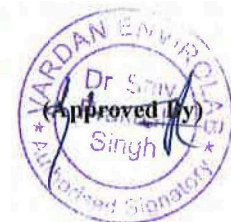
**Sample Number:** VEL/ASD/AN/01 **Report No.:** VEL/AN/2203/15/001  
**Issued To:** M/s ASD RKC J.V. **Format No.:** 7.8 F-01  
**Name & Address of Project:** 40, Laxmi Nagar, Near Sub City Centre, HiranMagri, Sector-8, Udaipur, Rajasthan-313002. **Party Reference No.:** NIL  
**Sample Description:** Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District-Bhiwani, Haryana. **Reporting Date:** 19/03/2022  
**Receipt Date:** 15/03/2022  
**Sample Description:** AMBIENT NOISE LEVEL MONITORING

### 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** : 13/03/2022 to 14/03/2022  
**Time of Monitoring** : 06:00 AM to 06:00AM  
**Surrounding Activity** : Human, Vehicular & Mining Activities  
**Scope of Monitoring** : Regulatory Requirement  
**Sampling & Analysis Protocol** : IS-9989 & CPCB Guidelines  
**Sampling Duration** : 24 Hours  
**Parameter Required** :  $L_{max}$ ,  $L_{min}$ , &  $L_{eq}$

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	$L_{max}$	IS-9989	75.3	61.9	dB(A)
2.	$L_{min}$	IS-9989	49.6	40.6	dB(A)
3.	$L_{eq}$	IS-9989	69.52	60.12	dB(A)
4.	As per #DGMS Limits in dB(*A) Leq (Mining Area)	-	75.0	70.0	dB(A)

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



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## Test Report

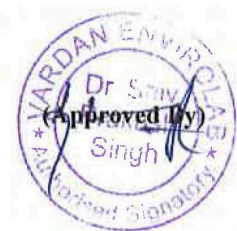
<b>Sample Number:</b>	VEL/ASD/AN/02	<b>Report No.:</b>	VEL/AN/2203/15/002
<b>Issued To:</b>	M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, HiranMagri, Sector-8, Udaipur, Rajasthan-313002.	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Project:</b>	Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District-Bhiwani, Haryana.	<b>Party Reference No.:</b>	NIL
<b>Sample Description:</b>	AMBIENT NOISE LEVEL MONITORING	<b>Reporting Date:</b>	19/03/2022
		<b>Receipt Date:</b>	15/03/2022

### General Information:-

Sample collected by	: Vardan Enviro Lab Representative
Sampling Location	: 100 mtr from mine site
Instrument Used	: Sound Level Meter
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 13/03/2022 to 14/03/2022
Time of Monitoring	: 06:00 AM to 06:00 AM
Surrounding Activity	: Vehicular & Mining Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: IS-9989 & CPCB Guidelines
Sampling Duration	: 24 Hours
Parameter Required	: $L_{max}$ , $L_{min}$ , & $L_{eq}$

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	$L_{max}$	IS-9989	72.5	63.6	dB(A)
2.	$L_{min}$	IS-9989	47.2	39.4	dB(A)
3.	$L_{eq}$	IS-9989	66.42	55.70	dB(A)
4.	As per #DGMS Limits in dB(*A) Leq ( Mining Area)	-	75.0	70.0	dB(A)

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



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## Test Report

<b>Sample Number:</b>	<b>VEL/ASD/AN/03</b>	<b>Report No.:</b>	<b>VEL/AN/2203/15/003</b>
<b>Issued To:</b>	<b>M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, HiranMagri, Sector-8, Udaipur, Rajasthan- 313002.</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
<b>Name &amp; Address of Project:</b>	<b>Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District- Bhiwani, Haryana.</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Sample Description :</b>	<b>AMBIENT NOISE LEVEL MONITORING</b>	<b>Reporting Date:</b>	<b>19/03/2022</b>
		<b>Period of Analysis</b>	<b>15/03/2022to 19/03/2022</b>
		<b>Receipt Date:</b>	<b>15/03/2022</b>

### General Information:-

<b>Sample collected by</b>	: Vardan Enviro Lab Representative
<b>Sampling Location</b>	: <b>Haul Road</b>
<b>Instrument Used</b>	: Sound Level Meter
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>13/03/2022to 14/03/2022</b>
<b>Time of Monitoring</b>	: 06:00 AM to 06:00AM
<b>Surrounding Activity</b>	: Mining & Vehicular Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Sampling &amp; Analysis Protocol</b>	: <b>IS-9989 &amp; CPCB Guidelines</b>
<b>Sampling Duration</b>	: 24 Hours
<b>Parameter Required</b>	: $L_{max}$ , $L_{min}$ , & $L_{eq}$

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	$L_{max}$	IS-9989	73.4	63.7	dB(A)
2.	$L_{min}$	IS-9989	50.6	42.6	dB(A)
3.	$L_{eq}$	IS-9989	64.78	56.37	dB(A)
4.	As per #DGMS Limits in dB(*A) Leq (Mining Area)	-	75.0	70.0	dB(A)

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



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## Test Report

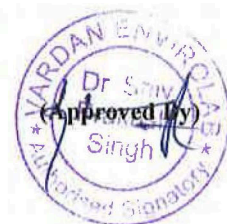
<b>Sample Number:</b>	<b>VEL/ASD/AN/04</b>	<b>Report No.:</b>	<b>VEL/AN/2203/15/004</b>
<b>Issued To:</b>	<b>M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, HiranMagri, Sector-8, Udaipur, Rajasthan- 313002.</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
<b>Name &amp; Address of Project:</b>	<b>Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District- Bhiwani, Haryana.</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Sample Description :</b>	<b>AMBIENT NOISE LEVEL MONITORING</b>	<b>Reporting Date:</b>	<b>19/03/2022</b>
		<b>Period of Analysis</b>	<b>15/03/2022to 19/03/2022</b>
		<b>Receipt Date:</b>	<b>15/03/2022</b>

### General Information:-

<b>Sample collected by</b>	: VardanEnviro Lab Representative
<b>Sampling Location</b>	: <b>Village-Kheribattar</b>
<b>Instrument Used</b>	: Sound Level Meter
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>14/03/2022to 15/03/2022</b>
<b>Time of Monitoring</b>	: 06:00 AM to 06:00AM
<b>Surrounding Activity</b>	: Human & Vehicular Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Sampling &amp; Analysis Protocol</b>	: <b>IS-9989&amp; CPCB Guidelines</b>
<b>Sampling Duration</b>	: 24 Hours
<b>Parameter Required</b>	: $L_{max}$ , $L_{min}$ , & $L_{eq}$

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	$L_{max}$	IS-9989	65.6	54.6	dB(A)
2.	$L_{min}$	IS-9989	44.2	36.6	dB(A)
3.	$L_{eq}$	IS-9989	52.35	43.85	dB(A)
4.	<b>CPCB Limits in dB(A) Leq ( Residential Area)</b>	-	55.0	45.0	dB(A)

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



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## Test Report

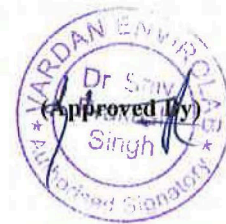
<b>Sample Number:</b>	<b>VEL/ASD/AN/05</b>	<b>Report No.:</b>	<b>VEL/AN/2203/15/005</b>
<b>Issued To:</b>	<b>M/s ASD RKC J.V.</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
	<b>40, Laxmi Nagar, Near Sub City Centre,</b>	<b>Party Reference No.:</b>	<b>NIL</b>
	<b>HiranMagri, Sector-8, Udaipur, Rajasthan-</b>	<b>Reporting Date:</b>	<b>19/03/2022</b>
	<b>313002.</b>		
<b>Name &amp; Address of Project:</b>	<b>Stone Mine (Associated Minor Mineral),</b>	<b>Period of Analysis</b>	<b>15/03/2022to 19/03/2022</b>
	<b>Kheribattar Plot-2, Tehsil-Dadri, District-</b>	<b>Receipt Date:</b>	<b>15/03/2022</b>
	<b>Bhiwani, Haryana.</b>		
<b>Sample Description :</b>	<b>AMBIENT NOISE LEVEL MONITORING</b>		

### General Information:-

<b>Sample collected by</b>	: VardanEnviro Lab Representative
<b>Sampling Location</b>	: <b>Loading Area</b>
<b>Instrument Used</b>	: Sound Level Meter
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>14/03/2022to 15/03/2022</b>
<b>Time of Monitoring</b>	: 06:00 AM to 06:00AM
<b>Surrounding Activity</b>	: Mining & Loading Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Sampling &amp; Analysis Protocol</b>	: <b>IS-9989&amp; CPCB Guidelines</b>
<b>Sampling Duration</b>	: 24 Hours
<b>Parameter Required</b>	: $L_{max}$ , $L_{min}$ , & $L_{eq}$

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	$L_{max}$	IS-9989	<b>76.8</b>	<b>63.6</b>	dB(A)
2.	$L_{min}$	IS-9989	<b>51.6</b>	<b>42.7</b>	dB(A)
3.	$L_{eq}$	IS-9989	<b>67.64</b>	<b>56.41</b>	dB(A)
4.	As per #DGMS Limits in dB(*A) Leq ( Mining Area)	-	<b>75.0</b>	<b>70.0</b>	dB(A)

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



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## Test Report

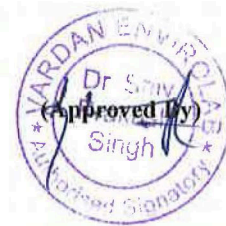
<b>Sample Number:</b>	<b>VEL/ASD/AN/06</b> M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, HiranMagri, Sector-8, Udaipur, Rajasthan- 313002.	<b>Report No.:</b>	<b>VEL/AN/2203/15/006</b>
<b>Name &amp; Address of Project:</b>	<b>Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District- Bhiwani, Haryana.</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
<b>Sample Description :</b>	<b>AMBIENT NOISE LEVEL MONITORING</b>	<b>Party Reference No.:</b>	<b>NIL</b>
		<b>Reporting Date:</b>	<b>19/03/2022</b>
		<b>Period of Analysis</b>	<b>15/03/2022to 19/03/2022</b>
		<b>Receipt Date:</b>	<b>15/03/2022</b>

### General Information:-

<b>Sample collected by</b>	: Vardan Enviro Lab Representative
<b>Sampling Location</b>	: <b>Village-Kheribora</b>
<b>Instrument Used</b>	: Sound Level Meter
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>14/03/2022to 15/03/2022</b>
<b>Time of Monitoring</b>	: 06:00 AM to 06:00AM
<b>Surrounding Activity</b>	: Human, Vehicular Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Sampling &amp; Analysis Protocol</b>	: <b>IS-9989&amp; CPCB Guidelines</b>
<b>Sampling Duration</b>	: 24 Hours
<b>Parameter Required</b>	: $L_{max}$ , $L_{min}$ , & $L_{eq}$

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	$L_{max}$	IS-9989	55.9	49.6	dB(A)
2.	$L_{min}$	IS-9989	41.5	35.5	dB(A)
3.	$L_{eq}$	IS-9989	50.67	41.23	dB(A)
4.	<b>CPCB Limits in dB(*A) Leq ( Residential Area)</b>	-	55.0	45.0	dB(A)

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



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## Test Report

<b>Sample Number:</b>	<b>VEL/ASD/S/01</b>	<b>Report No.:</b>	<b>VEL/S/2203/15/001</b>
<b>Issued To:</b>	<b>M/s ASD RKC J.V.</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
	<b>40, Laxmi Nagar, Near Sub City Centre,</b>	<b>Party Reference</b>	<b>NIL</b>
	<b>Hiran Magri, Sector-8, Udaipur, Rajasthan-</b>	<b>No.:</b>	
	<b>313002.</b>	<b>Reporting Date:</b>	<b>19/03/2022</b>
<b>Name &amp; Address of Project:</b>	<b>Stone Mine (Associated Minor Mineral),</b>	<b>Period of Analysis:</b>	<b>15/03/2022to 19/03/2022</b>
	<b>Kheribattar Plot-2, Tehsil-Dadri, District-</b>	<b>Receipt Date:</b>	<b>15/03/2022</b>
	<b>Bhiwani, Haryana.</b>	<b>Sampling Date:</b>	<b>14/03/2022</b>
<b>Sample Description:</b>	<b>Soil Sample</b>	<b>Type of Sampling:</b>	<b>Composite</b>
<b>Sampling Location:</b>	<b>Near Mine Site</b>	<b>Sampling Quantity:</b>	<b>2.0 Kg</b>
<b>Sampling &amp; Analysis Protocol:</b>	<b>IS 2720, USEPA 3050B &amp; SOP</b>	<b>Packing Status:</b>	<b>Temp Sealed</b>

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 °C)	IS : 2720 (P-26) by pH Meter	7.68	--
2.	Conductivity	IS:14767, 2000, RA	0.269	mS/cm
3.	Soil Texture	SOP , SP-87,Issue No.-01	Sandy loam	--
4.	Color	SOP , SP-78,Issue No.-01	Yellowish Brown	--
5.	Water holding capacity	SOP , SP-81,Issue No.-01	32.52	%
6.	Bulk density	SOP , SP-80,Issue No.-01	1.49	gm/cc
7.	Chloride (as Cl)	SOP , SP-85,Issue No.-01	32.42	mg/100g
8.	Calcium (as Ca)	SOP , SP-82,Issue No.-01	25.35	mg/100g
9.	Sodium (as Na)	SOP , SP-84,Issue No.-01	46.15	mg/kg
10.	Potassium (as K)	SOP , SP-84,Issue No.-01	128.41	kg/hect.
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method, RA	0.36	%
12.	Magnesium (as Mg)	SOP , SP-83,Issue No.-01	11.86	mg/100g
13.	Available Nitrogen (as N)	IS:14684 Distillation Method, RA	126.87	kg./hect.
14.	Available Phosphorus (as P)	SOP , SP-86,Issue No.-01	18.11	kg./hect.
15.	Zinc (as Zn)	USEPA 3050B	0.98	mg/kg
16.	Manganese (as Mn)	USEPA 3050B	4.32	mg/kg
17.	Lead (as Pb)	USEPA 3050B	0.53	mg/kg
18.	Cadmium (as Cd)	USEPA 3050B	0.47	mg/kg
19.	Chromium (as Cr)	USEPA 3050B	0.23	mg/kg
20.	Copper (as Cu)	USEPA 3050B	1.01	mg/kg

\*SOP-Laboratory standard operating procedure.



**NOTE:** a) The results listed refer only to the tested samples & applicable parameters  
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## Test Report

<b>Sample Number:</b>	VEL/ASD/S/02	<b>Report No.:</b>	VEL/S/2203/15/002
<b>Issued To:</b>	M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, Hiran Magri, Sector-8, Udaipur, Rajasthan-313002.	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Project:</b>	Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District-Bhiwani, Haryana.	<b>Party Reference No.:</b>	NIL
<b>Sample Description:</b>	Soil Sample	<b>Reporting Date:</b>	19/03/2022
<b>Sampling Location:</b>	Village - Kheribora	<b>Period of Analysis:</b>	15/03/2022to 19/03/2022
<b>Sampling &amp; Analysis Protocol:</b>	IS 2720, USEPA 3050B & SOP	<b>Receipt Date:</b>	15/03/2022
		<b>Sampling Date:</b>	14/03/2022
		<b>Type of Sampling:</b>	Composite
		<b>Sampling Quantity:</b>	2.0 Kg
		<b>Packing Status:</b>	Temp Sealed

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 °C)	IS : 2720 (P-26) by pH Meter	7.70	--
2.	Conductivity	IS:14767, 2000, RA	0.350	mS/cm
3.	Soil Texture	SOP , SP-87,Issue No.-01	Sandy loam	--
4.	Color	SOP , SP-78,Issue No.-01	Brownish Black	--
5.	Water holding capacity	SOP , SP-81,Issue No.-01	34.18	%
6.	Bulk density	SOP , SP-80,Issue No.-01	1.43	gm/cc
7.	Chloride as Cl	SOP , SP-85,Issue No.-01	36.74	mg/100g
8.	Calcium as Ca	SOP , SP-82,Issue No.-01	32.47	mg/100g
9.	Sodium as Na	SOP , SP-84,Issue No.-01	41.25	mg/kg
10.	Potassium as K	SOP , SP-84,Issue No.-01	134.56	kg/hect.
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method, RA	0.43	%
12.	Magnesium as Mg	SOP , SP-83,Issue No.-01	16.42	mg/100g
13.	Available Nitrogen as N	IS:14684 Distillation Method, RA	142.65	kg/hect.
14.	Available Phosphorus	SOP , SP-86,Issue No.-01	26.47	kg/hect.
15.	Zinc (as Zn)	USEPA 3050B	1.00	mg/kg
16.	Manganese (as Mn)	USEPA 3050B	4.45	mg/kg
17.	Lead (as Pb)	USEPA 3050B	0.50	mg/kg
18.	Cadmium (as Cd)	USEPA 3050B	0.46	mg/kg
19.	Chromium (as Cr)	USEPA 3050B	0.22	mg/kg
20.	Copper (as Cu)	USEPA 3050B	1.10	mg/kg

\*SOP-Laboratory standard operating procedure.

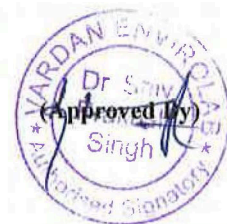


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## Test Report

<b>Sample Number:</b>	VEL/ASD/W/01	<b>Report No.:</b>	VEL/W/2111/11/001
<b>Issued To:</b>	M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, HiranMagri, Sector-8, Udaipur, Rajasthan-313002.	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Project</b>	Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District- Bhiwani, Haryana.	<b>Party Reference No.:</b>	NIL
<b>Sample Description:</b>	Ground Water Sample	<b>Reporting Date:</b>	15/11/2021
<b>Sampling Location:</b>	Near Mine Site	<b>Period of Analysis:</b>	11/11/2021 to 15/11/2021
<b>Sample Collected by</b>	Vardan Enviro Lab representative	<b>Receipt Date:</b>	11/11/2021
<b>Sampling &amp; Analysis Protocol:</b>	IS 3025 & APHA, 23 Edt. 2017	<b>Sampling Date:</b>	10/11/2021
		<b>Sampling Quantity:</b>	2.0 Ltr
		<b>Sampling Type:</b>	Grab
		<b>Preservation:</b>	Ice Box
		<b>Parameter Required:</b>	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 °C)	APHA ,4500-H <sup>+</sup> B Electrometric Method	7.55	--	6.5 to 8.5	No Relaxation
2.	Colour	APHA ,2120 B, Visual Comparison Method	*BDL (**DL 1.0 Hazen)	Hazen	5	15
3.	Turbidity	APHA, 2130 B, Nephelometric Method	*BDL (**DL 1.0 NTU)	NTU	1	5
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--	Agreeable	Agreeable
5.	Taste	APHA , 2160 B, Threshold Test Method	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	APHA , 2340 C, EDTA Titrimetric Method	450.00	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	133.85	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	APHA , 2320 B, Titrimetric Method	482.00	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl <sup>-</sup> B, Argentometric Method	95.50	mg/l	250	1000
10.	Cyanide as CN	APHA , 4500 CN <sup>-</sup> D	*BDL(**DL 0.02 mg/l)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	28.20	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	733.00	mg/l	500	2000
13.	Sulphate as SO <sub>4</sub>	APHA , 4500 E, Turbidimetric Method	54.79	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F D, SPADNS Method	0.45	mg/l	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	IS 3025 (P-34) ,Chromotropic Method	22.43	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.32	mg/l	1.0	No relaxation
17.	Aluminum as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.05	No Relaxation



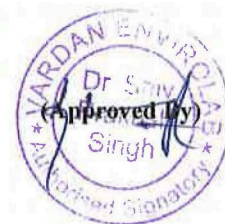
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## Test Report

Sample No.: VEL/ASD/W/01			Report No: VEL/W/2111/11/001			
S. No	Parameter	Test-Method	Result	Unit	Limits of IS:10500-2012	
					Requirement (Acceptable) Limit	Permissible limit in the Absence of Alternate Source
20.	Conductivity (at 25 <sup>0</sup> C)	APHA, 2510 B, Conductivity Meter Method	1128	µS/cm	----	----
21.	Phenolic Compounds	APHA, 5530 C Chloroform Extraction Method	*BDL(**DL 0.0004 mg/l)	mg/l	0.001	0.002
22.	Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05mg/l)	mg/l	1.0	No Relaxation
23.	Anionic Detergents as MBAS	Annex K of IS 13428, IS 3025(P-68)	*BDL(**DL 0.05 mg/l)	mg/l	0.2	1.0
24.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	1.38	mg/l	5	15
25.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.10	mg/l	0.05	1.5
26.	Manganese as Mn	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.1	0.3
27.	Cadmium as Cd	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.003	No Relaxation
28.	Lead as Pb	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
29.	Selenium as Se	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.001 mg/l)	mg/l	0.01	No Relaxation
30.	Arsenic as As	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
31.	Mercury as Hg	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.0005 mg/l)	mg/l	0.001	No Relaxation
32.	Total Coliform	IS 1622,1981, RA-2019	<2	MPN/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 1622,1981, RA-2019	Absent	MPN/100ml	Shall not be detectable in any 100 ml sample	

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



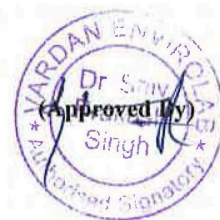
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## Test Report

<b>Sample Number:</b>	VEL/AR/W/02	<b>Report No.:</b>	VEL/W/2111/11/002
<b>Issued To:</b>	M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, HiranMagri, Sector-8, Udaipur, Rajasthan-313002.	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Project</b>	Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District- Bhiwani, Haryana.	<b>Party Reference No.:</b>	NIL
<b>Sample Description:</b>	Ground Water Sample	<b>Reporting Date:</b>	15/11/2021
<b>Sampling Location:</b>	Village- Kheribora	<b>Period of Analysis:</b>	11/11/2021 to 15/11/2021
<b>Sample Collected by</b>	Vardan Enviro Lab representative	<b>Receipt Date:</b>	11/11/2021
<b>Sampling &amp; Analysis Protocol:</b>	IS 3025 & APHA, 23 Edt. 2017	<b>Sampling Date:</b>	10/11/2021
		<b>Sampling Quantity:</b>	2.0 Ltr
		<b>Sampling Type:</b>	Grab
		<b>Preservation:</b>	Ice Box
		<b>Parameter Required:</b>	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 °C)	APHA ,4500-H <sup>+</sup> B Electrometric Method	7.66	--	6.5 to 8.5	No Relaxation
2.	Colour	APHA ,2120 B, Visual Comparison Method	*BDL (**DL 1.0 Hazen)	Hazen	5	15
3.	Turbidity	APHA, 2130 B, Nephelometric Method	*BDL (**DL 1.0 NTU)	NTU	1	5
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--	Agreeable	Agreeable
5.	Taste	APHA , 2160 B, Threshold Test Method	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	APHA , 2340 C, EDTA Titrimetric Method	453.00	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	142.62	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	APHA , 2320 B, Titrimetric Method	493.00	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl <sup>-</sup> B, Argentometric Method	99.41	mg/l	250	1000
10.	#Cyanide as CN	APHA , 4500 CN <sup>-</sup> D	*BDL(**DL 0.02 mg/l)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	23.61	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	763.00	mg/l	500	2000
13.	Sulphate as SO <sub>4</sub>	APHA , 4500 E, Turbidimetric Method	57.63	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F D, SPADNS Method	0.42	mg/l	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	IS 3025 (P-34) ,Chromotropic Method	26.96	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.29	mg/l	1.0	No relaxation
17.	Aluminum as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.05	No Relaxation



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## Test Report

Sample No.: VEL/ASD/W/02			Report No: VEL/W/2111/11/002			
S. No	Parameter	Test-Method	Result	Unit	Limits of IS:10500-2012	
					Requirement (Acceptable) Limit	Permissible limit in the Absence of Alternate Source
20.	Conductivity (at 25 <sup>0</sup> C)	APHA, 2510 B, Conductivity Meter Method	1174	µS/cm	----	----
21.	Phenolic Compounds	APHA, 5530 C Chloroform Extraction Method	*BDL(**DL 0.0004 mg/l)	mg/l	0.001	0.002
22.	Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05mg/l)	mg/l	1.0	No Relaxation
23.	Anionic Detergents as MBAS	Annex K of IS 13428, IS 3025(P-68)	*BDL(**DL 0.05 mg/l)	mg/l	0.2	1.0
24.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	1.26	mg/l	5	15
25.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.14	mg/l	0.05	1.5
26.	Manganese as Mn	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.1	0.3
27.	Cadmium as Cd	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.003	No Relaxation
28.	Lead as Pb	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
29.	Selenium as Se	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.001 mg/l)	mg/l	0.01	No Relaxation
30.	Arsenic as As	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
31.	Mercury as Hg	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.0005 mg/l)	mg/l	0.001	No Relaxation
32.	Total Coliform	IS 1622,1981, RA-2019	<2	MPN/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 1622,1981, RA-2019	Absent	MPN/100ml	Shall not be detectable in any 100 ml sample	

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



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## Test Report

<b>Sample Number:</b>	VEL/ASD/W/01	<b>Report No.:</b>	VEL/W/2201/11/001
<b>Issued To:</b>	M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, HiranMagri, Sector-8, Udaipur, Rajasthan-313002.	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Project</b>	Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District- Bhiwani, Haryana.	<b>Party Reference No.:</b>	NIL
<b>Sample Description:</b>	Ground Water Sample	<b>Reporting Date:</b>	15/01/2022
<b>Sampling Location:</b>	Near Mine Site	<b>Period of Analysis:</b>	11/01/2022 to 15/01/2022
<b>Sample Collected by</b>	Vardan Enviro Lab representative	<b>Receipt Date:</b>	11/01/2022
<b>Sampling &amp; Analysis Protocol:</b>	IS 3025 & APHA, 23 <sup>rd</sup> Edition 2017	<b>Sampling Date:</b>	10/01/2022
		<b>Sampling Quantity:</b>	2.0 Ltr
		<b>Sampling Type:</b>	Grab
		<b>Preservation:</b>	Ice Box
		<b>Parameter Required:</b>	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 °C)	APHA ,4500-H <sup>+</sup> B Electrometric Method	7.57	--	6.5 to 8.5	No Relaxation
2.	Colour	APHA ,2120 B, Visual Comparison Method	*BDL (**DL 1.0 Hazen)	Hazen	5	15
3.	Turbidity	APHA, 2130 B, Nephelometric Method	*BDL (**DL 1.0 NTU)	NTU	1	5
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--	Agreeable	Agreeable
5.	Taste	APHA , 2160 B, Threshold Test Method	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	APHA , 2340 C, EDTA Titrimetric Method	370.00	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	86.42	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	APHA , 2320 B, Titrimetric Method	399.00	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl <sup>-</sup> B, Argentometric Method	97.60	mg/l	250	1000
10.	Cyanide as CN	IS:3025 (P-27)	*BDL(**DL 0.02 mg/l)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	35.08	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	640.00	mg/l	500	2000
13.	Sulphate as SO <sub>4</sub>	APHA , 4500 E, Turbidimetric Method	51.96	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F D, SPADNS Method	0.34	mg/l	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	IS 3025 (P-34) ,Chromotropic Method	20.42	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.14	mg/l	1.0	No relaxation
17.	Aluminum as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.05	No Relaxation



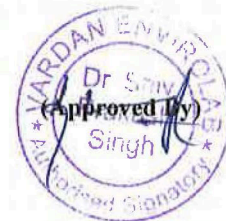
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## Test Report

Sample No.: VEL/ASD/W/01			Report No: VEL/W/2201/11/001			
S. No	Parameter	Test-Method	Result	Unit	Limits of IS:10500-2012	
					Requirement (Acceptable) Limit	Permissible limit in the Absence of Alternate Source
20.	Conductivity (at 25 °C)	APHA, 2510 B, Conductivity Meter Method	984	µS/cm	—	—
21.	Phenolic Compounds	APHA, 5530 Chloroform Extraction Method	*BDL(**DL 0.0004 mg/l)	mg/l	0.001	0.002
22.	Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)	mg/l	1.0	No Relaxation
23.	Anionic Detergents as MBAS	Annex K, IS 13428/IS 3025 (P-68)	*BDL(**DL 0.05 mg/l)	mg/l	0.2	1.0
24.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	1.10	mg/l	5	15
25.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.09	mg/l	0.05	1.5
26.	Manganese as Mn	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.1	0.3
27.	Cadmium as Cd	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.003	No Relaxation
28.	Lead as Pb	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
29.	Selenium as Se	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.001 mg/l)	mg/l	0.01	No Relaxation
30.	Arsenic as As	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
31.	Mercury as Hg	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.0005 mg/l)	mg/l	0.001	No Relaxation
32.	Total Coliform	IS 1622,1981, RA-2019	<2	/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 1622,1981, RA-2019	Absent	/100ml	Shall not be detectable in any 100 ml sample	

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

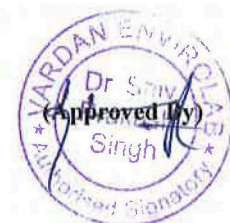


NOTE: a) The results listed refer only to the tested samples & applicable parameters  
 b) Total liabilities of our lab will be restricted to the invoice amount only  
 c) The sample will be destroyed after retention time unless otherwise specified  
 d) This report is not to be reproduced wholly or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

## Test Report

<b>Sample Number:</b>	VEL/AR/W/02	<b>Report No.:</b>	VEL/W/2201/11/002
<b>Issued To:</b>	M/s ASD RKC J.V. 40, Laxmi Nagar, Near Sub City Centre, HiranMagri, Sector-8, Udaipur, Rajasthan-313002.	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Project</b>	Stone Mine (Associated Minor Mineral), Kheribattar Plot-2, Tehsil-Dadri, District- Bhiwani, Haryana.	<b>Party Reference No.:</b>	NIL
<b>Sample Description:</b>	Ground Water Sample	<b>Reporting Date:</b>	15/01/2022
<b>Sampling Location:</b>	Village- Kheribora	<b>Period of Analysis:</b>	11/01/2022 to 15/01/2022
<b>Sample Collected by</b>	VardanEnviro Lab representative	<b>Receipt Date:</b>	11/01/2022
<b>Sampling &amp; Analysis Protocol:</b>	IS 3025 & APHA, 23 <sup>rd</sup> Edition 2017	<b>Sampling Date:</b>	10/01/2022
		<b>Sampling Quantity:</b>	2.0 Ltr
		<b>Sampling Type:</b>	Grab
		<b>Preservation:</b>	Ice Box
		<b>Parameter Required:</b>	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 °C)	APHA ,4500-H <sup>+</sup> B Electrometric Method	7.61	--	6.5 to 8.5	No Relaxation
2.	Colour	APHA ,2120 B, Visual Comparison Method	*BDL (**DL 1.0 Hazen)	Hazen	5	15
3.	Turbidity	APHA, 2130 B, Nephelometric Method	*BDL (**DL 1.0 NTU)	NTU	1	5
4.	Odour	APHA, 2150 B , Threshold Test Method	Agreeable	--	Agreeable	Agreeable
5.	Taste	APHA , 2160 B, Threshold Test Method	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	APHA , 2340 C, EDTA Titrimetric Method	383.00	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	90.74	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	APHA , 2320 B, Titrimetric Method	407.00	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl <sup>-</sup> B, Argentometric Method	99.42	mg/l	250	1000
10.	Cyanide as CN	APHA , 4500 CN <sup>-</sup> D	*BDL (**DL 0.02 mg/l)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	38.05	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	662.00	mg/l	500	2000
13.	Sulphate as SO <sub>4</sub>	APHA , 4500 E, Turbidimetric Method	55.96	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F D, SPADNS Method	0.36	mg/l	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	IS 3025 (P-34) ,Chromotropic Method	24.75	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.18	mg/l	1.0	No relaxation
17.	Aluminum as Al	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.002 mg/l)	mg/l	0.05	No Relaxation



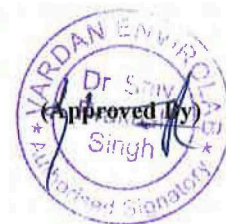
**NOTE:** a) The results listed refer only to the tested samples & applicable parameters  
 b) Total liabilities of our lab will be restricted to the invoice amount only  
 c) The sample will be destroyed after retention time unless otherwise specified  
 d) This report is not to be reproduced wholly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



## Test Report

Sample No.: VEL/ASD/W/02			Report No: VEL/W/2201/11/002			
S. No	Parameter	Test-Method	Result	Unit	Limits of IS:10500-2012	
					Requirement (Acceptable) Limit	Permissible limit in the Absence of Alternate Source
20.	Conductivity (at 25 °C)	APHA, 2510 B, Conductivity Meter Method	1019	µS/cm	—	—
21.	Phenolic Compounds	APHA, 5530 Chloroform Extraction Method	*BDL(**DL 0.0004 mg/l)	mg/l	0.001	0.002
22.	Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)	mg/l	0.5	No Relaxation
23.	Anionic Detergents as MBAS	Annex K, IS 13428/IS 3025 (P-68)	*BDL(**DL 0.05 mg/l)	mg/l	0.2	1.0
24.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	1.16	mg/l	5	15
25.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.12	mg/l	0.05	1.5
26.	Manganese as Mn	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.1	0.3
27.	Cadmium as Cd	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.003	No Relaxation
28.	Lead as Pb	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
29.	Selenium as Se	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.001 mg/l)	mg/l	0.01	No Relaxation
30.	Arsenic as As	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
31.	Mercury as Hg	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.0005 mg/l)	mg/l	0.001	No Relaxation
32.	Total Coliform	IS 1622,1981, RA-2019	<2	/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 1622,1981, RA-2019	Absent	/100ml	Shall not be detectable in any 100 ml sample	

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



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

[www.vardan.co.in](http://www.vardan.co.in)







Phone +91-294-2483638  
+91-294-2486274  
Fax +91-294-2483830  
Mob No. +91 70566 67112  
+91 70566 67122

# ASD - RKC J.V.

VILLAGE - KHERI BATTAR, TEHSIL - CHARKHI DADRI, DISTT. - CHARKHI DADRI (HR.)

Date: 28 October, 2021  
Date : \_\_\_\_\_

Ref.

To

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

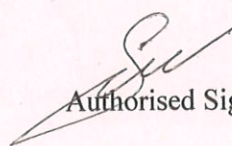

**Sub: Submission of Six Monthly Compliance Report of Stipulated Conditions of Environment Clearance for proposed stone along with associates Minor Minerals at Kheribattar plot -2 over an area 42.0 Ha tehsil- Dadri District- Bhiwani, Haryana for Submission period of Dec 2021.**

Ref. No. 1. SEIAA/HR/2016/875 dated: 04.10.2016  
2. 13-27/2016(ENV)/413 dated: 02.12.2019

Sir,

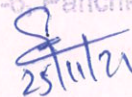
In accordance to the EC letter as above stated received from State Environment Impact Assessment Authority (SEIAA) vide letter SEIAA/HR/2016/875 dated: 04.10.2016. We are submitting herewith six monthly compliance report of stipulated conditions of Environment Clearance (Soft only) along with laboratory 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 ASD RKC JV.

  
Authorised Signatory, 

Name - Sanjeev Kumar Singh  
Designation- Business Head  
E-mail - singh\_sanjiv@rediffmail.com  
Contact No.- +91 98330-80030

Haryana State Pollution Control Board  
C-11, Sector-6, Panchkula

  
25/10/21

Copy to:

1. State Environment Impact Assessment Authority (SEIAA), Bay No. 55-58, Paryatan Bhavan,  
Sector-2, Panchkula, Haryana.

2. The Chairmen, Haryana State Pollution Control Board (HSPCB), Sector-6, Panchkula





Phone +91-294-2483638  
+91-294-2486274  
Fax +91-294-2483830  
Mob No. +91 70566 67112  
+91 70566 67122

# ASD - RKC J.V.

VILLAGE - KHERI BATTAR, TEHSIL - CHARKHI DADRI, DISTT. - CHARKHI DADRI (HR.)

Date: 28 October, 2021

Date: 28/11/2021

Ref.

To

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

भारत सरकार / Government of India  
पर्यावरण, वन एवं जलवायु परिवर्तन विभाग  
Min of Environment, Forests & Climate Change  
बेज नं. 24-25, सेक्टर 31-ए  
चंडीगढ़/Chandigarh

**Sub: Submission of Six Monthly Compliance Report of Stipulated Conditions of Environment Clearance for proposed stone along with associates Minor Minerals at Kheribattar plot -2 over an area 42.0 Ha tehsil- Dadri District- Bhiwani, Haryana for Submission period of Dec 2021.**

Ref. No. 1. SEIAA/HR/2016/875 dated: 04.10.2016  
2. 13-27/2016(ENV)/413 dated: 02.12.2019

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For M/s ASD RKC JV.

Authorised Signatory,



Name - Sanjeev Kumar Singh  
Designation- Business Head  
E-mail - singh\_sanjiv@rediffmail.com  
Contact No.- +91 98330-80030

Copy to:

1. State Environment Impact Assessment Authority (SEIAA), Bay No. 55-58, Paryatan Bhavan, Sector-2, Panchkula, Haryana.
2. The Chairmen, Haryana State Pollution Control Board (HSPCB), Sector-6, Panchkula





# ASD - RKC J.V.

VILLAGE - KHERI BATTAR, TEHSIL - CHARKHI DADRI, DISTT. - CHARKHI DADRI (HR.)

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+91-294-2486274  
Fax +91-294-2483830  
Mob No. +91 70566 67112  
+91 70566 67122

Ref.

Date: ~~28 October, 2021~~  
Date: 25/11/2021

To

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

**Sub: Submission of Six Monthly Compliance Report of Stipulated Conditions of Environment Clearance for proposed stone along with associates Minor Minerals at Kheribattar plot -2 over an area 42.0 Ha tehsil- Dadri District- Bhiwani, Haryana for Submission period of Dec 2021.**

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For M/s ASD RKC JV.

Authorised Signatory,



Name - Sanjeev Kumar Singh  
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2. The Chairmen, Haryana State Pollution Control Board (HSPCB), Sector-6, Panchkula





**ASD-RKC J V**

**Kheri Battar Stone Mines-2**

**Charkhi Dadri, Haryana**

**Drilling Machine Photo**



















## Water Sprinkling Photographs







## Form 59

[See rules 115 (2)]

## Pollution Under Control Certificate

Issued By  
Government of Haryana

Date : 14/10/2021  
Time : 15:29:52 PM  
Validity upto : 13/10/2022



Certificate SL. No. : HR06300240001648  
Registration No. : HR55AJ0297  
Date of Registration : 03/Feb/2021  
Month & Year of Manufacturing : December-2020  
Mobile Number : \*\*\*\*\*6930  
Emission Norms : BHARAT STAGE VI  
Fuel : DIESEL  
VCI Code : HR0630024  
Fees : Rs.100,0(GST as applicable)  
Observation : No

*Akhil*

## Vehicle Photo with Registration plate

70 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	0.66

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

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

Authorised Signature with stamp of PUC operator  
(Optional for State)



ALL INDIA VALID  
WITH DELHI



All Over India Valid

प्रदूषण नियन्त्रित प्रमाण पत्र  
Pollution Under Control Certificate



ALL INDIA VALID  
WITH DELHI

अधिकृत परिवहन आयुक्त, हरियाणा

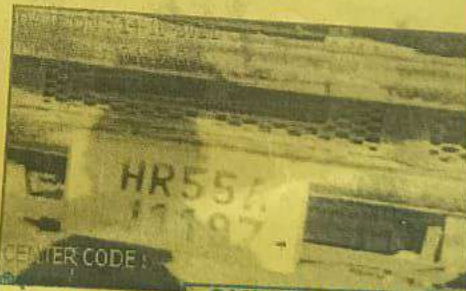
Authorised By :- Transport Commissioner Haryana

आइडलिंग पर HSU (% आयतन)  
HSU level at Idling (% volume)

प्रमाणित किया जाता है कि इस  
वाहन का HSU उत्सर्जन  
स्तर कं०मो०वा० नियम 1989  
के नियम 115(2) के अनुसार

यदि आपका कोई शिकायत है तो  
कृपया सचिव, प्रादेशिक, परिवहन  
प्राधिकारी चरखी दादरी (हरि०) को लिखें  
In case of any  
Comments/complaint  
please write to  
Secretary, Regional  
Transport Authority  
Charkhi Dadri (Haryana)

Sr. No.	CYCLE		RPM Max.	Temp.	K Value	O <sub>2</sub> Temp
	RPM Min.	RPM Max.				
1	950	1790	59			
2	550	1810	22.83	00.50	62	
3	960	1800	23.32	00.60	61	
4	530	1800	22.84	00.60	63	
5	520	1790	22.83	00.60	63	
MEAN		PASS	23.21	00.61		



Authorised Centre Code **CKD-D HR0840015**  
Shri Balaji Pollution Cheking Center  
C/o :- S.S Filling Station, Achina Taal, Delhi Road  
Distt. Charkhi Dadri (Hr.)

हस्ताक्षरकर्ता  
Authorised Signatory

नाम  
Name



Prescribe Pollution Checking charges: any Diesel Vehicle = Rs. 100/- (3 Month) 1st May 2016

संख्या  
Sr. No.

प्रमाण पत्र संख्या  
PUCC No.

DL

वाहन पंजी संख्या  
Vehicle R.No.

मेक  
Make

मॉडल  
Model

वर्ग  
Category

इंजिन स्ट्रोक  
Engine Stroke

वर्ष  
Year

ईंधन  
Fuel

दिनांक  
Date

समय  
Time

वैधता  
Valid upto

00000999

HR55AJ1197

TATA

4825TK

TRUCK

Bharat Stage IV

3-2-2021

DIESEL

14-10-2021

04:17 PM

13-10-2022



Form 59

[See rules 115 (2)]

**Pollution Under Control Certificate**

Authorised By :  
Government of Haryana

Date : 10/07/2021  
Time : 14:06:37 PM  
Validity upto : 09/07/2022



Certificate SL. No. : HF05600330000817  
Registration No. : HR66B7766  
Date of Registration : 08/Jun/2021  
Month & Year of Manufacturing : March-2021  
Valid Mobile Number : \*\*\*\*\*1478  
Emission Norms : BHARAT STAGE VI  
Fuel : DIESEL  
PUC Code : HR0660033  
GSTIN :  
Fees : Rs.100.00(GST 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	0.2

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

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

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



Form 59  
[See rules 115 (2)]

**Pollution Under Control Certificate**

Authorised By  
Government of Haryana

Date : 27/01/2022  
Time : 16:22:39 PM  
Validity upto : 26/01/2023



Certificate Sl. No. : HR06300480000999  
Registration No. : HR55AJ1415  
Date of Registration : 01/Feb/2021  
Month & Year of Manufacturing : December 2020  
Valid Mobile Number : \*\*\*\*\*6300  
Emission Norms : BHARAT STAGE VI  
Fuel : DIESEL  
PUC Code : HR0630048  
GSTIN :  
Fees :  
MIL observation : (GST as applicable)  
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	
Smoke Density	Lambda	-	1 ± 0.03	
	Light absorption coefficient	1/metre	1.62	0.74

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

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

Authorised Signature with stamp of PUC operator  
60mm x 20 mm P.R. Pollution Check Center.

Near Highway Filling station,  
Indian Oil Petrol Pump Gurgaon Road,  
Village-Dulina (Jhajjar) Haryana



Form 59

[See rules 115 (2)]

**Pollution Under Control Certificate**

Authorised By  
Government of Haryana

Date : 27/01/2022  
Time : 16:22:39 PM  
Validity upto : 26/01/2023



Certificate SL No. : HR06300480000999  
Registration No. : HR55AJ1415  
Date of Registration : 01/Feb/2021  
Month & Year of Manufacturing : December-2020  
Valid Mobile Number : \*\*\*\*\*6300  
Emission Norms : BHARAT STAGE VI  
Fuel : DIESEL  
PUC Code : HR0630048  
GSTIN :  
Fees : (GST 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		
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	RPM	RPM	2500 ± 200	
Smoke Density	Lambda	-	1 ± 0.03	
	Light absorption coefficient	1/metre	1.62	0.74

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

Authorised Signature with stamp of PUC operator  
60mm x 20 mm P. R. Pollution Check Center.

Near Highway Filling station,  
Indian Oil Petrol Pump Gurgaon Road,  
Village-Dulna (Jhajjar) Haryana







बपीड पोस्ट द्वारा

Telephone 0120 2711597  
(office) 0120 2789483  
Fax 0120 2711597  
website: www.dgmsindia.in  
email: dir.gzr@dgms.gov.in

भारत सरकार / Government of India

श्रम एवं रोजगार मंत्रालय / Ministry of Labour & Employment  
खान सुरक्षा महानिदेशालय / Directorate General of Mines Safety  
गाजियाबाद क्षेत्र गाजियाबाद / Ghaziabad Region, Ghaziabad

कमरा संख्या 101-102, प्रथम तल ब्लॉक - जी  
बी., जी.ओ. कॉम्प्लेक्स II, हापुड रोड गाजियाबाद-201002

संख्या: S29024/GR/HR/BHIWANI/0171 /Per 2803 दिनांक 15/11/2016

प्रेषक

खान सुरक्षा निदेशक,  
गाजियाबाद क्षेत्र, गाजियाबाद।

सेवा में,

मैसर्स एसडी-आरकेसी जेवी

मालिक- खेरीबतर प्लॉट नं० 2 स्टोन खान,

40, लक्ष्मी नगर, हिरण मागरी, सेक्टर-8

उदयपुर-313002(राजस्थान)

**विषय:** धातुीक खान विनियम, 1961 के विनियम 106(2)(जी) के अंतर्गत मैसर्स एसडी-आरकेसी जेवी की खेरीबतर प्लॉट नं० 2 स्टोन खान में डीप होल ड्रिलिंग और ब्लास्टिंग के साथ भारी यंत्रों के प्रयोग की अनुमति।

महोदय

कृपया उपरोक्त विषय पर अपने दिनांक 22.10.2016 के पत्रांक शून्य का संदर्भ लें और उसके साथ संलग्न दिनांक 22.10.2016 का प्लान सं. KBSM/ASD-RKC/SWP/01 का संदर्भ लें। आपके आवेदन में दिए गए तथ्यों के आलोक में मामले पर विचार किया गया।

मुख्य खान निरीक्षक (खान सुरक्षा महानिदेशक की तरह भी पदनामित) को धातुीक खान विनियम, 1961 के विनियम 106(2)(जी) के अंतर्गत दिए गए अधिकारों और मुख्य खान निरीक्षक (खान सुरक्षा महानिदेशक की तरह भी पदनामित) द्वारा खान अधिनियम, 1952 की धारा 6(1) के अंतर्गत मुझे दिए गए प्राधिकरण के तहत मैसर्स एसडी-आरकेसी जेवी की हरियाणा राज्य में भिवानी जिले के दादरी तहसील में खेरीबतर गाँव के पास में अवस्थित खेरीबतर प्लॉट नं० 2 स्टोन खान में डीप होल ड्रिलिंग और ब्लास्टिंग के साथ भारी यंत्रों के प्रयोग की अनुमति देता हूँ।

1.0 सामान्य:

इस शर्त अनुमति में जहाँ भी अन्य रूप में प्रदान किया गया है उसके अतिरिक्त धातुीक खान विनियम, 1961 के सभी विनियमों का कठोरता से पालन किया जाएगा।

1.1 Following additional precautions shall be taken for working old pits that may be standing vertical and dangerously:

- 1.1.1 Such pits shall be worked top downwards only by forming benches in accordance with the stipulations of this permission.
- 1.1.2 Proper access shall be provided for transport of material and persons to reach top of the working benches and other working places of the mine.
- 1.1.3 No person shall be engaged at the bottom of high walls.
- 1.1.4 All approaches to the bottom of high sides shall be kept securely and effectively fenced so as to prevent entry of persons.
- 1.1.5 Provision of MMR 164 shall strictly be adhered to and no workings shall be extended beyond any point which is 300mts from any permanent building or structure of permanent nature, not belonging to the owner without the prior permission in writing of the Chief Inspector or Regional Inspector and subject to such conditions as he may specify therein.
- 1.1.6 No working shall be made or extended to any point within 45 meters of any public road, without the prior permission in writing of the Chief Inspector and subject to such conditions as he may specify therein.

## **2.0 Height and Width of Benches**

- 2.0.1 The height of benches in overburden, ore body or other rock formation shall not be more than 9.0m or maximum digging height of the machine used for digging, excavation or removal, whichever is less.
- 2.0.2 Width of any bench shall not be less than -
- (a) width of the widest machine plying on the bench plus 2 m, or
  - (b) if dumpers ply on the bench, 3 times the width of the dumper, or
  - (c) the height of the bench, whichever is more.
- 2.0.3 When persons are employed within 5 m of the working face, adequate precautions shall be taken to ensure their safety by dressing the sides of the bench.

## **2.1 Roads for Trucks and Dumpers etc:**

- 2.1.1 All roads for trucks, dumpers or other mobile machinery shall be maintained in good condition.
- 2.1.2 Wherever practicable, all roads from the opencast workings shall be arranged to provide one-way traffic.
- 2.1.3 No road shall be of width less than three times plus 5m width of the largest vehicle plying on road.



- 2.1.4 All corner and bends shall be made in such a way that operator of vehicle have clear view of distance of not less than 3 times the braking distance of largest HEMM working at 40Km/hour.
- 2.1.5 Where it is not possible to ensure a visibility for a distance as mention in clause (2.2.4), there shall be provided with two roads of width not less than 2 times plus 3m of largest vehicle plying on the road with a strong road divider at centre with adequate lighting and reflector along the divider.
- 2.1.6 Where any road existing above level of surrounding area it shall be provided with strong parapet wall/embankment of following dimensions:  
(a) Width at top-not less than 1 m.  
(a) Width at bottom-not less than 2.5 m.  
(b) The height not less than the diameter of tyre of largest vehicle plying on road. It may be noted that just dumping of mud of OB shall not be treated as strong parapet wall.
- 2.1.7 No road shall have gradient more than 1 in 16.

### **3.0 Supervision :**

- 3.1 A person possessing First Class Mine Manager's Certificate of competency under Regulation MMR, 1961 shall be appointed as the manager of the mine to look after HEMM operation. This permission shall stand revoked as soon as the qualified manager ceases to work at the mine. Use of HEMM shall be suspended in the absence of manager with aforesaid qualification.
- 3.1 During every production shift, the opencast workings shall be placed under the charge of an Assistant Manager and during maintenance shift, the working shall be placed under the charge of a Foreman, who shall be responsible to see that all the regulations and orders made there under are strictly complied with. He shall also supervise transport and loading being done by the contractor.
- 3.2 The deep hole drilling and blasting shall be carried out under the personal supervision of the 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.
- 3.3 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;
- (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 properly maintained.

**4.0 Maintenance of Machines:**

- 4.1 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.
- 4.2 Any defect in machinery reported by its operator shall be promptly attended to.
- 4.3 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.
- 4.4 All repairs to a machine shall be done at a location which will provide a safe place for the persons engaged on repairs.
- 4.5 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.
- 4.6 Power shall be disconnected when repairs are made to any electric machine.
- 4.7 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.



4.8 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.

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

4.10 *Design aspects of equipments:*

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

4.10.2 Every shovel or dragline shall be so designed as to afford the operator clear and uninterrupted vision all around and shall be provided with portable lamp for emergency, suitable portable fire extinguishers and retracting ladder.

4.10.3 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.

4.11 *Schedule of maintenance:*

4.11.1 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.

4.11.2 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.

4.11.3 A report of every inspection made under clause (4.11.2) shall be recorded in a bound paged book kept for the purpose, and shall be signed and dated by the person making the inspection.

4.11.4 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.

4.11.5 A report of every inspection made under clause (4.11.4) shall be recorded in a bound paged book kept for the purpose and shall be signed and dated by person making the inspection.

4.12 *Shift examination of machinery and vehicle:*

4.12.1 At the commencement of every shift, the engineer or mechanic or foreman 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.

4.12.2 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.

4.12.3 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.

**5.0 Safety features of dumper, Excavator, dozer and drill (Cir 9/2008)**

**5.1.1 Dumper:**

**5.1.1.1** The following safety feature shall be provided in dumper:



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- (a) Mechanical steering locking to prevent untoward movement of steering wheel and tyre while work persons working below the cabin while engine is running.
  - (b) Blind spot mirror apart from rear view mirror to enable operator to have clear visibility of blind spot in and around dumpers.
  - (c) Mechanical type Anti collision device to avoid head to tail collision on haul road such as tail gate, bumper extension or any other strong device.
  - (d) Fire resistant hydraulic hoses in place of ordinary hoses to decrease the chance of fire. All the sleeves and conducts where cable / wire are passed shall be fire resistant.
  - (e) Seat belt for operator.
  - (f) The maximum speed of vehicle shall be restricted to 30 km/hour by blocking higher gear or any other automatic means.
  - (g) Proper shaft guard.
  - (h) Proximity working device.

### 5.1.2 **Excavators:**

5.1.2.1 The following safety feature shall be provided in excavator:

- (a) All functions cut off switch.
- (b) Swing Motor Brake.
- (c) Fire resistant hydraulic hoses in place of ordinary hoses to decrease the chance of Fire. All the sleeves and conducts where cable/wire is passed shall be fire resistant.
- (d) Turbo charger Guard.
- (e) Seat belt.
- (f) Vent valve on top of hydraulic tank should be able to be removed without any tool.
- (g) A baffle plate between cold zone and hot zone.
- (h) Provision for limiting of hydraulic cylinders- Stoppers

### 5.1.3 **Drills:**

5.1.3.1 The following safety feature shall be provided in drills:

- (a) Approved type of dust prevention or suppression system.
- (b) Each moving parts of the machinery shall be guarded/fenced and also ensure its effectiveness all the time.
- (c) Emergency push button in
  - (i) Operator's cabin.
  - (ii) Main frame.

- (iii) Propeller pendent.
- (iv) Rear end.
- (d) Tripping device to trip the field switch.
- (e) Thermostat motor protection relay in winding temperature and other related parts.
- (f) Explosive vent in transformer.
- (g) Propel interlock (an electric interlock between drilling and propeller operation).
- (h) High air discharge temperature switch.
- (i) Low lube oil pressure switch.
- (j) Oil stop valve (electric solenoid valve in compressor lubrication line).
- (k) No bump circuit.
- (l) Tower lock and lock check valve.
- (m) Propel joystick-spring loaded type to return to neutral (dead man safety).
- (n) Disc-brake and brake valve and its testing parameters.
- (o) Lock check valve for preventing creeping in drill.
- (p) Seat belt.
- (q) Fire resistant hydraulic hoses and wiring near hot zone.
- (r) Turbo charger guard.
- (s) Cabin for the operator

#### 5.1.4 **Dozers:**

5.1.4.1 The following safety feature shall be provided in dozers:

- (a) Roll over protection.
- (b) Turbo charger guard.
- (c) Fire resistant hydraulic hoses and wiring near hot zone.
- (d) Seat belt.

#### 5.1.5 **General:**

5.1.5.1 The approved type of audio visual alarm shall be provided in all equipments.

5.1.5.2 The approved type of fire suppression system shall be provided in all equipments.

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



**5.1.5.4** The crane and overhead crane shall be subject to proof load test and NDT test once in a year from a competent authority.

**5.1.5.5** The pressure vessel receiver are subjected to hydraulic and NDT test and shall be carried out by a competent authority.

**5.1.5.6** In case of any defect in equipment such as brake, steering and safety device the equipment shall be immediately taken out of use and a record shall be kept.

5.1.5.7 The code of practice for installation operation and maintenance of all equipment shall be prepared and implemented before putting the equipment to use in mine.

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

5.1.5.9 The layout of the workshop shall be required as per DG's Circular No. 8 of 2003.

## **6.0 Precautions while Drilling:**

6.1 The position of every deep hole to be drilled shall be distinctly marked by the mine foremen so as to be readily seen by the drillers.

6.2 No person shall be permitted to remain within a radius of 20 m or within 60 m on the same bench where charging of holes with explosives is being carried out.

## **7.0 Transport of Explosives:**

7.1.1 Where explosives are transported in bulk for deep hole blasting, the following precautions shall be taken:

7.1.1.1 Transport of explosives from the magazine to the priming station or the site of blasting shall not be done except in original wooden or cardboard packing cases. The quantity of explosive transported at one time to the

site of blasting shall not exceed the actual quantity required for use in one round of shots. Explosives shall be transported to the site of blasting not more than 90 minutes before the commencement of charging of the holes.

7.1.1.2 No mechanically propelled vehicle shall be used for the transport of explosives unless it is of a type approved in writing by the Chief Inspector. Provided that a Jeep or Land Rover may be used for the transport of detonators from magazines to 'priming stations' subject to the following conditions:

- (a) not more than 200 detonators are transported in a vehicle at a time;
- (b) the detonators are packed suitably in a wooden box;
- (c) the wooden box containing detonators is placed inside an outer metal case of construction approved by the Chief Inspector;
- (d) the outer metal case shall be suitably bolted to the floor of the vehicle or otherwise fixed in a wooden frame so that the container does not move about while the vehicle is in motion; and
- (e) no person shall ride on the rear portion of the vehicle.

7.1.1.3 Every vehicle used for transportation of explosive shall be marked or placarded on both sides and ends with the word 'Explosives' in white letters not less than 15 cm high on a red background.

7.1.2 Every mechanically propelled vehicle transporting explosives shall be provided with not less than two fire extinguishers (one of carbon tetrachloride type for petroleum fire and the other of carbon dioxide under pressure type for electrical fire) suitably placed for convenient use.

7.1.2.1 The vehicle used for transport of explosives shall not be overloaded and in no case shall the explosive cases be piled higher than the sides of its body.

7.1.2.2 Explosives and detonators shall not be transported in the same vehicle, at the same time.

7.1.2.3 No persons other than the driver and his helper shall ride on a mechanically propelled vehicle used for transport of explosives.

7.1.2.4 A vehicle loaded with explosive shall not be left unattended.



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- 7.1.2.5 Engine of a vehicle transporting explosives shall be stopped and the brakes set securely before it is unloaded or left standing.
- 7.1.2.6 A vehicle transporting explosives shall not be driven at a speed exceeding 25 kilometers per hour.
- 7.1.2.7 A vehicle loaded with explosives shall not be taken into garage or repair shop and shall not be parked in a congested place.
- 7.1.2.8 A vehicle transporting explosives shall not be refueled except in emergencies and only when its engine is stopped and other precautions taken to prevent accidents.
- 7.1.2.9 No trailer shall be attached to a vehicle transporting explosives.
- 7.1.3 Every vehicle used for the transport of explosives shall be carefully inspected once in every 24 hours by a competent person to ensure that:
- (a) fire extinguishers are filled and in place;
  - (b) the electric wiring is well-insulated and firmly secured;
  - (c) the chassis, engine and body are clean and free from surplus oil and grease;
  - (d) the fuel tank and feed lines are not leaking; and
  - (e) lights, brakes and steering mechanism are in good working order.
- 7.1.4 Report of every inspection made under clause (7.3) shall be signed and dated by competent person making the inspection.
- 7.1.5 All operations connected with transport of explosives shall be conducted under the personal supervision of a foreman solely placed in charge of blasting operations at the mine.
- 7.1.6 The blaster shall personally search every person engaged in the transport and use of explosives and shall satisfy himself that no person so engaged has in his possession any cigarette, 'biri' or other smoking apparatus, or any match or any other apparatus of any kind capable of producing a light, flame or spark.

## **8.0 Precaution during Firing:**

**8.1.1** Shots shall not be fired except during 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.

**8.1.2** As far as practicable, shot firing shall be carried out either between shifts or during the rest interval, or at the end of work for the day.

**8.1.3** During the approach and progress of an electric storm, the following precautions shall be taken:

- (a) no explosive, particularly detonators, shall be handled;
- (b) if charging operations have been commenced, the work shall be discontinued until the storm has passed;
- (c) 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;
- (d) all wires shall be removed from contact with the steel rails or a haulage track so as to prevent the charge being exploded prematurely by a local strike of the lightning.

**8.1.4** The danger zone shall be distinctly demarcated (by means of red flags properly arranged and supported) before firing of holes is to commence.

**8.1.5** Before firing, a siren installed for the purpose shall be blown three times for one minute each at intervals of one minute; and no shots shall be fired unless the blasting foreman with assistance of sufficient number of persons appointed in writing by the manager for the purpose has ensured that all persons have left the danger zone or have taken adequate shelter.

**8.1.6** No shot shall be fired when there is traffic on any road or railway track within the danger zone.

## **9.0 Operation of machines:**

9.1 a) Every heavy earth moving machinery (and Hydraulic Excavators) shall be under the charge of a competent person (herein called the 'operator') authorised 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.

- 9.2 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.
- 9.3 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 dragline.
- 9.4 No person shall be permitted to ride in the bucket of a shovel.
- 9.5 No shovel or dragline shall be operated in a position where any part of the machine, suspended loads or lines are brought closer 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.
- 9.6 Electrical cables, if any, shall be laid in such a manner that they are not endangered either by falling rocks or by a mobile equipment.
- 9.7 Shovel bucket shall be pulled out of the bank as soon as it is full.
- 9.8 When not in operation, the bucket shall be pulled out of the bank as soon as it is full.
- 9.9 When being operated in soft or unstable ground, every shovel (and dragline) 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 shovel (or dragline) over-turning.
- 9.10 When not in use, the shovel or dragline shall be moved to and stood on stable ground.

9.11 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 no danger or accident from flying or falling objects etc. from one machine to the other.

10.0 **Duties of Mechanics, Fitters and Engineers:**

10.1 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.

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 The mechanic 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.

11.0 **ADDITIONAL DUTIES OF ENGINEERS PLACED IN CHARGE OF MACHINES AND EQUIPMENTS IN OPENCAST WORKINGS:**

11.1 During each shift the machines and equipments at work shall be placed under the charge of qualified and experienced engineer to effect inspection, examination, safe operations and maintenance of the machines, equipments and accessories. During his shift the engineer/engineers shall;

- (a) inspect, examine machines, equipments and accessories and satisfy himself that they are in sound and safe working order;
- (b) not allow any machine, equipment to be used, if it is found defective;
- (c) ensure that every machine, equipment, accessory used is in a safe and efficient order;
- (d) ensure that each operation, activity is carried on in safe and efficient manner.

12.0 **Operation of Truck, Dumpers and other Vehicles:**



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- 12.1 No person shall be permitted to ride on the running board of a truck or dumper.
- 12.2 As far as possible, loaded trucks or dumpers shall not be reversed on gradient.
- 12.3 Sufficient stop blocks shall be provided at every tipping point and these shall be used on every occasion the material is dumped from the truck, dumper, or other such vehicle.
- 12.4 Standard Traffic Rules shall be adopted and followed during movement of all trucks and dumpers. They shall be prominently displayed at the relevant places in the opencast working and truck/dumper roads.
- 12.5 No person shall be permitted to work on the chassis of truck or dumper with the body in a raised position until the truck or dumper body has been securely blocked in position. The mechanical hoist mechanism alone shall not be depended upon to hold the body of the truck or dumper in raised position.
- 12.6 No unauthorized person shall be permitted to enter or remain in any dumping yard or turning point.
- 12.7 When not in use every truck or dumper shall be moved to and stood on proper parking places.
- 12.8 Every dumper/tipper/truck shall be provided with suitable fire extinguishers preferably automatic and suitably placed for operation/convenient use.
- 12.9 Every dumper/tipper/truck shall be provided with automatically operating audio-visual reversing alarm, which shall always be kept in working order.

**13.0 Duties of Machine operators:**

13.1 At the commencement of every shift, the operator shall also personally inspect and test the machine, paying special attention to the following details:

- (i) That brakes and every warning device are in working order; and
- (ii) If the machine is required to work after day-light hours, that lights are in working order.

(iii) 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.

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

13.3 He shall not swing the bucket of shovel over passing haulage units. While the trucks/dumpers are being loaded, he shall swing over the body of the truck/dumper and not over the cab, unless the cab is protected by a substantially strong cover.

13.4 The operator shall not allow any unauthorized person to ride on the machine.

14.0 **Duties of Truck / Dumper Operators:**

14.1 No person shall be permitted to ride on the running board of a truck or dumper.

14.2 As far as possible loaded trucks or dumper shall not be reversed on gradient.

14.3 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.

14.4 Suitable "Code of Traffic Rules" shall be framed by the Mines Manager and enforced strictly for movement of all trucks, tippers and dumpers in the mine. A copy of the traffic rules shall be submitted to this Directorate for record. They shall be prominently displayed at the relevant places in the opencast workings and truck/dumper roads.

14.5 He shall not drive too fast, shall avoid distractions, and shall drive defensively.

14.6 He 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.

14.7 When approaching a stripping equipment, the driver of the truck, dumper shall sound the audible warning signal and shall not attempt to pass the stripping equipment until he has received proper audible signal in reply.

14.8 Before crossing a road or railway line, he shall reduce his speed, look in both directions along the road or line and shall proceed across the road or line only if it is safe to do so.

14.9 The driver shall sound the audible warning signal while approaching 'blind' corner or any other point from where persons may walk in front unexpectedly.

14.10 The driver 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.



- 14.11 The driver shall be sure of clearance before driving through tunnels, archways, plant structures etc.
- 14.12 The driver shall see that the vehicle is not overloaded and that the material is not loaded in a truck or dumper so as to project horizontally beyond the sides of its body and that any material projecting beyond the front or rear is indicated by a red flag during the day and by red light after day light hours.
- 14.13 The driver shall not allow any unauthorized persons to ride on the vehicle. He shall also not allow more than the authorized number of persons to ride on the vehicle.
- 15.0 **Miscellaneous:**
- 15.1 Trucks, tippers and other heavy vehicles, not belonging to management shall not be allowed in the mine premises without a valid pass issued by the competent authority of the mine. Before the pass is issued the mine engineer/competent person shall check the roadworthiness of such vehicle. In order to check the entry of such vehicle in the mine premises, properly manned check gate shall be provided at the mine entrance where the record of entry & exit of each vehicle shall be maintained. At the check gate the license of the drivers shall also be checked for eliminating the possibility of unlicensed persons driving the vehicle.
- 15.1.1 Persons engaged in surface operation and in particular, the contractor's workers shall be provided closer and competent supervision.
- 15.1.2 All persons engaged at any work within the mine premises through the contractors shall be provided relevant training and other job related briefings and that the drivers of the vehicle belonging to contractors entering the mine premises have additionally been explained the salient provisions of "Traffic Rules".
- 15.1.3 Each and every operation, including the operation carried out through contractor's worker or by outside agency, shall be placed under the charge of a competent supervisor, duly appointed and authorized by the manager.
- 15.2 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.
- 15.3 No manual workers shall 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.

- 15.4 No blasting shall be conducted within 300 m of building/infrastructure not belonging to the owner. The distance shall be kept marked in the field as well as on the plan mentioned under Regulation 61(1)(a) of the MMR, 1961.
- 15.5 Adequate general lighting arrangements shall be provided during working hours in the opencast working and Regulation 146 of MMR 1061 shall be complied with.
- 15.6 All the precautions and directives given in DGMS circulars issued from time to time shall be complied with.
- 15.7 The Owner, Agent and Manager shall ensure that the aforesaid conditions are made known to all concerned. They shall also ensure that every such person has fully understood the same and complies with them.
- 15.8 Please note that this permission is subject to the following additional conditions:
- 15.8.1 In the event of any change in the circumstances connected with this permission which is likely to endanger the life of workmen employed in the mining operation for which this permission has been granted shall be stopped forthwith and intimation thereof sent to this Directorate. The said mining operation shall not be resumed without an express and fresh permission in writing.
- 15.8.2 This permission may be amended or withdrawn at any time should it be considered necessary in the interest of safety.
- 15.8.3 This permission is being issued specifically under the regulations mentioned above and without prejudice to any other provision of law, which may be or may become applicable at any time.

भवदीय



स्वान सुरक्षा निदेशक,  
गजियाबाद क्षेत्र, गजियाबाद.







**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 / ..... 1938.....

दिनांक / ..... 03-11-15.....

सेवा मे:- ✓ M/s. ASD-RKC J.V.,  
40, Laxmi Nagar, Near Sub City Centre.  
Hira magari, Sector-8 Udaipur. 313002 (Raj)

विषय: **Issue of Certificate Regarding Non-involvement of Forest land and Wildlife Sanctuary in mine lease area of 42.01 ha. at Village Kheri Battar -2" Tehsil Charkhi Dadri Distt. Bhiwani.**

संदर्भ: आपका प्रार्थना पत्र Memoदिनांक 29.10.2015 के संदर्भ में।

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उपरोक्त विषय के सम्बन्ध में सूचित किया जाता है कि गांव खेड़ी बत्तर-2 तहसील दादरी जिला भिवानी स्थित खसरा नं0 139, 140 व 141 का कुल क्षेत्र 42.01 हैक्टेयर अरावली पौधारोपण क्षेत्र में नहीं आता व किसी प्रकार की वन भूमि (Category of Forest Land) का पार्ट भी नहीं हैं। अतः रिकार्ड अनुसार वन विभाग गांव खेड़ी बत्तर-2 तहसील दादरी जिला भिवानी स्थित खसरा नं0 139, 140 व 141 के कुल क्षेत्रफल 42.01 हैक्टेयर ऐरिया में खनन से सम्बन्धित गतिविधियां चलाने की अनुमति निम्न शर्तों के आधार पर दी जाती है:-

1. मौका पर भारतीय वन संरक्षण अधिनियम 1980 की पालना सुनिश्चित करनी होगी तथा साथ लगते 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 संरक्षण 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।
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 है।

वन मण्डल अधिकारी,  
भिवानी।

पृ0क्रमांक :

दिनांक:

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

वन मण्डल अधिकारी  
भिवानी।





M/s ASD RKC JV Kheribattar Stone Mine-2

<b>Environmental Manangement Plan- expenses</b>		
<b>Particulars</b>	<b>Year</b>	
	<b>(2021-22)</b>	
Water Sprinkling	2863783	Other expenses also incurred like –Monitoring of Ambient Air Quality, Ambient Noise ,Ground water, soil
Air Ambient Machine for Air Pollution Control and air pollution expenses	218400	
Smog-Gun Machine and expenses	78000	
Plantation	294800	
<b>Total</b>	<b>3454983</b>	



M/s ASD RKC JV Kheribattar Stone Mine-2

CSR Expenses		
Particulars		
	2021-22	
Drinking Water	2,36,144	Other Expenses also incurred like Road repair and nearby villages facility improvement
Kheribattar School Paint, Water facility and village consultation and other infrastructure in the village Kherbattar, Dada Dhola Village Temple and Gaushala	10,19,644	
Total	12,55,788	

M/s ASD RKC JV Kheribattar Stone Mine-2

Employee Safety and Welfare		
Particular		
Health Check-up,Employee safety and welfare,food with	47,52,856	Health Check-up,Employee safety and welfare,food with accomodation



**ASD-RKC J V**

**Kheri Battar Stone Mines-2**

**Charkhi Dadri, Haryana**

**Labourer House Photo**









**Labourer House**





**ASD-RKC J V**

**Kheri Battar Stone Mines-2**

**Charkhi Dadri, Haryana**

**Approach Road Photo**





REDMI NOTE 5 PRO  
MI DUAL CAMERA





REDMI NOTE 5 PRO  
MI DUAL CAMERA





REDMI NOTE 5 PRO  
MI DUAL CAMERA





REDMI NOTE 5 PRO  
MI DUAL CAMERA





REDMI NOTE 5 PRO  
MI DUAL CAMERA

**ASD-RKC J V**  
**Kheri Battar Stone Mines-2**  
**Charkhi Dadri, Haryana**

**First Aid Photo**





















(FORM - 0)

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

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

Certificate No. 501 (A) / 100 / 21 dt 22/4/21

Certified that Shri/Shrimati\* Satender Singh S/o:- Shri Narayan Singh employed as Driver in ASD-RKC-TV mine, Form A No. \_\_\_\_\_ has been examined for an

initial/periodical medical examination. He/she\* appears to be 31 years of age. The findings of the the examining authority are given in the attached sheet. It is considered that Shri/Shrimati\* Satender Singh.

- (a)\* is medically fit for any employment in mines.
- (b)\* is suffering from..... And is medically unfit for
- (d) any employment in mine; or
- (e) any employment below ground; or
- (f) any employment or work.....

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

Space for affixing  
Passport Size  
Photograph of the Candidate.

Place: Kheri Bulki  
Date: 22/4/21

Signature of the examining authority  
[Signature]  
Name and designation in Block letters Date  
MBBS HCM-1  
Reg No. 7616

\* Delete whatever is not applicable.  
\*\* One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the manager of the mine concerned by registered post; and the third copy shall be retained by the examining authority.

# Report of the examination authority

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

Annexure to Certificate No. SCG/CPD/160/21 dt 22/4/12 as result of medical examination

on.....  
Identification Mark Scar mark on the (left) wrist joint

1. General development-

2. Height.....5.5 cms.

3. weight.....75 kg.

4. Eyes:

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

ii. night blindness

iii. Colour blindness

iv. Any organic disease of eyes

v. Squint (\* to be tasted in special cases)

5. Ears :

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

b. Any organic diseases.

6. Respiratory system. measurement:

(a) after full inspiration.....31 cms.

(b) After full expiration.....26 cms.

7. Circulatory system:- (a) Blood pressure 122/82 (b) pulse 76

8. Abdomen:- (a) Tenderness. NAD (b) Liver. NAD  
(c) Spleen. NAD (d) tumor NAD

9. Nervous system:- (a) History of fits or epilepsy  
(b) paralysis  
(c) mental health. 140

10. Locomotory system.

11. skin.

12. Hydrocele. NO

13. Hernia

14. Any other abnormality.

15. Urine:- (a) reaction :

(b) Albumin: Nil (c) sugar: nil

16. Skiagram of chest.

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

18. Any opinion of specialist considered necessary.

signature of the examining authority

Dr. S.C. Gupta

MBBS HON'RY  
Reg No. 7616



(FORM - 0)

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

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

Certificate No. SCG/CKD/159/21 dt 22/4/21

Certified that Shri/Shrimati\* Sunil Tiwari s/o: Rajeshwar Tiwari employed as Supervisor in ASD-RKC-3V mine, Form A No. \_\_\_\_\_ has been examined for an

initial/periodical medical examination. He/she\* appears to be 51 years of age. The findings of the the examining authority are given in the attached sheet. It is considered that Shri/Shrimati\* Sunil Tiwari.

- (a)\* is medically fit for any employment in mines.
- (b)\* is suffering from..... And is medically unfit for
- (d) any employment in mine; or
- (e) any employment below ground; or
- (f) any employment or work.....

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

Space for affixing  
Passport Size  
Photograph of the Candidate.

Signature of the examining authority  
[Signature]  
Name and designation in Block letters Date

Place: Kheri Ballia

Date:

MBBS HE 451  
Reg No. 7016

\* Delete whatever is not applicable.  
\*\* One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the manager of the mine concerned by registered post; and the third copy shall be retained by the examining authority.

# Report of the examination authority

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

Annexure to Certificate No. 566/CK17/1.59/21 dt-22/4/21 as result of medical examination

on.....  
Identification Mark..... Scm mark on the nose.

1. General development-

2. Height..... 51.....cms.

3. weight..... 70.....kg.

4. Eyes:

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

ii. night blindness

iii. Colour blindness

iv. Any organic disease of eyes

v. Squint (\* to be tasted in special cases)

5. Ears :

a. Hearing: right ear Normal Left ear Normal

b. Any organic diseases.

6. Respiratory system. measurement:

(a) after full inspiration..... 28.....cms.

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

7. Circulatory system:- (a) Blood pressure 150/90

8. Abdomen:- (a) Tenderness. N/A (b) pulse 72

(c) Spleen. N/A (b) Liver. N/A

9. Nervous system:- (a) History of fits or epilepsy (d) tumor N/A

(b) paralysis (c) mental health. N/A

10. Locomotory system.

11. skin.

12. Hydrocele. No

13. Hernia

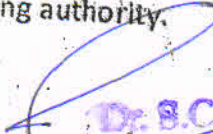
14. Any other abnormality.

15. Urine:- (a) reaction :

16. Skilagram of chest. (b) Ablumin : NIL (c) sugar : NTI

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

18. Any opinion of specialist considered necessary.

  
signature of the examining authority  
Dr. S.C. Gupta  
SMO  
MBBS HCMRI  
Reg No. 7616



(FORM - O)

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

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

Certificate No. 546/157/161/21 dt 22/4/21

Certified that Shri/Shrimati\* Rahul Singh employed as W.B. Manager in ASD-RKC-J.V mine, Form A No.          has been examined for an initial/periodical medical examination. He/she\* appears to be 27 years of age. The findings of the the examining authority are given in the attached sheet. It is considered that Shri/Shrimati\* Rahul Singh.

s/o:- Shri Akhileshwar Singh

- (a)\* is medically fit for any employment in mines.
- (b)\* is suffering from..... And is medically unfit for
- (d) any employment in mine; or
- (e) any employment below ground; or
- (f) any employment or work.....

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

Space for affixing  
Passport Size  
Photograph of the Candidate.

Signature of the examining authority  
[Signature]  
Name and designation in Block letters Date  
S.C. Gupta  
SMO  
Reg No. 7616

Place: Kheri Bakri  
Date:

\* Delete whatever is not applicable.  
\*\* One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the manager of the mine concerned by registered post; and the third copy shall be retained by the examining authority.

Report of the examination authority

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

Annexure to Certificate No. 544/KD/16/21 as result of medical examination dt 22/4/21

Identification Mark Left thumb on the R hand

Left thumb impression of  
The candidate  
Good /Fair/ Poor

- 1. General development-
- 2. Height 5'9 cms.
- 3. weight 65.5 kg.
- 4. Eyes:
  - i. visual acuity- Distant vision (with or without glasses). Right eye 6/6 Left eye 6/6
  - ii. night blindness
  - iii. Colour blindness
  - iv. Any organic disease of eyes
  - v. Squint (\* to be tasted in special cases)
- 5. Ears:
  - a. Hearing: right ear Normal Left ear Normal
  - b. Any organic diseases.

6 glasses (0.5)

- 6. Respiratory system. measurement:
  - (a) after full inspiration 38 cms.
  - (b) After full expiration 33 cms.

- 7. Circulatory system:-
  - (a) Blood pressure 126/84
  - (b) pulse 72/m
- 8. Abdomen:-
  - (a) Tenderness. nan
  - (c) Spleen. nan
  - (b) Liver. nan
  - (d) tumor nan
- 9. Nervous system:-
  - (a) History of fits or epilepsy no
  - (b) paralysis
  - (c) mental health no

- 10. Locomotory system.
- 11. skin.
- 12. Hydrocele. no
- 13. Hernia no

- 14. Any other abnormality.
- 15. Urine:- (a) reaction:
- 16. Skilagram of chest. (b) Ablumin: nil (c) sugar: nil
- 17. Any other test considered necessary by the examining authority.
- 18. Any opinion of specialist considered necessary.

Dr. S.C. Gupta  
signature of the examining authority  
MBBS  
Reg No. 7616



(FORM - 0)

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

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

Certificate No.....

566/1500/158/21 dt 22/4/21

Certified that Shri/Shrimati\* Derender S/O:- Hawa Singh employed as Supervisor in ACD-RKC-T.V mine, Form A No. .... has been examined for an

initial/periodical medical examination. He/she\* appears to be 28 years of age. The findings of the the examining authority are given in the attached sheet. It is considered that Shri/Shrimati\* Derender

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

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

(d) any employment in mine; or

(e) any employment below ground; or

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

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

Space for affixing  
Passport Size  
Photograph of the Candidate.

Signature of the examining authority

Dr. S.C. Gupta

Name and designation in Block letters Date

MBBS HCMSI

Reg No. 7616

Place: Kheri Balhi

Date: 22/4/21

\* Delete whatever is not applicable.

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

Report of the examination authority

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

Annexure to Certificate No. SC/1100/158121 dt 22/4/21 as result of medical examination

on ..... Identification Mark Scar mark below the left elbow.

1. General development-

2. Height 5-7 cms.

3. weight 58 kg.

4. Eyes:

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

ii. night blindness

iii. Colour blindness

iv. Any organic disease of eyes

v. Squint (\* to be tasted in special cases)

5. Ears :

a. Hearing: right ear normal Left ear normal

b. Any organic diseases.

Left thumb impression of The candidate Good /Fair/ Poor

Devendra

2 out glare

6. Respiratory system. measurement:

(a) after full inspiration 38 cms.

(b) After full expiration 34 cms.

7. Circulatory system:- (a) Blood pressure 120/80

(b) pulse 72/min

8. Abdomen:- (a) Tenderness none

(c) Spleen none

(b) Liver normal

(d) tumor none

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

(b) paralysis

(c) mental health no

10. Locomotory system.

11. skin.

12. Hydrocele. no

13. Hernia

14. Any other abnormality.

15. Urine:- (a) reaction

(b) Albumin: nil

(c) sugar nil

16. Skiagram of chest.

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

18. Any opinion of specialist considered necessary.

signature of the examining authority

Dr. S.C. Gupta

MBBS HCMSI

Reg No. 7616



(FORM - O)

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

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

Certificate No.....

SCA/CKD/158/21

d/t 22/4/21

Certified that Shri/Shrimati\*

Alakhdev Singh

S/O:- Kapil Singh

ASD-RKC-J.V

employed as W.B. Clerk in

mine, Form A No. has been examined for an initial/periodical medical examination. He/she\* appears to be 46 years of age. The findings of the the examining authority are given in the attached sheet. It is considered that Shri/Shrimati\* Alakhdev Singh.

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

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

(d) any employment in mine; or

(e) any employment below ground; or

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

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

Space for affixing

Passport Size

Photograph of the Candidate.

Signature of the examining authority

Name and designation in Block letters Date

Dr. S.C. Gupta  
EX-3120  
MBDS FC  
Reg No. 7616

Place:

Kheri Ballia

Date:

22-4-21

\* Delete whatever is not applicable.

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

Report of the examination authority

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

Annexure to Certificate No. 561/CRD/154/21 as result of medical examination on 22/4/21

Identification Mark Scars mark on the (L) face and hand

1. General development

2. Height 5-5 cms.

3. weight 77kg kg.

4. Eyes:

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

ii. night blindness

iii. Colour blindness

iv. Any organic disease of eyes

v. Squint (\* to be tasted in special cases)

5. Ears :

a. Hearing: right ear Normal Left ear Normal

b. Any organic diseases.

6. Respiratory system. measurement:

(a) after full inspiration 40 cms.

(b) After full expiration 35 cms.

7. Circulatory system:- (a) Blood pressure 122/84

8. Abdomen:- (b) pulse 76

(a) Tenderness.

(b) Liver.

(c) Spleen. Normal

(d) tumor Normal

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

(b) paralysis

(c) mental health Normal

10. Locomotory system.

11. skin.

12. Hydrocele. Nil

13. Hernia

14. Any other abnormality.

15. Urine:- (a) reaction :

(b) Albumin : Nil

(c) sugar : Nil

16. Skilogram of chest.

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

18. Any opinion of specialist considered necessary.

signature of the examining authority

D.S.C. Gupta

MBBS  
Reg No. 7616



(FORM - 0)

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

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

Certificate No. SEG/CMD/154/21 dt 22/4/21

Certified that Shri/Shrimati\* Vikas Nehera S/o:- Jai Singh  
ACD-RKC-J.V mine, Form A No. W.B. Asst. Manager  
has been examined for an initial/periodical medical examination. He/she\* appears to be 30 years of age. The findings of the the examining authority are given in the attached sheet. It is considered that Shri/Shrimati\* Vikas Nehera.

- (a)\* is medically fit for any employment in mines.
- (b)\* is suffering from..... And is medically unfit for
- (d) any employment in mine; or
- (e) any employment below ground; or
- (f) any employment or work.....

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

Space for affixing  
Passport Size  
Photograph of the Candidate.

Place: Kheri Ballia  
Date: 22/4/21

Signature of the examining authority  
Dr. S.C. Gupta  
Name and designation in Block letters Date  
**MBBS HCMST**  
**Reg No. 7616**

\* Delete whatever is not applicable.  
\*\* One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the manager of the mine concerned by registered post; and the third copy shall be retained by the examining authority.

Report of the examination authority

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

Annexure to Certificate No. S.G./G.N./154/21 dt 22/4/21 as result of medical examination

on.....  
Identification Mark Scar mark on the (Rt) ankle

1. General development

2. Height..... 154 cms.

3. weight..... 65 kg.

4. Eyes:

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

ii. night blindness

iii. Colour blindness

iv. Any organic disease of eyes

v. Squint (\* to be tasted in special cases)

5. Ears :

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

b. Any organic diseases.

6. Respiratory system. measurement:

(a) after full inspiration..... 25 cms.

(b) After full expiration..... 24 cms.

7. Circulatory system:- (a) Blood pressure 120/80

8. Abdomen:-

(a) Tenderness. None

(c) Spleen.

(b) pulse 72

(b) Liver.

(d) tumor None

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

(b) paralysis

(c) mental health None

10. Locomotory system.

11. skin.

12. Hydrocele.

13. Hernia None

14. Any other abnormality.

15. Urine:- (a) reaction :

(b) Albumin: Nil

(c) sugar: Nil

16. Skiagram of chest.

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

18. Any opinion of specialist considered necessary.

Dr. S.C. Gupta

signature of the examining authority

MBBS HON

Reg No. 7616



(FORM - 0)

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

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

Certificate No. 566/CKD/149/21 dt 22/4/21

Certified that Shri/Shrimati\* Chittaranjan Kumar S/o: Bhagwan Pandit  
ASD-RKC-JV mine, Form A No. employed as W.B. Clerk In  
initial/periodical medical examination. He/she\* appears to be 25 years of age. The  
findings of the the examining authority are given in the attached sheet. It is considered that  
Shri/Shrimati\* Chittaranjan

- (a)\* is medically fit for any employment in mines.
- (b)\* is suffering from..... And is medically unfit for
- (d) any employment in mine; or
- (e) any employment below ground; or
- (f) any employment or work.....

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

Space for affixing  
Passport Size  
Photograph of the Candidate:

Place: Khin Ballu

Date: 22/4/21

\* Delete whatever is not applicable.

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

Signature of the examining authority

Name and designation in Block letters Date

Dr. S. M. Gupta  
EX-SMO  
MBBS HCMSI  
Reg No. 7616

Report of the examination authority

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

Annexure to Certificate No. 562/CKD/149/21 as result of medical examination

on 22/4/21

Identification Mark: B. Singh male in the (R) Thumb Chiranjankumar

Left thumb impression of The candidate Good /Fair/ Poor

- 1. General development-
- 2. Height 5.4 cms.
- 3. weight 32 kg.
- 4. Eyes:
  - i. visual acuity- Distant vision (with or without glasses). Right eye 6/6 Left eye 6/6
  - ii. night blindness
  - iii. Colour blindness
  - iv. Any organic disease of eyes
  - v. Squint (\* to be tasted in special cases)
- 5. Ears:
  - a. Hearing: right ear Normal Left ear Normal
  - b. Any organic diseases.

- 6. Respiratory system. measurement:
  - (a) after full inspiration 35 cms.
  - (b) After full expiration 32 cms.
- 7. Circulatory system:-
  - (a) Blood pressure 140/90
  - (b) pulse 72/min
- 8. Abdomen:-
  - (a) Tenderness
  - (b) Liver
  - (c) Spleen
  - (d) tumor
- 9. Nervous system:-
  - (a) History of fits or epilepsy
  - (b) paralysis
  - (c) mental health

- 10. Locomotory system.
- 11. skin.
- 12. Hydrocele.
- 13. Hernia.
- 14. Any other abnormality.
- 15. Urine:- (a) reaction (b) Albumin: Nil (c) sugar: Nil
- 16. Skiagram of chest.
- 17. Any other test considered necessary by the examining authority.
- 18. Any opinion of specialist considered necessary.

Dr. S.C. Gupta  
signature of the examining authority  
SMO  
MBBS HCMISI  
Reg No. 7616



(FORM - O)

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

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

Certificate No.....

5/2/21/21

24/3/21

Certified that Shri/Shrimati\* Subesh Ch. Mahapatra employed as S. Supervisor in ASD - DKL-3-V mine, Form A No. \_\_\_\_\_ has been examined for an initial/periodical medical examination. He/she\* appears to be 54 years of age. The findings of the the examining authority are given in the attached sheet. It is considered that Shri/Shrimati\*.....

- (a)\* is medically fit for any employment in mines.
- (b)\* is suffering from..... And is medically unfit for
- (d) any employment in mine; or
- (e) any employment below ground; or
- (f) any employment or work.....

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

Space for affixing  
Passport Size  
Photograph of the Candidate.

Dr. S.C. Gupta  
Signature of the examining authority  
MBBS/HCMSI  
Reg No 7616  
Name and designation in Block letters Date

Place: Kheri Batta  
Date: 24/03/2021

\* Delete whatever is not applicable.  
\*\* One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the manager of the mine concerned by registered post; and the third copy shall be retained by the examining authority.

Report of the examination authority

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

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

Identification Mark..... *Scar mark on forehead*

*Suresh Chandra Mohapatra*  
Left thumb impression of  
The candidate  
Good /Fair/ Poor

1. General development-

2. Height..... *166*.....cms.

3. weight..... *70*.....kg.

4. Eyes:

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

ii. night blindness

iii. Colour blindness

iv. Any organic disease of eyes

v. Squint (\* to be tasted in special cases)

5. Ears :

a. Hearing: right ear..... *Norm*..... Left ear..... *Norm*

b. Any organic diseases. *NIL*

6. Respiratory system. measurement:

(a) after full inspiration..... *96*.....cms.

(b) After full expiration..... *92*.....cms.

7. Circulatory system:- (a) Blood pressure *124/80*

8. Abdomen:- (a) Tenderness. *N/A* (b) pulse *74/m*

(c) Spleen. *N/A* (b) Liver. *N/A*

(d) tumor *N/A*

9. Nervous system:- (a) History of fits or epilepsy *NO*  
(b) paralysis  
(c) mental health

10. Locomotory system.

11. skin.

12. Hydrocele. *NIL*

13. Hernia

14. Any other abnormality.

15. Urine:- (a) reaction :

(b) Albumin: *NIL* (c) sugar: *NIL*

16. Skiagram of chest.

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

18. Any opinion of specialist considered necessary.

*Dr. S.C. Gupta*  
signature of the examining authority  
MBBS HCA - I  
24/3/14  
Reg No. 7616



(FORM - O)

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

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

Certificate No..... SK/CKD/145/21 dt 24/3/21

Certified that Shri/Shrimati\* Rohit sha employed as w.b. operator in ASD-RKC-V mine, Form A No. \_\_\_\_\_ has been examined for an initial/periodical medical examination. He/she\* appears to be 30 years of age. The findings of the the examining authority are given in the attached sheet. It is considered that Shri/Shrimati\*.....

- (a)\* is medically fit for any employment in mines.
- (b)\* is suffering from..... And is medically unfit for
- (d) any employment in mine; or
- (e) any employment below ground; or
- (f) any employment or work.....

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

Space for affixing  
Passport Size  
Photograph of the Candidate.

Dr. S.C. Gupta  
Ex SMO  
Signature of the examining authority  
SK/CKD/145/21  
Name and designation in Block letters Date  
Reg No. 7616

Place : Khesi Bhatta  
Date: 24/03/2021

\* Delete whatever is not applicable.  
\*\* One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the manager of the mine concerned by registered post; and the third copy shall be retained by the examining authority.

Report of the examination authority

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

Sch. CKD/145/21 dt 24/3/21

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

Identification Mark..... *Right molar the 2<sup>nd</sup> arm*

*Font 2029*  
Left thumb impression of  
The candidate  
Good /Fair/ Poor

1. General development-

2. Height... *1.68* .....cms.

3. weight... *85* .....kg.

4. Eyes:

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

ii. night blindness

iii. Colour blindness

iv. Any organic disease of eyes

v. Squint (\* to be tasted in special cases)

5. Ears:

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

b. Any organic diseases.

6. Respiratory system. measurement:

(a) .after full inspiration..... *120/50* .....cms.

(b) After full expiration..... *90* .....cms.

7. Circulatory system:- (a) Blood pressure *120/80*

8. Abdomen: - (a) Tenderness. *None*

(c) Spleen. *None*

(b) pulse *72/min*

(b) Liver. *None*

(d) tumor *None*

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

(b) paralysis

(c) mental health

10. Locomotory system.

11. skin.

12. Hydrocele.

13. Hernia

14. Any other abnormality.

15. Urine:- (a) reaction :

(b) Albumin : *None*

(c) sugar : *None*

16. Skiagram of chest.

17. Any other test considered necessary by the examining authority

18. Any opinion of specialist considered necessary.

Dr. S.C. Gupta

Ex. SMD

signature of the examining authority

MBBS & MD

Reg No. 7616