



Mines at Atela Kalan/Jhojhu Kalan in  
Distt. Charkhi Dadri, Haryana

Mining of Stone alongwith Minor Minerals

Letter No. Msk/005/2021

To

Date: 14/04/2021

The Director,  
Ministry of Environment, Forests & Climate Change (IA Division),  
Indira Paryavaran Bhavan, Jor Bagh Road,  
New Delhi

**Sub: Submission of Six Monthly Compliance Report of Stipulated Conditions of Environmental Clearance for Stone Mining Project of M/s MSK (JV) with Production capacity of 6 MTPA located at Vill-AtelaKalan, Tehsil- CharkhiDadri, District - Bhiwani ,Haryana (54 ha) for submission period of June 2022.**

**Ref. No. J-11015/74/2014-IA.II(M) dated 11<sup>th</sup> June 2015**

Sir,

In accordance to the EC letter as above stated received from Ministry of Environment, Forests & Climate Change vide letter J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June 2015, 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 MSK (JV)**

Authorised Signatory,

*Umesh Singh*

Name - Umesh Singh  
Designation- Mine Manager  
E-mail - umesh.singh@mskindia.com  
Contact No. - 09589686781

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

Copy to:

- The Director, Ministry of Environment & Forests, Northern Regional Office,  
Sector-31, Dakshin Marg, Chandigarh-160030
- The Member Secretary, Haryana State Pollution Control Board (HSPCB), Sector-6,  
Panchkula

**Ward No. 1, MC Colony, Charkhi Dadri, Haryana - 127306**  
**Telephone : 7027800700, E-mail : info@mskjav.in**

To

Date: - 22-06-2022

The Director,  
Ministry of Environment, Forests & Climate Change (IA Division),  
Indira Paryavaran Bhavan, Jor Bagh Road,  
New Delhi

**Sub:Submission of Six Monthly Compliance Report of Stipulated Conditions of Environmental Clearance for Stone Mining Project of M/s MSK (JV) with Production capacity of 6 MTPA located at Vill-AtelaKalan, Tehsil- CharkhiDadri, District – Bhiwani ,Haryana (54 ha) for submission period ofJUNE-2022.**

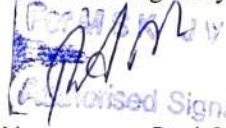
**Ref. No.J-11015/74/2014-IA.II(M)dated 11<sup>th</sup>June 2015**

Sir,

In accordance to the EC letter as above stated received from Ministry of Environment, Forests & Climate Change vide letter **J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June 2015**, 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 MSK (JV)**

Authorised Signatory,



Name - Ravi Garg

Designation- Authorised Singnatory

E-mail - accounts@mskjb.in

Contact No.- 7027800700

Copy to:

1. The Director, Ministry of Environment & Forests, Northern Regional Office, Sector-31,Dakshin Marg, Chandigarh-160030
2. The Member Secretary, Haryana State Pollution Control Board (HSPCB), Sector-6, Panchkula

**M/s MSK (JV), Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- CharkhiDadri, District- Bhiwani (HR) (Capacity- 6 million TPA), (EC No- J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June, 2015).**

---

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

**FOR**

**Stone Mine of Atela kalan , Village- Atela kalan, Tehsil- Dadri, District- Bhiwani (HR) (Capacity- 6 million TPA ),**

**Submitted by:**

**M/s MSK (JV), Village-Atela kalan  
Tehsil-Charkhi Dadri, Distt- Bhiwani (HR)**

**INDEX**

	<b>Description</b>	<b>Page No.</b>
<b>Chapter 1</b>	<b>INERODUCTION</b>	
1.1	About Project	1
1.2	Purpose of the Report	1
1.3	Methodology for Preparation of Report	2
1.4	Generic Structure of Report	2
<b>Chapter 2</b>	<b>ADHERENVE TO SPECIFIC AND GENERAL CONDITIONS</b>	
Part-A	i. Specific Conditions	3-6
Part-B	ii. General Conditions	7-12
<b>Chapter 3</b>	<b>Details of Environmental Monitoring</b>	
3.0	Monitoring portfolio	13
3.1	Ambient Air Quality Monitoring	13
3.1.1	Ambient Air Quality Monitoring Stations	13
3.1.2	Ambient Air Quality Monitoring Methodology	13-14
3.1.3	Ambient Air Quality Monitoring Results	14-15
3.1.4	Discussion on Ambient Air Quality in the Study Area	16
3.2	Ambient Noise Monitoring	16
3.2.1	Ambient Noise Monitoring Locations	16
3.2.2	Methodology of Noise Monitoring	16
3.2.3	Ambient Noise Monitoring Results	17
3.2.4	Discussion on Ambient Noise Levels in the Study Area	17
3.3	Ground water Quality Monitoring	18
3.3.1	Ground water Quality Monitoring Locations	18
3.3.2	Methodology of Ground water Quality Monitoring	18
3.3.3	Ground water Quality Monitoring Results	19-22
3.3.4	Discussion on Ground water Quality in the Study Area	23
3.3.5	Ground water level in and around the mine area	23-25
3.4	Soil Monitoring	26
3.4.1	Soil Monitoring Locations	26
3.4.2	Methodology of Soil Monitoring	26
3.4.3	Soil Monitoring Results	27-28
3.4.4	Discussion on Soil Characteristics in the Study Area	28
3.5	Site Photographs	29-34
<b>Figures</b>		
3.1	Graphical representation of particulate pollutants	15
3.2	Graphical representation of gaseous pollutants	15
3.3	Graphical representation of Ambient Noise Level	17
3.4	Cross section of Piezometer 1	24
3.5	Cross section of Piezometer 2	25



	<b>Annexures</b>	
1	Environmental Clearance	
2	NOC Forest	
3	CTO	
4	Doctor's Appointment letter	
5	Health Record of workers	
6	Photographs of Road Development	
7	Mine Plan	
8	PUC	
9	Rain water harvesting	
10	Water sprinklers	
11	Plantation details & Photographs	
12	Blasting & Drilling permission certificate	
13	CSR	
14	Lab Reports	
15	EMP	

# 1

## INTRODUCTION

### 1.1 About Project

M/s MSK (JV) has obtained the Environmental Clearance Letter from MoEF& CC, New Delhi for the Mining of Stone Mine along with Associated Minor Minerals at Village “AtelaKalan Tehsil- CharkhiDadri, over an area of **54Ha** in District-Bhiwani, Haryana Vide Ref. No. **J-11015/74/2014-IA.II (M) on dated: 11.06.2015.**

Total area of the mining site is 54 Ha. Total cost of the project is 30Crores. 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/AtelaKalan/MP/4154 on dated 15.09.2014.**

### 1.2 Purpose of the Report

As per the “Sub Para (i)” of “Para 10” of EIA Notification 2006, it is stated that “It shall be mandatory for the project management to submit half-yearly compliance reports in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year” and as per compliance of condition mentioned in Environment Clearance Letter (i.e. PART B General Condition, point number XXVI), 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 Ministry of Mines, New Delhi, MoEF& CC New Delhi Department of Environment, Chandigarh, Haryana State Pollution Control Board, Regional Office-MoEF& CC (Chandigarh), Central Ground Water Authority, Delhi, Dept. Of Forests, Chandigarh, Dept. of Mines & Geology, Chandigarh and District Collector (Bhiwani). Various scheduled Site Visits were conducted by a team of Experts to Monitor Pollution related parameters as defined by CPCB / HPCB. 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 by the Team 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 Order. 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 in true spirit.
- 4) The non conformity in the project with respect to the environmental implication of the project.
- 5) That the project proponent is implementing the environmental pollution mitigative measures as suggested in approved Mining Plan and Form-1, Environmental Management Plan.

**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 Sets,
- 4) Analysis of Samples collected during Monitoring,
- 5) Interpretation of Monitoring Results,
- 6) Preparation of Semi Annual 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) Environment Clearance Letter, prescribing all the conditions & guidelines to be followed during construction Phase and Operation Phase of the Project.
- 3) Site Study Report, showing status of the project and site photographs.
- 4) Compliance Report, explaining the entire General & specific conditions in the EC Letter and providing details w.r.t. each condition/ guideline.
- 5) Monitoring Reports & Analysis, showing the level of emission within the project site for various Environment Parameters.

# 2

## ADHERENCE TO SPECIFIC AND GENERAL CONDITIONS

### PART A – SPECIFIC CONDITIONS

A. SPECIFIC CONDITIONS		
SI. No.	Conditions	Reply
I.	Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Haryana and any other Court of Law, if any, as may be applicable to this project.	Agreed. Environmental Clearance was granted in favour of M/s MSK (JV) for proposed Stone along with Associated Minor Minerals at AtelaKalan, Village- AtelaKalan, Tehsil- CharkhiDadri, District- Bhiwani by vide letter no. EC No- J-11015/74/2014-IA.II (M) dated 11th June, 2015. Copy of EC is enclosed as <b>Annexure-1</b> .
II.	Environmental clearance is subject to obtaining clearance, if any, under the Wildlife (Protection) Act, 1972 from the Competent Authority, as may be applicable to this project.	Agreed.
III.	The environmental clearance is valid for 12 years as the life of mine is 12 years.	Agreed.
IV.	No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.	Agreed. NOC Forest has been obtained from DFO Bhiwani vide letter no. <b>2046 dated 26.09.2014</b> . Copy of the same is enclosed as <b>Annexure- 2</b> .
V.	The project proponent shall obtain Consent to Operate, from the State Pollution Control Board, Haryana and effectively implement all the conditions stipulated therein.	Agreed. Consent to Operate has been granted by HSPCB vide letter no. <b>313100420BHICTO7791125 dated 01.08.2020</b> , which is <b>valid up to 30.09.2025</b> . Copy of the same is enclosed as <b>Annexure- 3</b> .
VI.	Proponent shall appoint an Occupational Health Specialist for regular and periodical medical examination of the workers engaged in the project and maintain records accordingly; also, Occupational health checkups for workers having some ailments like BP, diabetes, habitual smoking etc. shall be undertaken once in six months and necessary remedial /preventive measures taken accordingly. The recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented.	Agreed. Dr.S.C. Gupta has been appointed for periodical medical examination of the workers engaged in the project and maintain records accordingly. He has also conducted occupational health checkups for workers having some ailments like BP, diabetes, habitual smoking etc. and will be undertaken once in six months and necessary remedial /preventive measures will be taken accordingly. <b>Appointment letter is attached as Annexure-4 Health Records of the workers are attached as Annexure-5.</b>
VII.	An independent study has been organized during peak activity, to understand how the actual compare with the carrying capacities and further decisions taken to maintain sustainability of this essential stone extraction and supply activity. Project proponent shall ensure that the road may not be damaged due to transportation of stone.	Agreed.  Project proponent ensure that no roads will be damaged due to transportation of stone. Roads are well maintained by the Project Proponent. <b>Photographs of the Developed roads are Attached as</b>

**M/s MSK (JV), Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- CharkhiDadri, District- Bhiwani (HR) (Capacity- 6 million TPA), (EC No- J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June, 2015).**

		<b>Annexure-6.</b>
VIII.	Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The PP shall complete all the tasks as per the Action Plan submitted with budgetary provisions during the public hearing held on 10.10.2014.	Agreed.
IX.	The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of Ministry of Environment, Forests & Climate Change and Central Ground Water Authority shall be obtained, for which a detailed hydro-geological studies shall be carried out. The report on six monthly basis on changes in ground water level and quality shall be submitted to the Regional Office of the Ministry.	Agreed. Mining activity is being carried out as per approved mine plan. Copy of the same is enclosed as <b>Annexure- 7.</b>
X.	The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' Certificate for all the vehicles from authorized pollution testing centres.	Agreed and Complied. PUC certificate for all the vehicles has been obtained from authorized centres. During transportation all the haulage roads including the main ramp from the mines pit will be kept wide, levelled, 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 are attached as Annexure-8.</b>
XI.	There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis in consultation with Regional Director, Central Ground Water Board and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.	Noted & Agreed. As per our EMP (Environment Management Plan), we are developing reservoir for rain water harvesting & recharge ground water table. This site has been selected after surveying, for better infiltration of rain water. We are developing the reservoir in phase wise manner. <b>Photographs of Rain Water Harvesting Pits are attached as Annexure-9.</b>
XII.	Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured	Agreed and Complied. Water Sprinkling is being regularly done at the haul road <b>Photographs of Water Sprinkling are attached as Annexure-10.</b>
XIII.	A comprehensive study for slope stabilization of mine benches and OB dumps shall be undertaken within one year. The clearance is only for the stone and not for any associated mineral.	Agreed. OB dump at designated at site as per approved mining plan.
XIV.	Washing of all transport vehicles should be done inside the mining lease.	Agreed.
XV.	Native plant species of Amla, Tamarind, Neem, Arjun, Bauhinia and others as suggested by villagers/specialist may be planted.	Agreed. <b>Plantation Details and Photographs are attached as Annexure-11.</b>
XVI.	Implementation of Haryana Government Rehabilitation And Resettlement of Land Owners Policy As per applicability in the area.	Noted.
XVII.	Implementation of Environment Management	Agreed.



**M/s MSK (JV), Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- CharkhiDadri, District- Bhiwani (HR) (Capacity- 6 million TPA), (EC No- J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June, 2015).**

	Policy of the Company w.r.t. Judicious use of Mineral Resources for growth & development synchronizing mining & environment with prosperity.	
XVIII.	The project proponent shall also take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted in the study area.	Agreed. Mining is being done as per Approved mining plan. Copy of the same is enclosed as <b>Annexure- 7</b> .
XIX.	The illumination and sound at night at project site disturb the villages in respect of both human and animals population. Consequent sleeping disorders and stress may effect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise level at night. Project proponent must ensure that the biological clock of villages is not disturbed; by orienting the floodlights/masks away from the villagers and keeping the noise level well within the prescribed limits for day light/night hours.	Agreed.
XX.	Where ever blasting is undertaken as part of mining activity, the project proponent shall carry out vibration studies well before approaching any such habitats or other buildings, to evaluate the zone of influence and impact of blasting on the neighbourhood. Within 500 meters of such sites vulnerable to blasting vibration, avoidance of use of explosive and adoption of alternative means of mineral extraction, such as ripper/dozer combination/rock breakers/ surface minor etc. Should be seriously considered and practiced wherever practicable. A provision for monitoring of each blast should be made so that the impact of blasting on nearby habitation and dwelling units could be ascertained. The covenant of lease deed under rule 31 of MCR 1960 provides that no mining operations shall be carried out within 50 meters of public works such as public roads and buildings or inhabited sites except with the prior permission from the competent authority.	Agreed. Following precaution will be taken during the blasting: <ul style="list-style-type: none"> <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 at the project site.( Lab report attached as <b>Annexure- 5</b>)</li> <li>➤ Dense plantation in mining area is also reducing the propagation of noise.</li> <li>➤ Rock breakers are being used instead of secondary blasting.</li> <li>➤ Blasting is proposed to reduce the vibrations and check noise pollution. An earplug is being provided to the workers.</li> </ul> <b>Blasting and Drilling permission/ certificates are attached as Annexure-12.</b>
XXI.	Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers.	Agreed. Regularly water sprinkling is being done on main haulage roads and loading and unloading areas with water tankers fitted sprinklers. <b>Photographs of Water Sprinkling are attached as Annexure-10.</b>
XXII.	Transportation of the minerals by road passing through the villages shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust	Agreed.

**M/s MSK (JV), Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- CharkhiDadri, District- Bhiwani (HR) (Capacity- 6 million TPA), (EC No- J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June, 2015).**

	and accidents could be mitigated. The project proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the project. No road movement should be allowed on the existing village road network without appropriately increasing the carrying capacity of such roads.	
XXIII.	Likewise, alteration or re-routing of foot paths, pagdandies, cart roads, and village infrastructure/public utilities or roads (for purpose of land acquisition for mining) shall be avoided to the extents possible and in case such acquisition is inevitable, alternative arrangements shall be made first and only the area acquired. In these types of cases, inspection reports by site visit by experts may be insisted upon which should be done through reputed Institute.	Agreed.
XXIV.	CSR activities by Companies including the Mining Establishments has become mandatory up to 2% of their financial Turn-over, Socio Economic Development of the neighborhood Habitats could be planned and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment & Forest and its Regional Office located at on six monthly basis.	Agreed. CSR activities are done under this project for fulfilling the requirements of villagers & Gram Panchayat. <b>Details and Expenses of CSR are gives as Annexure-13</b>
XXV.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Agreed. Housing arrangement has been made for the labour near the site with all necessary amenities. Whereas rest shelter, first aid facility, crèche, soak pit and other basic sanitary facilities have been developed. All the temporary structure will be removed after the completion of the project.
XXVI.	A final mine closure plan along with details of corpus fund shall be submitted to the Ministry of Environment, Forest & Climate Change 5 years in advance of final mine closure for approval.	Agreed. 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.

**B. GENERAL CONDITIONS**

SI. No.	Conditions	Response
I.	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forests & Climate Change	Agreed.
II.	No change in the calendar plan including excavation, quantum of mineral and waste shall be made.	Agreed. Work is being conducted as per the proposed mine scheme approved by DGM Haryana Vide letter no. <b>DMG/H1/Atelakalan/MP/4154 dated -13.09.2014.</b>
III.	The project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and ground water for the project.	Agreed.
IV.	Regular monitoring of ground water table to be carried out at the upstream and depth of water available in the dug well is to be measured. Monitoring to be done by establishing a network of existing wells and constructing new piezometers.	Monitoring of groundwater from existing dug wells and piezometers are being monitored regularly as per condition. In this reporting period, monitoring was done in Month of November ( <b>Post monsoon</b> ) and month of January ( <b>Winter</b> ).The monitoring reports of water quality are enclosed as <b>Annexure-14</b> ). Data of ground water level is given in <b>chapter-3 Table - 3.11</b> .
V. W	Monitoring of Ambient air quality to be carried out based on the 2009 Notification, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.	Agreed. Lab report of ambient air quality is attached as <b>Annexure- 5</b> .
VI.	The upliftment of scheduled caste/scheduled tribe population, specific programmes have been taken in to consideration specially with respect to education, health care, livelihood generation, infrastructure development & Promotion of sports & culture for SC/ST population and that these will be intensified in future.	Agreed.
VII.	The top-soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time. The maximum height of the dumps shall not be exceed 8m and the width 20m and overall slope of the dumps shall be maintained 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface runoff.	Agreed. Top soil is being used for reclamation and plantation purpose.

**M/s MSK (JV), Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- CharkhiDadri, District- Bhiwani (HR) (Capacity- 6 million TPA), (EC No- J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June, 2015).**

	In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest & Climate Change and its Regional Office located at Chandigarh on Six monthly basis.	
VIII.	Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and over burden dumps to prevent run off of water and flow of sediments directly in to the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drain shall be regularly desilted particularly after monsoon and maintained properly. The drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dump to prevent run off of water and flow of sediments directly into the river and other water bodies and sumps capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pit shall be constructed at the corners of the garland drains and desilted at regular intervals.	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 maintained regularly Mining Activity is being done as per approved mining plan.
IX.	Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. By planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within next five years.	Agreed. ThePlantation has been done as per approved mining plan and with the consultation of DFO/Agriculture Department.
X.	Dimension of the retaining wall at the toe of over burden dumps and OB benches within the mine to check runoff and siltation shall be based on the rain fall data.	Noted.
XI.	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high	Agreed and complied. Lab reports are attached as <b>Annexure-14</b> .

**M/s MSK (JV), Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- CharkhiDadri, District- Bhiwani (HR) (Capacity- 6 million TPA), (EC No- J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June, 2015).**

	levels of PM10 & PM2.5 such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	
XII.	Regularly monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained. Regular monitoring of water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the ministry of Environment, Forest & Climate Change, its Regional Office Chandigarh, Central Ground water authority Regional Director, Ground Central Water Board, State Pollution Control Board and Central Pollution Control Board.	Agreed. Lab reports enclosed as <b>Annexure-14</b> .
XIII.	Regularly Monitoring of Ground Water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year : Pre-monsoon (April-May), Monsoon ( August), Post monsoon ( November) and winter ( January) and the data collected may be sent regularly to the ministry of Environment, Forest & Climate Change, its Regional Office Chandigarh, Central Ground water authority Regional Director, Ground Central Water Board, State Pollution Control Board and Central Pollution Control Board	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>Annexur-14</b> . Ground water Level monitoring data in and around the mine area for <b>pre monsoon (May) and August (Monsoon)</b> are given in <b>Table 3.11 of the chapter-3</b> .
XIV.	Blasting operation shall be carried out only during the day time, control blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented. Drills shall either be operated with dust extractors or equipped with water injection system.	Controlled blasting will be conducted during day time only and 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>➤ Controlled and Cushion blasting to reduce waste generation, ensuring the burden is one-third to one-half of the depth of hole</li> <li>➤ Proper warning signals are being used.</li> <li>➤ The number of rows in a blast is not more than four so that fly rock generation and ground vibration is reduced.</li> <li>➤ Maximum permissible charge per delay is decided on the basis of the distance of structure to be protected from the blasting.</li> <li>➤ The dampers or springs will be provided on the vehicles which are used for mining</li> </ul>



**M/s MSK (JV), Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- CharkhiDadri, District- Bhiwani (HR) (Capacity- 6 million TPA), (EC No- J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June, 2015).**

		<p>activities to reduce vibration</p> <ul style="list-style-type: none"> <li>➤ Regular Noise monitoring is being conducted regularly at the project site. (Lab report attached as <b>Annexure-14</b>).</li> </ul>
XV.	<p>The critical parameters such as PM10 (size less than 10 micro meter), PM2.5 (size less than 2.5 micro meter), NOx in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored, (TDS, DO, pH &amp; TSS). The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the company in public domain. The circular no. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment, Forest &amp; Climate Change, which is available on the website of the ministry <a href="http://www.envfor.nic.in">www.envfor.nic.in</a> shall also be referred in this regard for its compliance.</p>	<p>Agreed. Lab reports enclosed as <b>Annexure- 14</b>.</p>
XVI.	<p>Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for PM10, PM2.5, SO2 &amp; NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board. Data on ambient air quality should be regularly submitted to the ministry including its Regional Office located at Chandigarh and the State pollution Control Board/ Central Pollution Control Board once in six months.</p>	<p>Agreed. Monitoring of ambient air quality is being carried out in the core zone as well as in the buffer zone for PM10, PM2.5, SO2&amp;NOx. Lab reports are attached as <b>Annexure-14</b>.</p>
XVII.	<p>Fugitive dust emission from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.</p>	<p>Agreed.</p>
XVIII.	<p>Measures should be taken for control of noise level below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc should be provided with ear plugs/muffs</p>	<p>Following mitigation measure will be taken to reduce the noise impact in project site.</p> <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> </ul>

**M/s MSK (JV), Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- CharkhiDadri, District- Bhiwani (HR) (Capacity- 6 million TPA), (EC No- J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June, 2015).**

		<ul style="list-style-type: none"> <li>➤ Drilling with sharp edges bits is provided to reduce generation of noise.</li> <li>➤ Noise source will be isolated.</li> </ul> <p>Dense plantation in mining area is also reducing propagation of noise outside the core zone.(Noise report are attached as <b>Annexure- 14</b>.)</p>
XIX.	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluent.	Not Applicable.
XX.	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and healthy aspects.	<p>Following mitigation measures has been initiated for the workers who worked at critically dusty area.</p> <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>➤ Also allocated 08 lakh per annum for organizing health camps training purposes.</li> </ul>
XXI.	Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	<p>Agreed.</p> <ul style="list-style-type: none"> <li>➤ Dust mask is being provided to the workers working in the dust prone areas as additional personal protective equipment's.</li> <li>➤ Workers are informed and kept aware about occupational health hazards due to such activities and preventive measures.</li> <li>➤ Workers health related problem is being properly addressed.</li> </ul>
XXII.	A separate environmental management cell with suitable qualified personnel should be set up under the control of a senior Executive, who will report directly to the head of the organization.	Agreed.
XXIII.	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the ministry and its Regional Office located at Chandigarh.	<p>Agreed &amp; Complied.</p> <p>Project Proponent is being reported Year wise expenditure of Environment protection Measures to the HSPCB and the Regional office of MoEF located at Chandigarh.</p> <p><b>EMP Details are attached as Annexure- 15</b></p>
XXIV.	The project authorities should inform to the Regional Office located at Chandigarh regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	<p>Agreed &amp; Complied.</p> <p>Already complied and already published Environmental Clearance conditions on website.</p>
XXV.	The regional office of this Ministry located at Chandigarh shall monitor compliance of the stipulated conditions. The project authorities should extend full co-operation to the officer(s)	Agreed.

**M/s MSK (JV), Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- CharkhiDadri, District- Bhiwani (HR) (Capacity- 6 million TPA), (EC No- J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June, 2015).**

	of the Regional Office by furnishing the requisite data/ information/ monitoring reports.	
XXVI.	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest & Climate Change, its Regional Office, Chandigarh, Central Pollution Control Board and State Pollution Control Board.	We are regularly submitting six monthly compliance reports 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- 6</b> .
XXVII.	A copy of clearance letter will be marked to concerned panchayat/ local NGO, if any, from whom suggestion/ representation has been received while processing the proposal.	Noted.
XXVIII.	State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/ Tehsildar's Office for 30 days.	Agreed &Noted.
XXIX.	The Project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within the 7 days of the issue of the clearance and a copy of the clearance letter is available with the state pollution Control Board and also at the website of the Ministry of Environment, Forest & Climate change at <a href="http://enfor.nic.in">http://enfor.nic.in</a> and a copy of the same should be forwarded to the Regional Office of this Ministry located Chandigarh.	Complied.

# 3

## DETAILS OF ENVIRONMENTAL MONITORING

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

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

### 3.1 AMBIENT AIR QUALITY MONITORING

#### 3.1.1 Ambient Air Quality Monitoring Stations

Ambient air quality monitoring has been carried out at 8 locations: Project site, Loading Area, 100 mtr from mine site, Haul Road, Vill- Atelakalan, Bilawal. Atelakhurd, Dohkamoji. 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	Location Name/ Description
1.	AAQ- 1	Project site
2.	AAQ- 2	Loading Area
3.	AAQ- 3	100 mtr from mine site
4.	AAQ- 4	Haul Road
5.	AAQ- 5	Vill- AtelaKalan
6.	AAQ- 6	Vill-Bilawal
7.	AAQ- 7	Vill-Atelakhurd
8.	AAQ- 8	Vill-Dohkamoji

#### 3.1.2 Ambient Air Quality Monitoring Methodology

Monitoring was conducted in respect of the following parameters:

- Particulate Matter 2.5 (PM<sub>2.5</sub>)
- Particulate Matter 10 (PM<sub>10</sub>)
- Sulphur Dioxide (SO<sub>2</sub>)
- Nitrogen Dioxide (NO<sub>2</sub>)

Ambient Air Quality was monitored as per CPCB guidelines by installing RDS & FPS at each location for 24 hours.

**M/s MSK (JV), Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- CharkhiDadri, District- Bhiwani (HR) (Capacity- 6 million TPA), (EC No- J-11015/74/2014-IA.II (M) dated 11<sup>th</sup> June, 2015).**

The 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 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>2</sub>.

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

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

**3.1.3 Ambient Air Quality Monitoring Results**

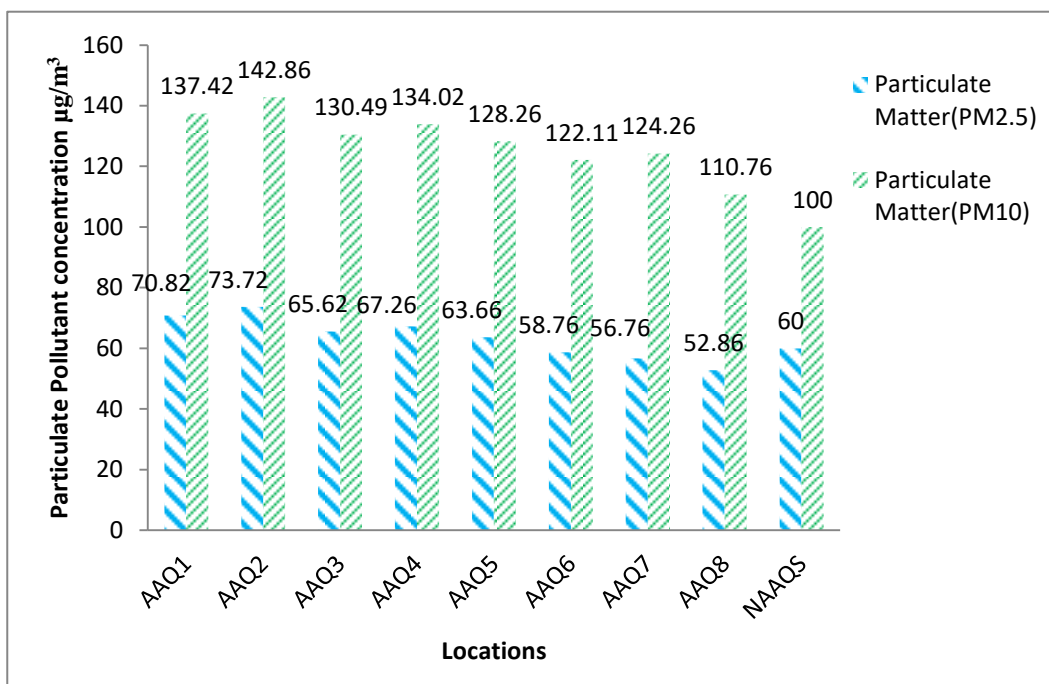
The Detailed on-site monitoring results of PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>2</sub> are presented in **Table 3.3**.

**Table 3.3 Ambient Air Quality Monitoring Results**

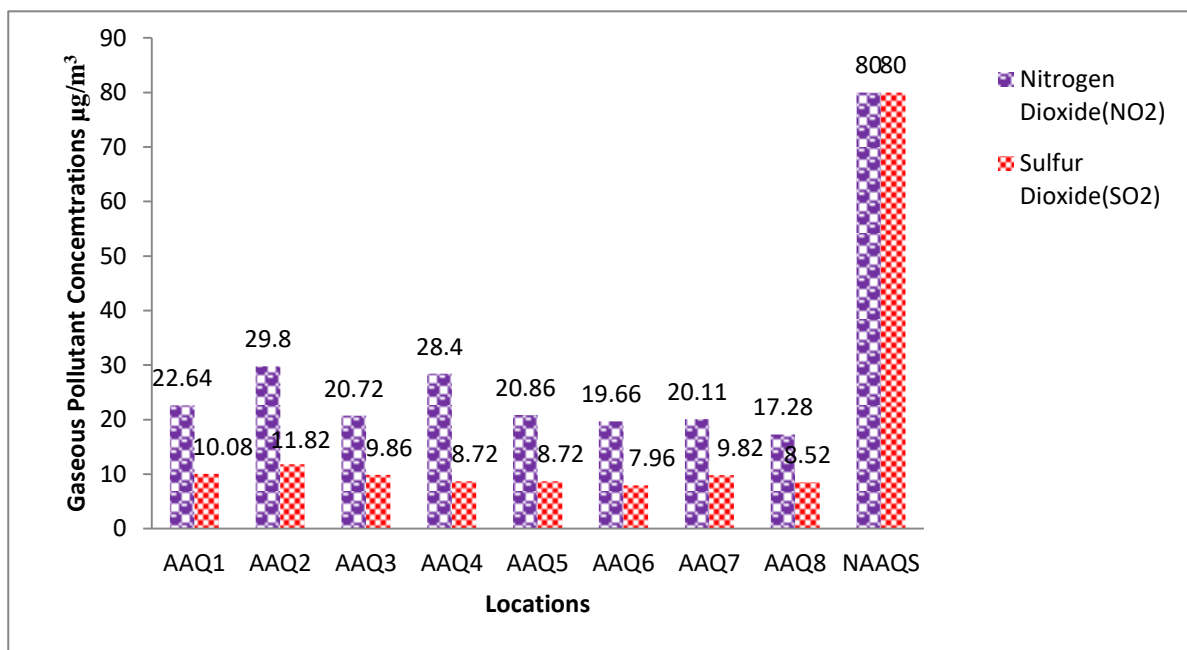
S. No.	Parameter	Test Result								NAAQS*
		AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7	AAQ8	
1.	Particulate Matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	70.82	73.72	65.62	67.26	63.66	58.76	56.76	52.86	60
2.	Particulate Matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	137.42	142.86	130.49	134.02	128.26	122.11	124.26	110.76	100
3.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	22.64	29.80	20.72	28.40	20.86	19.66	20.11	17.28	80
4.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	10.08	11.82	9.86	8.72	8.72	7.96	9.82	8.52	80



**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**

### 3.1.4 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 52.86 to 73.72  $\mu\text{g}/\text{m}^3$  and 110.76 to 142.86  $\mu\text{g}/\text{m}^3$  respectively. The level of NO<sub>2</sub> and SO<sub>2</sub> at all locations was found to be in range of 17.28 to 29.80  $\mu\text{g}/\text{m}^3$  and 8.52 to 11.82  $\mu\text{g}/\text{m}^3$  respectively. All the results were found to be well within the prescribed NAAQS limits.

### 3.2 AMBIENT NOISE MONITORING

#### 3.2.1 Ambient Noise Monitoring Locations

The main objective of noise monitoring in the study area is to assess the present ambient noise levels Near Project Site, Loading Area, 100 mtr from mine site, haul road, Vill-AtelaKalan and Village Bilawal due to various construction allied activities. A preliminary reconnaissance survey has been undertaken to identify the major noise generating sources in the area. Ambient noise monitoring was conducted at six locations at the boundary of the project site as given in **Table 3.4**.

**Table 3.4 Details of Ambient Noise Monitoring Stations**

S. No.	Location Code	Location Name/ Description
1.	N1	Near Project Site
2.	N2	Loading Area
3.	N3	100 mtr from mine site
4.	N4	Haul Road
5.	N5	Vill-AtelaKalan
6.	N6	Vill-Bilawal
7.	N7	Vill-Atelakhurd
8.	N8	Vill-Dohkamoji

#### 3.2.2 Methodology of Noise Monitoring

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

#### 3.2.3 Ambient Noise Monitoring Results

The location wise ambient noise monitoring results is summarized in **Table 3.5**. The location-wise variation of noise levels are graphically presented in **Figure 3.2**.

Table 3.5 Ambient Noise Monitoring Results

Parameter	N1		N2		N3		N4		N5		N6		N7		N8	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
L <sub>max</sub>	79.2	62.8	83.4	63.6	78.4	60.7	75.9	58.1	64.8	54.9	67.1	58.9	63.9	53.9	62.8	57.2
L <sub>min</sub>	57.2	44.2	58.2	45.7	54.9	43.2	47.6	43.0	45.6	38.9	46.2	35.2	43.4	37.2	41.9	35.7
L <sub>eq</sub>	73.86	60.12	71.89	59.96	68.76	56.92	70.84	53.96	53.68	44.07	51.98	43.65	52.60	43.75	50.86	41.73
CPCB	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0	55.0	45.0	55.0	45.0	55.0	45.0	55.0	45.0

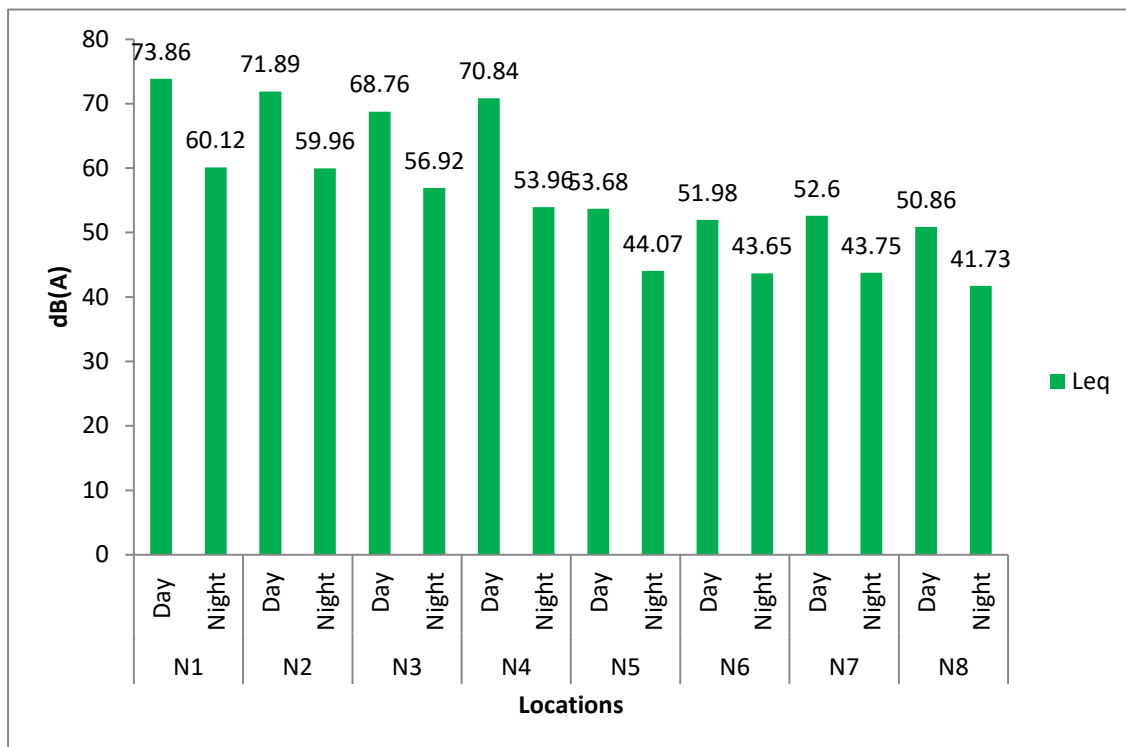


Figure 3.3 Graphical Presentation of Ambient Noise Levels

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

The Equivalent noise levels for day and night was found to be in range of 50.86 to 73.86 dB (A) and 41.73 to 60.12 dB (A) respectively. The noise levels were well within the permissible limits of NAAQS w.r.t Noise.

### 3.3 GROUND WATER QUALITY MONITORING

#### 3.3.1 Ground Water Quality Monitoring Station

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

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

S. No.	Location Code	Location Name/ Description
1.	GW 1	Near Project site(Ground Water Sample) in November 2021 and January 2022
2.	GW2	Vill. -Bilawal(Ground Water Sample) in November 2021 and January 2022

#### 3.3.2 Methodology of Drinking water Quality Monitoring

Sampling of 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. Sample collected for metal content were acidified to <2 pH with 1 ml HNO<sub>3</sub>. A sample for bacteriological analysis was 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 below:

### 3.3.3 Ground Water Quality Monitoring Results

The detailed waterquality monitoring results are presented in Table 3.7, 3.8, 3.9, 3.10

**Table 3.7 Ground Water Quality Monitoring Results (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)	--	7.52	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	224.62	200	600
7.	Calcium as Ca	mg/l	54.64	75	200
8.	Alkalinity as CaCO <sub>3</sub>	mg/l	187.95	200	600
9.	Chloride as Cl	mg/l	65.04	250	1000
10.	Cyanide as CN	mg/l	*BDL(**DL 0.02 mg/l)	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	21.47	30	100
12.	Total Dissolved Solids	mg/l	360.00	500	2000
13.	Sulphate as SO <sub>4</sub>	mg/l	39.04	200	400
14.	Fluoride as F	mg/l	0.35	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	mg/l	12.66	45	No Relaxation
16.	Iron as Fe	mg/l	0.38	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	554	----	----
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	1.05	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	Absent	Shall not be detectable in any 100 ml sample	
33.	E. Coli	MPN/100ml	Absent	Shall not be detectable in any 100 ml sample	

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



**Table 3.8 Ground Water Quality Monitoring Results (Post Monsoon) Village- Bilawal**

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>o</sup> C)	--	<b>7.69</b>	6.5 to 8.5	No Relaxation
2.	Colour	Hazen	<b>*BDL (**DL 1.0 Hazen)</b>	5	15
3.	Turbidity	NTU	<b>*BDL (**DL 1.0 NTU)</b>	1	5
4.	Odour	--	<b>Agreeable</b>	Agreeable	Agreeable
5.	Taste	--	<b>Agreeable</b>	Agreeable	Agreeable
6.	Total Hardness as CaCO <sub>3</sub>	mg/l	<b>298.59</b>	200	600
7.	Calcium as Ca	mg/l	<b>63.66</b>	75	200
8.	Alkalinity as CaCO <sub>3</sub>	mg/l	<b>279.40</b>	200	600
9.	Chloride as Cl	mg/l	<b>72.66</b>	250	1000
10.	Cyanide as CN	mg/l	<b>*BDL (**DL 0.02 mg/l)</b>	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	<b>33.96</b>	30	100
12.	Total Dissolved Solids	mg/l	<b>460.00</b>	500	2000
13.	Sulphate as SO <sub>4</sub>	mg/l	<b>43.68</b>	200	400
14.	Fluoride as F	mg/l	<b>0.48</b>	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	mg/l	<b>18.48</b>	45	No Relaxation
16.	Iron as Fe	mg/l	<b>0.26</b>	1.0	No relaxation
17.	Aluminum as Al	mg/l	<b>*BDL (**DL 0.002 mg/l)</b>	0.03	0.2
18.	Boron	mg/l	<b>*BDL (**DL 0.01 mg/l)</b>	0.5	2.4
19.	Total Chromium as Cr	mg/l	<b>*BDL (**DL 0.002 mg/l)</b>	0.05	No Relaxation
20.	Conductivity (at 25 <sup>o</sup> C)	μS/cm	<b>708</b>	----	----
21.	Phenolic Compounds	mg/l	<b>*BDL (**DL 0.0004 mg/l)</b>	0.001	0.002
22.	Mineral Oil	mg/l	<b>*BDL (**DL 0.05 mg/l)</b>	1.0	No Relaxation
23.	Anionic Detergents as MBAS	mg/l	<b>*BDL (**DL 0.05 mg/l)</b>	0.2	1.0
24.	Zinc as Zn	mg/l	<b>0.35</b>	5	15
25.	Copper as Cu	mg/l	<b>0.13</b>	0.05	1.5
26.	Manganese as Mn	mg/l	<b>*BDL (**DL 0.01 mg/l)</b>	0.1	0.3
27.	Cadmium as Cd	mg/l	<b>*BDL (**DL 0.002 mg/l)</b>	0.003	No Relaxation
28.	Lead as Pb	mg/l	<b>*BDL (**DL 0.002 mg/l)</b>	0.01	No Relaxation
29.	Selenium as Se	mg/l	<b>*BDL (**DL 0.001 mg/l)</b>	0.01	No Relaxation
30.	Arsenic as As	mg/l	<b>*BDL (**DL 0.002 mg/l)</b>	0.01	No Relaxation
31.	Mercury as Hg	mg/l	<b>*BDL (**DL 0.0005mg/l)</b>	0.001	No Relaxation
32.	Total Coliform	MPN/100ml	<b>Absent</b>	Shall not be detectable in any 100 ml sample	
33.	E. Coli	MPN/100ml	<b>Absent</b>	Shall not be detectable in any 100 ml sample	

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

**Table 3.9 Ground Water Quality Monitoring Result (Winter January 2022) (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)	--	7.60	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	245.50	200	600
7.	Calcium as Ca	mg/l	60.32	75	200
8.	Alkalinity as CaCO <sub>3</sub>	mg/l	206.14	200	600
9.	Chloride as Cl	mg/l	68.11	250	1000
10.	Cyanide as CN	mg/l	*BDL (**DL 0.02 mg/l)	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	23.09	30	100
12.	Total Dissolved Solids	mg/l	390.00	500	2000
13.	Sulphate as SO <sub>4</sub>	mg/l	36.45	200	400
14.	Fluoride as F	mg/l	0.41	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	mg/l	22.45	45	No Relaxation
16.	Iron as Fe	mg/l	0.42	1.0	No relaxation
17.	Aluminium as Al	mg/l	*BDL (**DL 0.002 mg/l)	0.03	0.2
18.	Boron	mg/l	*BDL (**DL 0.01 mg/l)	0.5	2.4
19.	Total Chromium as Cr	mg/l	*BDL (**DL 0.002 mg/l)	0.05	No Relaxation
20.	Conductivity (at 25°C)	µS/cm	600	----	----
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	0.42	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	Absent	Shall not be detectable in any 100 ml sample	
33.	E. Coli	MPN/100ml	Absent	Shall not be detectable in any 100 ml sample	

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

Table 3.10 Ground Water Quality Monitoring Result (Winter January 2022) (Vill. -Bilawal)

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)	--	7.56	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	218.11	200	600
7.	Calcium as Ca	mg/l	56.19	75	200
8.	Alkalinity as CaCO <sub>3</sub>	mg/l	180.50	200	600
9.	Chloride as Cl	mg/l	59.66	250	1000
10.	Cyanide as CN	mg/l	*BDL (**DL 0.02 mg/l)	0.05	No Relaxation
11.	Magnesium as Mg	mg/l	18.93	30	100
12.	Total Dissolved Solids	mg/l	475.00	500	2000
13.	Sulphate as SO <sub>4</sub>	mg/l	34.84	200	400
14.	Fluoride as F	mg/l	0.32	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	mg/l	18.45	45	No Relaxation
16.	Iron as Fe	mg/l	0.20	1.0	No relaxation
17.	Aluminium as Al	mg/l	*BDL (**DL 0.002 mg/l)	0.03	0.2
18.	Boron	mg/l	*BDL (**DL 0.01 mg/l)	0.5	2.4
19.	Total Chromium as Cr	mg/l	*BDL (**DL 0.002 mg/l)	0.05	No Relaxation
20.	Conductivity (at 25°C)	µS/cm	731	----	----
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	0.31	5	15
25.	Copper as Cu	mg/l	0.08	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	Absent	Shall not be detectable in any 100 ml sample	
33.	E. Coli	MPN/100ml	Absent	Shall not be detectable in any 100 ml sample	

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

### 3.3.4 Discussion on Water Quality in the Study Area

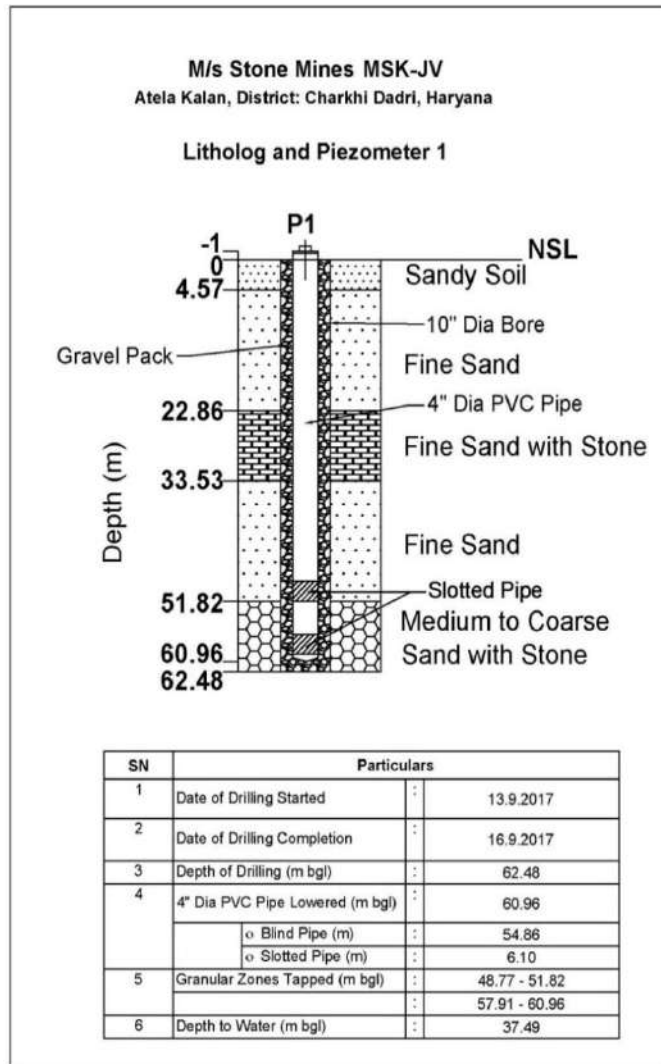
The Ground water quality of project site and Vill- Bilawal are observed to be slightly alkaline and neutral in nature respectively with total alkalinity reaching up to 180.50mg/L and 279.40mg/L respectively in water samples against the desirable limit of 200 mg/L(600 Permissible limit ). Total Hardness in the water is 218.11mg/L and 298.59 mg/L at project site and vill- Bilawal 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.

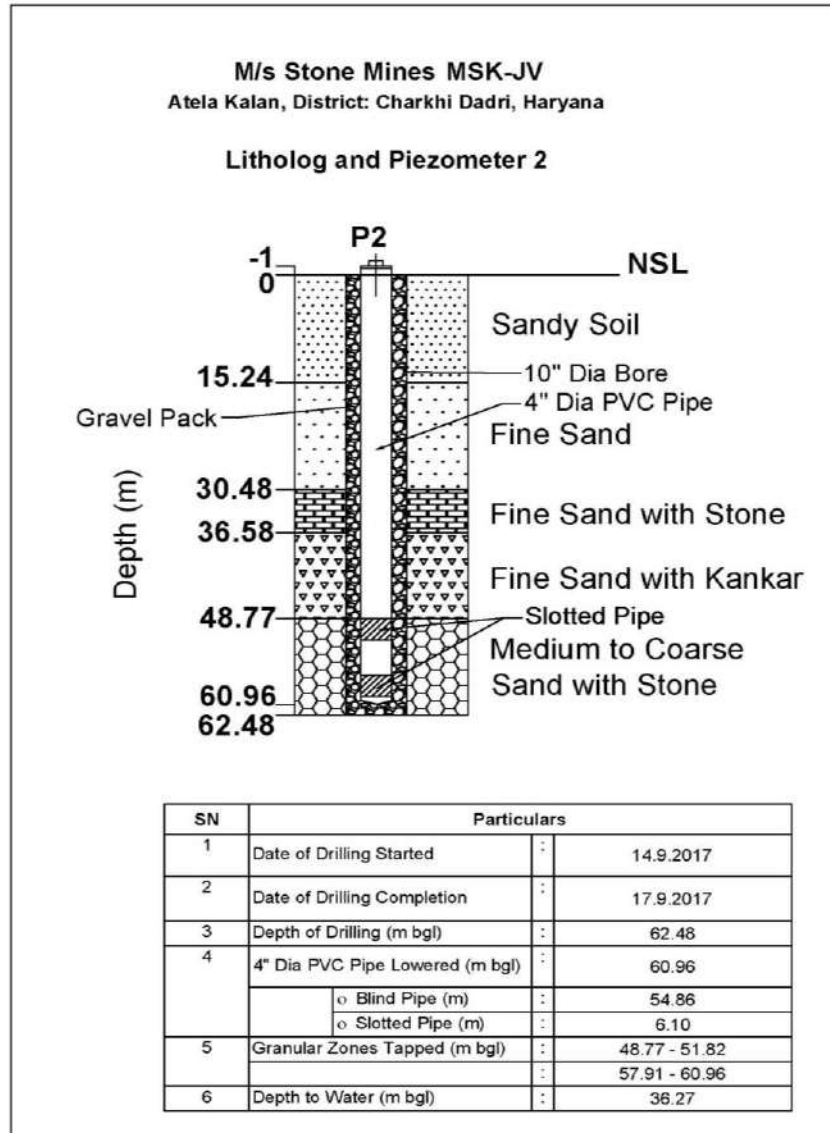
### 3.5 Ground Water Level in and around the Mine area

The Project Proponent has installed 2 piezometers in and around the mine site. Ground water level was monitored of those piezometers. Water level of the water sources was measured automatically from the piezometer during post monsoon (month of November) and during winter (month of January). The data is given below in table 3.11. This shows significant recharging in monsoon season and no impact of mining activities undertaken in the area on ground water. The cross section of piezometers also shown in Figure-3.4 and Figure-3.5

**Table 3.11: Monitoring data of Piezometer in the months of November 2020 and January 2021**

Piezometers	Pre monsoon (May 2021)	monsoon (August 2021)	Post monsoon (Nov 2021)	Winter (Jan 2022)	Location
PZ 1	40.65	39.12	39.20	39.48	28° 34'38.4"N 76° 5'41" E
PZ 2	40.75	39.25	38.92	39.4	28° 34'37.9"N 76° 5'43.9" E





### 3.4 SOIL MONITORING

#### 3.4.1 Soil Monitoring Locations

The objective of the soil monitoring is to identify the impacts of ongoing project activities on soil quality and also predict impacts, which have arisen due to execution of various constructions allied 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 project Site
2.	S2	Village -Bilawal

#### 3.4.2 Methodology of Soil Monitoring

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

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



### 3.4.3 Soil Monitoring Results

Single sample of soil is collected from the site to check the quality of soil of the study area .The Physico-chemical characteristics of the soil, as obtained from the analysis of the soil sample, are presented in **Table 3.13 and 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.	<b>pH (at 25 °C)</b>	IS : 2720 (P-26) by pH Meter	--	<b>7.58</b>
2.	<b>Conductivity</b>	IS:14767 by Conductivity meter	mS/cm	<b>0.264</b>
3.	<b>Soil Texture</b>	IS : 2720 (P-22, RA2003)	--	<b>Sandy Loam</b>
4.	<b>Color</b>	SOP , SP-78,Issue No.-01& Issue Date-14/02/2013	--	<b>Yellowish Brown</b>
5.	<b>Water holding</b>	SOP , SP-81,Issue No.-01& Issue Date-14/02/2013	%	<b>33.49</b>
6.	<b>Bulk density</b>	SOP , SP-80,Issue No.-01& Issue Date-14/02/2013	gm/cc	<b>1.53</b>
7.	<b>Chloride as Cl</b>	SOP , SP-85,Issue No.-01& Issue Date-14/02/2013	mg/100gm	<b>37.85</b>
8.	<b>Calcium as Ca</b>	SOP , SP-82,Issue No.-01& Issue Date-14/02/2013	mg/100gm	<b>20.70</b>
9.	<b>Sodium as Na</b>	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	mg/100gm	<b>36.91</b>
10.	<b>Potassium as K</b>	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	kg/hect.	<b>112.86</b>
11.	<b>Organic Matter</b>	IS:2720 (P-22) Titrimetric Method	%	<b>0.32</b>
12.	<b>Magnesium as Mg</b>	SOP , SP-83,Issue No.-01& Issue Date-14/02/2013	mg/100gm	<b>9.86</b>
13.	<b>Available Nitrogen</b>	IS:14684 Distillation Method	kg./hect.	<b>117.54</b>
14.	<b>Available</b>	SOP , SP-86,Issue No.-01& Issue Date-14/02/2013	kg./hect.	<b>16.85</b>
15.	<b>Zinc as Zn</b>	USEPA 3050B	mg/100gm	<b>0.96</b>
16.	<b>Manganese as Mn</b>	USEPA 3050B	mg/100gm	<b>1.38</b>
17.	<b>Chromium as Cr</b>	USEPA 3050B	mg/100gm	<b>0.41</b>
18.	<b>Lead as Pb</b>	USEPA 3050B	mg/100gm	<b>0.49</b>
19.	<b>Cadmium as Cd</b>	USEPA 3050B	mg/100gm	<b>0.35</b>
20.	<b>Copper as Cu</b>	USEPA 3050B	mg/100gm	<b>0.78</b>

SOP-Laboratory Standard operating procedure

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

S. No.	Parameter	Test-Method	Unit	Result
1.	<b>pH (at 25 °C)</b>	IS : 2720 (P-26) by pH Meter	--	<b>7.64</b>
2.	<b>Conductivity</b>	IS:14767 by Conductivity meter	mS/cm	<b>0.284</b>
3.	<b>Soil Texture</b>	IS : 2720 (P-22, RA2003)	--	<b>Sandy Loam</b>
4.	<b>Color</b>	SOP , SP-78,Issue No.-01& Issue Date-14/02/2013	--	<b>Yellowish Brown</b>
5.	<b>Water holding</b>	SOP , SP-81,Issue No.-01& Issue Date-14/02/2013	%	<b>35.86</b>
6.	<b>Bulk density</b>	SOP , SP-80,Issue No.-01& Issue Date-14/02/2013	gm/cc	<b>1.48</b>
7.	<b>Chloride as Cl</b>	SOP , SP-85,Issue No.-01& Issue Date-14/02/2013	mg/100gm	<b>40.19</b>
8.	<b>Calcium as Ca</b>	SOP , SP-82,Issue No.-01& Issue Date-14/02/2013	mg/100gm	<b>27.06</b>
9.	<b>Sodium as Na</b>	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	mg/100gm	<b>38.49</b>
10.	<b>Potassium as K</b>	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	kg/hect.	<b>120.26</b>
11.	<b>Organic Matter</b>	IS:2720 (P-22) Titrimetric Method	%	<b>0.38</b>
12.	<b>Magnesium as Mg</b>	SOP , SP-83,Issue No.-01& Issue Date-14/02/2013	mg/100gm	<b>11.07</b>
13.	<b>Available Nitrogen</b>	IS:14684 Distillation Method	kg./hect.	<b>148.26</b>
14.	<b>Available</b>	SOP , SP-86,Issue No.-01& Issue Date-14/02/2013	kg./hect.	<b>21.86</b>
15.	<b>Zinc as Zn</b>	USEPA 3050B	mg/100gm	<b>0.98</b>
16.	<b>Manganese as Mn</b>	USEPA 3050B	mg/100gm	<b>1.42</b>
17.	<b>Chromium as Cr</b>	USEPA 3050B	mg/100gm	<b>0.46</b>
18.	<b>Lead as Pb</b>	USEPA 3050B	mg/100gm	<b>0.52</b>
19.	<b>Cadmium as Cd</b>	USEPA 3050B	mg/100gm	<b>0.31</b>
20.	<b>Copper as Cu</b>	USEPA 3050B	mg/100gm	<b>0.84</b>

SOP-Laboratory Standard operating procedure

#### 3.4.4 Discussion on Soil Characteristics in the Study Area

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

**3.5 Site Photographs**



**Ambient Air Quality Monitoring**



**Ambient Noise Monitoring**





**Soil Sampling**



**Water Sprinkling**



**Water Sprinkling**



**Anti-Smog Gun**





**Loading Point**



**Plantation**



**Blasting Sign Board**





No. J-11015/74/2014-IA.II (M)  
Government of India  
**Ministry of Environment, Forest and Climate Change**  
Impact Assessment Division  
\*\*\*\*\*

Indira Paryavaran Bhavan,  
Aliganj, Jor Bagh Road  
New Delhi-110 003

Dated: 11<sup>th</sup> June, 2015

To,

**M/s MSK (JV)**  
S-571 Greater Kailash II  
New Delhi-110 048

Tel. 011-29220374; Fax: 011-29220377  
Email: msk@mkeindia.com

**Sub.: Mining of Stone in the Mine of "Atela Kalan" with proposed production capacity of 6.0 million TPA of Stone (ROM) by M/s. MSK (JV), located at village – Atela kalan, Tehsil – Charkhi Dadri, District– Bhiwani, Haryana (54ha)-Environmental Clearance regarding.**

**Reference:** Online Application IA/HR/MIN/22915/2014

Sir,

This has reference to your online application and subsequent letter dated 14.01.2015 for the above mentioned proposal for Mining of Stone (Minor Mineral) with proposed production capacity of 6.0 million TPA (ROM) of Stone. The mine is located at village – Atela kalan, Tehsil – Charkhi Dadri, District– Bhiwani, Haryana in MLA of 54ha. The Latitudes & Longitudes of the site are 28°34'10.94" N to 28°34'42.74"N and 76°5'38.24" E to 76°6'13.90" E respectively on Toposheet No. 53D/2, 53D/3.

2. The Ministry had prescribed TOR on 11.06.2014. The Proponent after conducting Public Hearing on 10.10.2014 submitted the EIA/EMP report online for seeking environmental clearance. The proposal was appraised before the Expert Appraisal Committee in its Meeting held during December 10-11, 2014 wherein the EAC sought information/clarification. Based on the information submitted by the Proponent, the proposal was reconsidered by the EAC in its meeting held during March 16-18, 2015 wherein the Committee recommended the Proposal for environmental clearance for Mining of Stone (Minor Mineral) with proposed production capacity of 6.0 million TPA (ROM) of Stone.

3. The total mining lease area is 54.0ha which is Government Land. Project Proponent reported that there is no forest land involved. LOI was issued by the Department of Mines & Geology, Haryana vide Memo No. DMG/HY/ML/Atela Kalan/2013/155 dated 03.01.2014, Chandigarh. Mining Plan & Progressive Mine Closure Plan has been approved by Department of Mines & Geology, State Govt. of Haryana vide letter No. DMG/HY/Atela Kalan/MP/4154, dated 15.09.2014. Project Proponent informed that the Department of Mines and Geology, Govt. of Haryana,

vide letter dated 13.01.2015 mentioned that there is no material change in both the plans except some of the minor changes.

4. Method of mining will be opencast mechanized for Mining of Stone (Minor Mineral) with production capacity of 6.0 million TPA (ROM) of Stone by digging, sorting and grading of minerals and transportation by trucks/dumpers. Bench height will be 9m. Each bench will advance one by one. The overall pit slope will be maintained at 50°. The mineral bearing rocks being hard and compact and blasting is proposed. Proponent reported that 27.56ha area will be converted into water reservoir, 18.91ha for Greenbelt development/Plantation; 0.18ha area for Infrastructure development, 2.08ha for road and 5.27ha area will be the undisturbed area. The mineable reserves are 69.105 Million Tonnes and life of mine is 12 years. Total water requirement for the project is 40 KLD which will be sourced from Nearby Villages.

5. The Latitudes & Longitudes of the site are 28°34'10.94" N to 28°34'42.74"N and 76°5'38.24" E to 76°6'13.90" E respectively on Toposheet No. 53D/2, 53D/3. Project Proponent reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves within 10 km radius of mine site. No Schedule – I species were reported within buffer zone. Proponent reported that mining lease does not fall in Aravalli Hill range and submitted a certificate from the Department of Mines & Geology, State Govt. of Haryana vide letter dated 20.08.2014. Proponent reported that total greenbelt & plantation will be carried out on 18.91 ha area till the end of the life of mine, out of which 3.4 ha will be unworked area & remaining 15.51 ha under plantation on benches. Green belt all along the mining lease boundary, quarry edge, roads, crushing plant, office, etc. The Species proposed for greenbelt development are Aam (*Magnifera Indica*), Jamun (*Syzygium cumini*), Arjun (*Terminalia arjuna*), Shahtoot (*Morus Alba*), Neem (*Azadiracta indica*), Pipal (*Ficus religiosa*), Ber (*Ziziphus mauritiana*), etc. Other Fruit bearing species, native species and plants useful for local etc. will also be planted.

6. The baseline data was generated for the period during Summer Season - March to May, 2014 and one month additional monitoring in October, 2014. The Committee deliberated on the baseline data and found that the principle environment parameters are well within the permissible limits as prescribed by the CPCB. Project Proponent reported that Action Plan for ensuring good occupational environment for mine workers has been prepared based on Recommendations of Nationally reputed Institute and the same will be implemented during mining operation.

7. The Public Hearing was conducted on 10<sup>th</sup> October, 2014 at 11:00 am at Mine Site, Village- Atela Kalan, Tehsil -Charkhi Dadri, District: Bhiwani (Haryana). The Public Hearing was presided over by Shri D.K. Behera, Deputy Commissioner, Bhiwani. The representative of Haryana SPCB was also present. The issues raised during Public Hearing were discussed during the Meeting. Project Proponent reported that besides making provision for fluoride free drinking water, periodical medical test will be done and Rs. 1.0 Lakh as Capital cost & Rs. 25,000 per year as Recurring cost under Budget for prevention of fluorosis and awareness programs will be conducted in the nearby villages.

8. Total cost of the Project is Rs. 30 Crores. The Project Proponent has earmarked Rs. 75 Lakhs/- towards Environmental Protection Measures & Rs. 12.0 Lakhs/annum towards recurring expenses. Proponent informed that Rs. 25.00 Lakh/- has been earmarked towards CSR activities. Project Proponent reported that there is a Court case in the Hon'ble High Court Punjab & Haryana in the matter of CWP No. 27700 of 2013-Rajbir Singh v/s State and others. The petitioner had challenged the conditions of the auction notice and the rules relating to Payment of Rent and Compensation to the land owners. The Hon'ble High Court did not restrain the auction proceedings and held that the auctions may be held but it has also directed its orders dated 17.12.2013 that the same shall be subject to final outcome of above said CWP. Accordingly, the acceptance /Lol was issued to the outcome of said case. The said case is still pending before Hon'ble Punjab and Haryana High Court for adjudication.

9. The Ministry of Environment, Forest and Climate Change has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto and hereby accords the environmental clearance under the provisions thereof to the above mentioned proposal of **M/s MSK (JV) for Mining of Stone (Minor Mineral) with proposed production capacity of 6.0 million TPA (ROM) of Stone in the mine lease area of 54ha, located at village-Atela kalan, Tehsil – Charkhi Dadri, District- Bhiwani, Haryana** subject to compliance of the followings terms and conditions and environmental safeguards mentioned below:-

**A. Specific conditions**

- (i) Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Haryana and any other Court of Law, if any, as may be applicable to this project.
- (ii) Environmental clearance is subject to obtaining clearance, if any, under the Wildlife (Protection) Act, 1972 from the Competent Authority, as may be applicable to this project.
- (iii) The environmental clearance is valid for 12 years as the life of mine is 12 years.
- (iv) No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.
- (v) The Project Proponent shall obtain Consent to Operate from the State Pollution Control Board, Haryana and effectively implement all the conditions stipulated therein.
- (vi) Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented.

- (vii) An independent study be organized during peak activity, to understand how the actuals compare with the carrying capacities and further decisions taken to maintain sustainability of this essential stone extraction and supply activity. Project Proponent shall ensure that the road may not be damaged due to transportation of stone.
- (viii) Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The PP shall complete all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing held on 10.10.2014.
- (ix) The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment, Forest and Climate Change and Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out; The Report on six monthly basis on changes in Ground water level and quality shall be submitted to the Regional Office of the Ministry.
- (x) The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centres.
- (xi) There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis in consultation with Regional Director, Central Groundwater Board and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.
- (xii) Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured.
- (xiii) A comprehensive study for slope stabilization of mine benches and OB dumps shall be undertaken within one year. The Clearance is only for the Stone and not for any associated mineral.
- (xiv) Washing of all transport vehicles should be done inside the mining lease.
- (xv) Native plant species as suggested by villagers/specialist may be planted.
- (xvi) Implementation of Haryana Government Rehabilitation and Resettlement of Land Owners' Policy as per applicability in the area.
- (xvii) Implementation of Environment Management Policy of the Company w.r.t. judicious use of Mineral resources for growth & development synchronizing mining & environment with prosperity.
- (xviii) The Project Proponent shall also take all precautionary measures during mining operation for conservation and protection of endangered flora/fauna, if any, spotted in the study area.

- (xix) The illumination and sound at night at project site, disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. Project Proponent must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.
- (xx) Where ever blasting is undertaken as part of mining activity, the Project Proponent shall carry out vibration studies well before approaching any such habitats or other buildings, to evaluate the zone of influence and impact of blasting on the neighbourhood. Within 500 meters of such sites vulnerable to blasting vibrations, avoidance of use of explosives and adoption of alternative means of mineral extraction, such as ripper/dozer combination/rock breakers/ surface miners etc. should be seriously considered and practiced wherever practicable. A provision for monitoring of each blast should be made so that the impact of blasting on nearby habitation and dwelling units could be ascertained. The covenant of lease deed under Rule 31 of MCR 1960 provides that no mining operations shall be carried out within 50 meters of public works such as public roads and buildings or inhabited sites except with the prior permission from the competent authority.
- (xxi) Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers.
- (xxii) Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The Project Proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.
- (xxiii) Likewise, Alteration or re-routing of foot paths, pagdandies, cart roads, and village infrastructure/public utilities or roads (for purposes of land acquisition for mining) shall be avoided to the extent possible and in case such acquisition is inevitable, alternative arrangements shall be made first and then only the area acquired. In these types of cases, Inspection Reports by site visit by experts may be insisted upon which should be done through reputed Institutes.
- (xxiv) CSR activities by Companies including the Mining Establishments has become mandatory up to 2% of their financial Turn-over, Socio Economic Development of the neighborhood Habitats could be planned and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers. The report

shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office located at Chandigarh on six monthly basis.

- (xxv) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (xxvi) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forest & Climate Change 5 years in advance of final mine closure for approval.

## **B. General conditions**

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest & Climate Change.
- (ii) No change in the calendar plan including excavation, quantum of stone and waste should be made.
- (iii) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and ground water for the project.
- (iv) Regular monitoring of ground water table to be carried out at the upstream and depth of water available in the dug well is to be measured. Monitoring to be done by establishing a network of existing wells and constructing new piezometers.
- (v) Monitoring of Ambient Air Quality to be carried out based on the 2009 Notification, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.
- (vi) The upliftment of scheduled caste/scheduled tribe population, specific programmes have been taken in to consideration specially with respect to education, health care, livelihood generation, infrastructure development & promotion of sports & culture for SC/ST population and that these will be intensified in future.
- (vii) The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time. The maximum height of the dumps shall not exceed 8m and width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the



vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest & Climate Change and its Regional Office located at Chandigarh on six monthly basis.

- (viii) Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. The drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.
- (ix) Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.
- (x) Dimension of the retaining wall at the toe of over burden dumps and OB benches within the mine to check run-off and siltation shall be based on the rain fall data.
- (xi) Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM<sub>10</sub> and PM<sub>2.5</sub> such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (xii) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained. Regular monitoring of water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment, Forest & Climate Change, its Regional Office, Chandigarh, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.
- (xiii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year – pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment, Forest

& Climate Change and its Regional Office, Chandigarh, Central Ground Water Authority and Regional Director, Central Ground Water Board.

- (xiv) Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented. Drills shall either be operated with dust extractors or equipped with water injection system.
- (xv) The critical parameters such as PM<sub>10</sub> (size less than 10 micro meter), PM<sub>2.5</sub> (size less than 2.5 micro meter), NO<sub>x</sub> in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS))]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forests & Climate Change, which is available on the website of the Ministry [www.envfor.nic.in](http://www.envfor.nic.in) shall also be referred in this regard for its compliance.
- (xvi) Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> & NO<sub>x</sub> monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board. Data on ambient air quality should be regularly submitted to the Ministry including its Regional office located at Chandigarh and the State Pollution Control Board / Central Pollution Control Board once in six months.
- (xvii) Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
- (xviii) Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
- (xix) Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.
- (xx) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
- (xxi) Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

- (xxii) A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
- (xxiii) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Chandigarh.
- (xxiv) The project authorities should inform to the Regional Office located at Chandigarh regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (xxv) The Regional Office of this Ministry located at Chandigarh shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
- (xxvi) The Project Proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest & Climate Change, its Regional Office, Chandigarh, Central Pollution Control Board and State Pollution Control Board.
- (xxvii) The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Chandigarh, Central Pollution Control Board and State Pollution Control Board.
- (xxviii) A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.
- (xxix) State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.
- (xxx) The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forest & Climate Change at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located Chandigarh.

10. The Ministry or any other Competent Authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

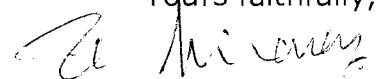
11. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may

result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

12. The above conditions will be enforced inter-alia, under the provisions 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 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Haryana and any other Court of Law relating to the subject matter.

13. 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 the National Green Tribunal Act, 2010.

Yours faithfully,

  
(Dr. U. Sridharan)  
Director (S)

**Copy to:**

- 1). **The Secretary**, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
- 2). **The Secretary**, Department of Environment, Government of Haryana, Chandigarh.
- 3). **The Secretary**, Department of Forests, Government of Haryana, Chandigarh.
- 4). **The Secretary**, Department of Mines and Geology, Government of Haryana, Chandigarh
- 5). **The Additional Principal Chief Conservator of Forests**, Region Office (Northern Region) Ministry of Environment and Forests, Bays No. 24-25, Dakshin Marg, Sector-31A Chandigarh-160030.
- 6). **The Chairman**, Haryana State Pollution Control Board, Plot No. C-11, Sector-6, Panchkula- 134109, Haryana
- 7). **The Chief Wildlife** of the State Govt., Haryana
- 8). **The Member Secretary**, Central Ground Water Authority, A2, W- 3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- 9). **The District Collector, Bhiwani** District, State of Haryana.
- 10). **Guard File.**
- 11). **MoEF &CC website.**

  
(Dr. U. Sridharan)  
Director (S)

# 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 / ..... 2046

दिनांक / ..... 26/9/14

सेवा मे:- ✓ M/s. MSK (JV),  
S,571 Greater Kailash,  
Part-II New Delhi -110046

विषय: NOC from Forest Department w.r.t. proposed Minor Mineral project over an area of 54.00 hectares falling in Khasra Nos. 103, 104 min.105,106,107 min of Village Atela Kalan in Tehsil Dadri District Bhiwani.

संदर्भ: आपका प्रार्थना पत्र MSK/2014-15/05/02 दिनांक 21.5.2014 के संदर्भ में।


—000—

उपरोक्त विषय सम्बन्ध में विषयांकित Minor Mineral project गांव अटेला कलां तहसील दादरी जिला भिवानी स्थित खसरा नं० 103, 104 min.105,106,107 min बारे समय-2 में मौका पर की गई विभागीय संयुक्त निरीक्षण रिपोर्ट/Ground Truthing Report व वन राजिक अधिकारी बाढड़ा द्वारा दिनांक 9.9.2014 को मौका पर की गई विभागीय संयुक्त निरीक्षण रिपोर्ट के आधार पर गांव अटेला कलां के गैर मुमकीन पहाड़ के खसरा नं० 103 के कुल क्षेत्र में से 20.92 हैक्टेयर, खसरा नं० 104 मीन में 6.46 हैक्टेयर, खसरा नं० 105 में 2.80 हैक्टेयर, खसरा नं० 106 मीन के कुल क्षेत्रफल में से 21.59 हैक्टेयर व खसरा नं० 107 मीन में 2.23 हैक्टेयर क्षेत्र अरावली पौधारोपण क्षेत्र में नहीं आता और वर्णित क्षेत्र किसी प्रकार की वन भूमि (Forest Land) का पार्ट भी नहीं हैं।

अतः वन विभाग द्वारा गांव अटेला कलां स्थित गैर मुमकीन पहाड़ के खसरा नं० 103, 104 min.105,106,107 min में  $20.92+6.46+2.80+21.59+2.23 = 54.00$  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 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।

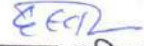
4. यूजर एजेंसी द्वारा मौका पर खनन क्षेत्र में लगवाये गये पिल्लरों पर जी0पी0एस0 कोर्डिनेट अंकित करवाये जायेंगे।
5. भारतीय वन्य प्राणी अधिनियम 1972 की सभी शर्तों की पालना की जाएगी। इसके अतिरिक्त मौका पर उपरोक्त शर्तों के अलावा पर्यावरण को क्षति पहुंचाने की कोई भी गैर कानूनी गतिविधि/उल्लंघना पाई गई तो वन विभाग द्वारा यह अनापत्ति प्रमाण पत्र रद्द किया जा सकता।

  
वन मण्डल अधिकारी,  
भिवानी।

पृ0कमांक :

दिनांक:

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

  
वन मण्डल अधिकारी  
भिवानी।



# 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/ : 313100420BHICTO7791125

Dated:01/08/2020

To.

M/s :MSK JV

Atela Kalan Stone Mines, Village- Atela Kalan, District Charki Dadri, Haryana

Subject: Grant of consent to operate to M/s MSK JV.

Please refer to your application no. 7791125 received on dated 2020-06-26 in regional office Bhiwani. With reference to your above application for consent to operate, M/s MSK JV is here by granted consent as per following specification/Terms and conditions.

<b>Consent Under</b>	BOTH
<b>Period of consent</b>	01/10/2020 - 30/09/2025
<b>Industry Type</b>	Mining and ore beneficiation
<b>Category</b>	RED
Investment(In Lakh)	703.089417
Total Land Area(Sq. meter)	54000.0
Total Builtup Area(Sq. meter)	400.0
<b>Quantity of effluent</b>	
1. Trade	0.0 KL/Day
2. Domestic	1.0 KL/Day
Number of outlets	1.0
<b>Mode of discharge</b>	
1. Domestic	septic tank with soak pit
2. Trade	
<b>Domestic Effluent Parameters</b>	
1. NA	
<b>Trade Effluent Parameters</b>	
1. NA	
Number of stacks	1
<b>Height of stack</b>	
1. NA	
<b>Emission parameters</b>	
1. SPM	100 mg/m <sup>3</sup>
<b>Product Details</b>	
1. Stone Alongwith associated minor minerals,	20000 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. Diesel	0.500 KL/day
<b>Raw Material Details</b>	
Stone Along with associated minor minerals, from hills	20000 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 run and maintain the APCM & green belt. 2. That the unit will apply for renewal of consent to operate before 90 days from the expiry of this CTO. 3. The said mining project will make strict compliance of EC granted by SEIAA. 4. The said unit will submit half yearly Environment management report as per EC condition & board policy for mining projects.

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



# MSK - "JV"

Mines at Atela Kalan in Tehsil Dadri  
Distt. Bhiwani, Haryana

**Manufacturer of Sand & Quality Aggregates**

To

Mr. S.C. Gupta  
Rohtak Road,  
Charkhi Dadri,  
Haryana.

**Subject:- Appointment Letter.**

Dear Sir,

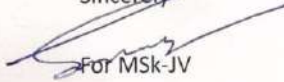
We are please to confirm your appointment in our company w.e. from 1.10.2015.

Below mention are the term of your appointment:

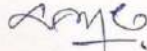
- Your position will be a Doctor to be posted at Atela Mines, Charkhi Dadri site for 2 days in a week. You will be expected to provide occupational Health Services to our workers/ staffs engaged at mines at Atela for their Health Check up, Diagnosis and consultation including all compliance report of medical Examination under rule 29B. of mines act.
- Per visit Doctor fee Rs. 2000/- will be paid. Company will provide vehicles for picking up & dropping at the time of visit.
- Charges of lab testing which is required for compliance @ Rs 750/- per head will be paid.
- The company shall be intitled to terminate your services with 30 days notice period.

Please indicate your understanding & acceptance of the above mention term & condition by signing and returning the duplicate copy of the letter.

Sincerely



For MSK-JV



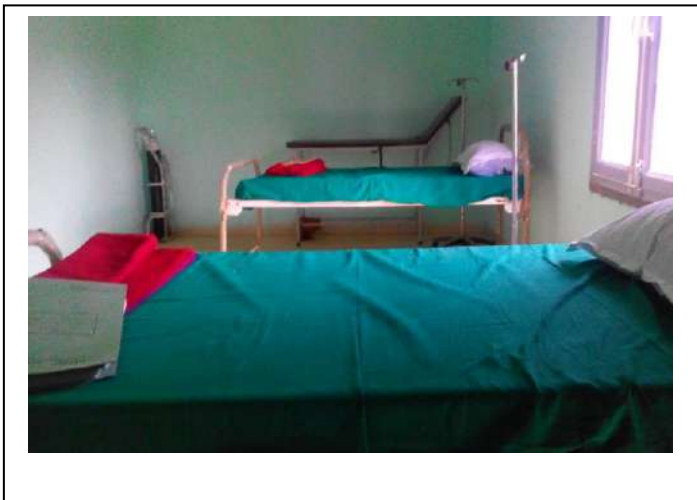
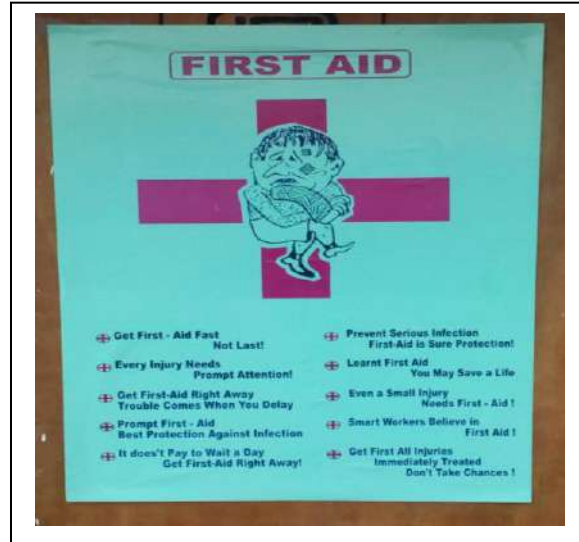
Authorized Signatory

I have carefully read the above term & condition and that are acceptable to me in full.



## Occupational Health program

As per Our Occupational Health policy, we have recently organized six monthly occupational health surveillance programs. Medical check-ups have been done all of our workers and staff. We have permanently hired an Occupational Health specialist for our workers and staff. We had constructed basis medical facility at our site office having two beds patient room and a Doctor room.







Recommended practices by nationally reputed Institute have been followed at our site, which includes:

- Administrated personnel, equipment and appliances has been provided for Occupational Health services.
- Health surveillance will be done & records will be maintained properly.
- Health education has been provided to mine workers.
- Medical officer engaged in medical examinations is trained in use of ILO classification of radiographs for Pneumniosis.
- Audiometric has been introduced, as a part of mandatory medical examination persons seeking employment in mines.

[FORM O]

[See rule 29 F (2) and 29 L]

Report of medical examination under rule 29 B\*

(To be issued in triplicate)

Certificate No. 18

(Positive)

\* Delete whatever is not applicable.

\*\* In respect of initial medical examination of a person already employed in a mine and in respect of every periodical medical examination, the second notice is to be given at least ten days previously.

1. Inserted vide Notification No. GSR 656 dated 5<sup>th</sup> June 1980.

Certified that Shri/ <sup>Shankar Prajapati</sup> Shrimati\* employed as <sup>Mine Foreman</sup> in <sup>Atola stone</sup> mine Form B No. <sup>95</sup> has been examined for an initial/periodical medical examination. He/She \* appears to be <sup>45</sup> Years of age. The findings of the examination 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

(i.) Any employment in the mine; or

(ii.) Any employment below ground; or

(iii.) Any employment or work .....

(c.) \* is suffering from ..... should get this disability cured /controlled\* and should be again examined within a period of ..... Month. He/ She may be permitted/ ~~not~~ \*permitted to carry on his duties during this period.



Signature of the examination authority

Ex. SMO  
MBBS HCMSI

Reg No. 7616

Name and Designation in Block Letters

Place:

Date:



FORM O (CONTD.)

Report of the examination authority

(to be filled in for every medical examination whether initial or periodical of re-examination or after cure/control of disability), Annexure to certificate No ..... as a result of medical examination on..... 8/10/15

- \* 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.

Identification mark... dot of left eye ..... Jas  
Left thumb impression of the candidate.

1. General development Good/Fair/Poor
2. Height 168 .....cms.
3. Weight 56 .....kg.
4. Eyes :
  - (i) Visual acuity- Distant vision (with or without Glasses) Right eye 6/6... Left eye 6/6.....
  - (ii) Any organic disease of the eyes
  - (iii) Night blindness
  - (iv) Colour blindness | NAD
  - (v) Squint(to be tested in special cases)
5. Ears :
  - (i) Hearing Right ear NAD ..... Left ear NAD.....
  - (ii) Any organic disease. NIL NAD.
6. Respiratory system; NAD  
Chest measurement:
  - (i) After full inspiration 34 ..... cms.
  - (ii) After full expiration 30 ..... cms.
7. Circulatory system; NAD  
Blood pressure 130/82  
Pulse 72
8. Abdomen  
Tenderness  
Liver  
Spleen  
Tumour | NAD



9. Nervous system  
Historical of fits or epilepsy | NAD.  
Paralysis  
Mental health

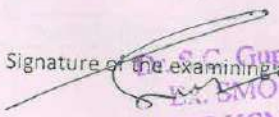
10. Locomotor system  
11. Skin  
12. Hernia | NAD  
13. Hydrocele  
14. Any other abnormality

15. Urine :  
Reaction  
Albumin Sugar  
NIL

16. Skiagram of chest  
17. Any other test considered necessary by the examining authority. NIL

18. Any opinion of specialist considered necessary. NIL

Place :

Signature of the examining authority  
  
S.S. Gupta  
B.A. B.M.O.  
MBBS HCMSI  
Reg No. 7616

**Report of medical examination as per the recommendations of  
National Safety Conferences in Mines  
(To be used in continuation with Form O)**

Certificate No 18

Name: Shankar Prajapati

Identification Marks: cut of left leg

**1. Cardiological Assessment**

Auscultation	S1	<u>Normal</u>
	S2	
	Additional Sound	
Electrocardiograph (12 leads) findings:	Normal/Abnormal	

Enclosed ECG

**2. Neurological Assessment**

Findings	Normal/ Abnormal
Superficial Reflexes	
Deep Reflexes	<u>Normal</u>
Peripheral Circulation	
Vibration Syndromes	

**3. ILO Classification of Chest Radiograph:**

Profusion of pneumoconiotic opacities	Grades	Types
Present/Absent		

Enclosed Chest Radiograph

**4. Audiometry findings:**

Conduction Type	Left Ear	Right Ear
Ear Conduction	<u>Normal/Abnormal</u>	<u>Normal/Abnormal</u>
Bone Conduction	<u>Normal/Abnormal</u>	<u>Normal/Abnormal</u>

Enclosed audiometry Report.

5. Pathological/Micrological Investigations:


S. No	Tests	Findings
1.	Blood -Tc, Dc, Hb, ESR, Platlets,	WNL/Abnormal
2.	Blood Sugar- Fasting & PP	WNL/Abnormal
3.	Lipid Profile	WNL/Abnormal
4.	Blood Urea, Creatine	WNL/Abnormal
5.	Urine Routine	WNL/Abnormal
6.	Stool Routine	WNL/Abnormal

Enclosed Investigation Reports - NIL

6. Special Test for Mn exposure

Behavior Disturbances		Present/Not Present
Neurological Disturbance	Speech Defect	Present/Not Present
	Tremor	Present/Not Present
	Adiadocokinesia	Present/Not Present
	Emotional changes	Present/Not Present

7. Any other Special Test Required:

  
Signature of the Examination Authority  
Dr. S.C. Gupta  
Reg No. 7019

**Report off Medical Examination under Mines Rule 29 B**  
(To be used in continuation with Form O)

Certificate No 18


Name: Shankar Rajgopal

Identification Marks: cut of left leg

Result of lung Function Test (Spirometry)

Parameter	Predicted value	Performed Value	% of Predicted
Forced Vital Capacity (FEV)			
Forced Vital Capacity 1 (FEV)			
FEV 1/ FVC			
Peak Expiratory Flow			

Spirometry Report enclosed

  
Signature of the Examination Authority  
Dr. S.C. Gupta  
MBBS, D.S.M.O.  
Reg No. 7616



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

VILLAGE: ATELA KALAN  
DISTRICT: BHIWANI  
STATE: HARYANA  
(Area-54Hectares)

खान एवं भूविज्ञान विभाग, हरियाणा, चण्डीगढ़  
Department of Mines and Geology,  
Haryana, Chandigarh  
**APPROVED**

With Conditions  
अपनी जो शर्तें अंगूठेपिंजित  
Vide letter No. DMG/HY/Atela Kalan/MP/4154  
दिनांक / Dated: 15-09-2014

  
राज्य खनन अभियन्ता  
State Mining Engineer



TO: DMG, HARYANA

## APPLICANT

M/s. MSK (JV),  
S-571, Greater Kailash Part-II,  
New Delhi -110048

## PREPARED BY

S.N. SHARMA  
RQP/DDN/0135/2001-A  
House No. 282, sector 11-D,  
Faridabad (Haryana)

ALL INDIA VALID  
WITH DELHI



All Over India Valid

प्रदूषण नियन्त्रित प्रमाण पत्र  
Pollution Under Control Certificate



ALL INDIA VALID  
WITH DELHI

संख्या  
Sr. No. 1905

प्रमाण पत्र संख्या  
PUC No. D0840017-1905

वाहन पंजी संख्या  
Vehicle R.No. HR61C9086

ब्रेक  
Make TATA

मॉडल  
Model 2518c

वर्ग  
Category Truck

इंजिन स्ट्रोक  
Engine Stroke 2016

वर्ष  
Year Diesel

ईंधन  
Fuel 02/01/2022

दिनांक  
Date 02-10-27 PM

समय  
Time 01/07/2022

वैधता  
Valid upto

Authorised By :- Transport Commissioner Haryana

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

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

Flush ing Cycle	Avg. RPM	RPM Min	RPM Max	Km <sup>-1</sup>	HSU %	Temp
1	717	683	3257	1.18	49.0	77
2	806	702	3344	1.71	52.2	77
3	897	710	3307	1.42	45.9	77
4	986	708	3226	1.38	44.9	77
5	1075	710	3226	1.14	39.0	77
6	1164	708	3226	1.33	43.7	77
7	1253	708	3226	1.36	44.3	77
8	1342	708	3226	Pass	1.36	44.3

In case of any  
Comments/complaint  
please write to  
Secretary Regional  
Transport Authority  
Charkhi Dadri (Haryana)



हरताक्षरकर्ता  
Authorised Signatory

नाम  
Name

Dhoop Singh, D0840017



अनुमोदित कोड  
Authorised Centre Code **CKD-D HR0840017**  
Dhoop Pollution Cheking Center  
C/o :- Shaheed Ram Chander Kissan Sewa Kendra  
Jhojhu Kalan To Adampur Dadi Road  
Distt. Charkhi Dadri (Hr.)

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



ALL INDIA VALID WITH DELHI



All Over India Valid

प्रदूषण नियंत्रित प्रमाण पत्र  
Pollution Under Control Certificate

अधिकृत परिवहन अनुमत, हरियाणा

Authorised By :- Transport Commissioner Haryana

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

संख्या  
Sr. No. 1945  
D0840017-1945

प्रमाण पत्र संख्या  
PUC No. HR63C5294

DL  
वाहन रजि संख्या  
Vehicle R.No. TATA

मार्क  
Make 2523

मॉडल  
Model Truck

वर्ग  
Category

इंजिन स्ट्रोक  
Engine Stroke 2015

वर्ष  
Year Diesel

ईंधन  
Fuel 17/01/2022

दिनांक  
Date 12:55:37 PM

समय  
Time 16/07/2022

वैधता  
Valid upto

प्रमाणित किया जाता है कि इस  
वाहन का HSU पर्यवेक्षण  
स्तर कोम्पोन्वाठ नियम 1989  
के नियम 115(2) के अनुसार  
स्तर को अनुमति है।

यदि आपको कोई शिकायत है तो  
कृपया सर्विस, प्रादेशिक, परिवहन  
प्राधिकारी चरखी दादरी (हरियाणा)  
को लिखें।

In case of any  
Comments/ complaint  
please write to  
Secretary Regional  
Transport Authority  
Charkhi Dadri (Haryana)

Flushing Cycle		RPM Max		Km <sup>-1</sup>		HSU %		Temp
Avg	RPM Min	RPM Max						
717		3267						
	RPM Min	RPM Max	1.18	40.0	77			
683		3274	1.71	52.2	77			
806		3344	1.42	45.9	77			
702		3307	1.38	44.9	77			
597		3226	1.14	39.0	77			
710		3226	1.33	43.7	77			
708		Pass	1.36	44.3				



Dated: 17/01/2022 12:55:37 PM

हस्ताक्षरकर्ता  
Authorised Signatory

नाम  
Name

HR 084  
0017

POLLUTION CHECKING CENTER  
AUTHORIZED

Dhoop Singh, D0840017

अधिकृत कोड  
Authorised Centre Code **CKD-D HR0840017**

Dhoop Pollution Cheking Center  
C/o :- Shaheed Ram Chander Kissan Sewa Kendra  
Jhojhu Kalan To Adampur Dadri Road  
Distt. Charkhi Dadri (Hr.)

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

## Form 59

[See rules 115 (2)]

**Pollution Under Control Certificate**

Authorised By :  
Government of Haryana

Date : 08/03/2022  
Time : 10:04:59 AM  
Validity upto : 07/03/2023



Certificate SL No. : HR08400260001745  
Registration No. : HR841221  
Date of Registration : 31/Mar/2020  
Month & Year of Manufacturing : February-2020  
Valid Mobile Number : \*\*\*\*\*6881  
Emission Norms : BHARAT STAGE IV  
Fuel : DIESEL  
VIC Code : HR0840026  
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
Cold 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	1.18

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 : 08/03/2022  
Time : 10:12:57 AM  
Validity upto : 07/03/2023



Certificate SL No. : HR08400260001747  
Registration No. : HR841624  
Date of Registration : 31/Mar/2020  
Month & Year of Manufacturing : February-2020  
Valid Mobile Number : \*\*\*\*\*6661  
Emission Norms : BHARAT STAGE IV  
Fuel : DIESEL  
PUC Code : HR0840026  
CURIN :  
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
Idle 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	0.79

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



ALL INDIA VALID  
WITH DELHI



All Over India Valid

प्रदूषण नियंत्रित प्रमाण पत्र  
Pollution Under Control Certificate



ALL INDIA VALID  
WITH DELHI

Authorised By :- Transport Commissioner Haryana

प्रमाणित किया जाता है कि इस  
वाहन का HSU उत्तराखण्ड  
स्तर को मोटाया नियम 1989  
के नियम 115(2) में निर्धारित  
स्तर को अनुसरण करता है।

आइडलिंग पर HSU (% आयतन)

HSU level at idling (% volume)

Flushing Cycle					
Avg	RPM Min	RPM Max			
717		3267			
No.	RPM Min	RPM Max	Km <sup>-1</sup>	HSU %	Temp
1	693	3274	1.18	40.0	77
2	806	3344	1.71	52.2	77
3	702	3307	1.42	45.9	77
4	697	3226	1.38	44.9	77
5	710	3226	1.14	39.0	77
6	708	3226	1.33	43.7	77
Pass			1.36	44.3	

In case of any complaint, please contact to  
Secretary Regional  
Transport Authority  
Charkhi Dadri (Haryana)



Dhoop Singh, D0840017

हस्ताक्षरकर्ता  
Authorised Signatory

नाम  
Name



अधिकृत कोड

Authorised Centre Code

CKD-D HR0840017

Dhoop Pollution Cheking Center

C/o :- Shaheed Ram Chander Kissan Sewa Kendra

Jhojhu Kalan To Adampur Dadi Road

Distt. Charkhi Dadri (Hr.)

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



[See rules 115 (2)]

**Pollution Under Control Certificate**Authorised By :  
Government of HaryanaDate : 08/03/2022  
Time : 10:09:48 AM  
Validity upto : 07/03/2023Certificate SL. No. : HR08400260001746  
Registration No. : HR842910  
Date of Registration : 31/Mar/2020  
Month & Year of Manufacturing : February-2020  
Valid Mobile Number : \*\*\*\*\*8681  
Emission Norms : BHARAT STAGE IV  
Fuel : DIESEL  
PUC Code : HR0840026  
TIN Fees : Rs.100.00(GST as applicable)  
MIL observation : NoVehicle 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	1.47

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

[See rules 115 (2)]

**Pollution Under Control Certificate**Authorised By :  
Government of HaryanaDate : 15/03/2022  
Time : 09:02:26 AM  
Validity upto : 14/03/2023Certificate SL No. : HR08400260001839  
Registration No. : HR847299  
Date of Registration : 31/Mar/2020  
Month & Year of Manufacturing : February-2020  
Valid Mobile Number : \*\*\*\*\*6661  
Emission Norms : BHARAT STAGE IV  
Fuel : DIESEL  
PUC Code : HR0840026  
GSTIN :  
Fees : Rs.100.00(GST as applicable)  
MIL-observation : NoVehicle 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	1.16

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 : 15/03/2022  
Time : 08:58:19 AM  
Validity upto : 14/03/2023



Certificate SL. No. : HR08400260001838  
Registration No. : HR848262  
Date of Registration : 31/Mar/2020  
Month & Year of Manufacturing : February-2020  
Valid Mobile Number : \*\*\*\*\*6661  
Emission Norms : BHARAT STAGE IV  
Fuel : DIESEL  
PUC Code : HR0840026  
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	1.32

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

RWH





RWH







## **Rainwater harvesting**







**FOGGER**





LIST OF TREES.

Green Belt MSK-JV Atela Kalan

Serial No.	Name Of species	No. of Tree
1	Neem	201
2	Kikar	296
3	Kikar Kabli	17
4	Sheesham	199
5	Bakan	298
6	Alenthias	132
7	Siras	224
8	Papri	155
9	Banyan	3
10	Pipal	16
11	Gulmer	36
12	Ashok	11
13	Gava	2
14	Lemon	2
15	Astonion	4
16	Ficus	12
17	Sicus	2
18	Jamun	485
19	Sahtoot	37
20	Hareda	54
21	Lehsua	27
22	Badberi	92
23	Kela	1
24	Amla	1
25	Bargad	7
26	Arjun	62
27	Aam Jala	142
28	Aam	1
29	Triveni	3
30	Mor Pankhi	41
31	Other Tree	73

2636





रपीड पोस्ट

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 - बी  
बी., सी.ओ. कॉम्प्लेक्स II, हापुड रोड गाजियाबाद-201002  
दिनांक /2015

संख्या: S29024/GR/HAR/Bhiwani/153 /Per

प्रेषक  
एम. अत्यमूर्ति  
खान सुरक्षा महानिदेशक,  
गाजियाबाद क्षेत्र, गाजियाबाद।

सेवा में,  
श्री अशोक कुमार, नामांकित स्वामी  
मैसर्स एमएनके - जेपी (MSK-JV)  
अटेला कलान बटोन माइन  
ग्राम अटेला कलान पो अटेला खुर्द  
तहसील चरखी दादरी,  
जिला भीमानी (हरीयाणा)

विषय धत्पीक खान विनियम, 1961 के विनियम 106(2)(बी) के अंतर्गत मैसर्स एमएनके - जेपी की अटेला कलान बटोन माइन में डीप होल ड्रिलिंग और ब्लास्टिंग के साथ भारी यंत्रों के प्रयोग की अनुमति।

महोदय

कृपया उपरोक्त विषय पर अपने प्रबंधक के दिनांक 01.07.15 तथा 06.07.15 के पत्रांक MSK/DGMS/15-16/11&12 का संदर्भ लें और उसके साथ संलग्न दिनांक 23.06.15 का प्लान नं. RKS/AKSM/MSK/BWN/SUR/01/24/15 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 धत्पीक खान विनियम, 1961 के विनियम 106(2)(बी) 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 मैं मैसर्स एमएनके - जेपी की हरीयाणा राज्य में भीमानी जिले के चरखी दादरी तहसील में अटेला कलान गोंध के पास में अपरिचित अटेला कलान बटोन माइन में डीप होल ड्रिलिंग और ब्लास्टिंग के साथ भारी यंत्रों के प्रयोग की की अनुमति देता हूँ।

1.0 सामान्य:

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



## 2.1 Height and Width of Benches

- 2.1.1 The height of benches in overburden, ore body or other rock formation shall not be more than 9.0 m or maximum digging height of the machine used for digging, excavation or removal, whichever is less.
- 2.1.2 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.
- 2.1.3 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.

## 2.2 Roads for Trucks and Dumpers etc:

- 2.2.1 All roads for trucks, dumpers or other mobile machinery shall be maintained in good condition.
- 2.2.2 Wherever practicable, all roads from the opencast workings shall be arranged to provide one-way traffic.
- 2.2.3 No road shall be of width less than three times plus 5m width of the largest vehicle plying on road.
- 2.2.4 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.
- 2.2.5 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.
- 2.2.6 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.
- 2.2.7 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:

- (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.
- 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;



## 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:
- not more than 200 detonators are transported in a vehicle at a time;
  - the detonators are packed suitably in a wooden box;
  - the wooden box containing detonators is placed inside an outer metal case of construction approved by the Chief Inspector;
  - 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
  - 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.
- 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 expose



high voltage lines, unless current has been cut off and the line de-energized. 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:**

- 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.

भारतीय


(एम. शत्यमूर्ति)

ब्रान सुरक्षा निदेशक,  
गजियाबाद क्षेत्र, गजियाबाद.

आपन संख्या/गा०के./ S29024/GR/HAR/Bhiwani/153 /Per 712 दिनांक 14/7/2015

Copy forwarded for information and necessary action to :

प्रबंधक, अटला कलान स्टोन माइन मैनेजर्स एसोसिएशन - जेपी (MSK-JV)  
ग्राम अटला कलान पो अटला, सुर्क तहसील चरबी दादरी जिला भीवानी हरीयाणा



ब्रान सुरक्षा निदेशक,  
गजियाबाद क्षेत्र, गजियाबाद.



WET DRILLING



**MSK - JV - ATELA KALAN**

<b>Corporate Social Responsibility CSR Exp During F.Y. 2021-22</b>			<b>Environment Monitoring Protection EMP Exp During F.Y. 2021-22</b>	
<b>S. No.</b>	<b>Exp. Head</b>	<b>Amount</b>	<b>Exp. Head</b>	<b>Amount</b>
1	Health Check-up Camp	98,500.00	Pollution Monitoring (Air, Water & Noise)	2,19,000.00
2	Survillance Programme of Workers	1,30,000.00	Water Sprinkling	7,20,000.00
3	Insurance Cover of Workers	4,31,600.00	Plantation including Maintenance , Land prepare, Fencing Wire, Pillar, etc..	1,53,700.00
4	Assistance to Local School Scholarship to Students	70,000.00	Rain Water Harvesting	-
5	Drinking Water Facilities	3,62,931.00	Haul Road, other Raod Repair & Maintenance	3,60,000.00
6	Vocational Trading Programme	75,000.00	Plants / Trees Purchased	1,25,850.00
7			Garner & Maintenance	2,35,400.00
	<b>TOTAL</b>	<b>11,68,031.00</b>	<b>TOTAL</b>	<b>18,13,950.00</b>

## Test Report

<b>Sample Number:</b>	VEL/MSK/A/01	<b>Report No.:</b>	VEL/A/2203/10/001
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Party:</b>	Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description :</b>	Ambient Air Quality Monitoring	<b>Reporting Date:</b>	14/03/2022
		<b>Period of Analysis:</b>	10/03/2022 to 14/03/2022
		<b>Receipt Date:</b>	10/03/2022

### General Information:-

<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: Near Mine Site
<b>Instrument Used</b>	: RDS & FPS sampler with all Accessories
<b>Instrument Code</b>	: VEL/RDS/07& VEL/FPS/07
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: 07/03/2022 to 08/03/2022
<b>Time of Monitoring</b>	: 09:00 AM to 09:00 AM
<b>Ambient Temperature (°C)</b>	: Min.25.0°C, Max.34.0°C
<b>Surrounding Activity</b>	: Human, Vehicular & mining related Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Control Measure if Any</b>	: No
<b>Sampling &amp; Analysis Protocol</b>	: IS-5182 CPCB Guidelines
<b>Parameter Required</b>	: PM <sub>2.5</sub> , PM <sub>10</sub> , NO <sub>2</sub> , SO <sub>2</sub> & CO

### TEST RESULTS

S. No.	Parameter	Protocol	Unit	Result	NAAQS*
1.	Particulate Matter (PM <sub>2.5</sub> )	#SOP No. VEL/SOP/01, Section No. SP 63	µg/m <sup>3</sup>	70.82	60
2.	Particulate Matter (PM <sub>10</sub> )	IS: 5182 (P-23), Gravimetric Method	µg/m <sup>3</sup>	137.42	100
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182 (P-6), Jacob & Hochheiser	µg/m <sup>3</sup>	22.64	80
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182 (P-2) Modified West and Gaeke	µg/m <sup>3</sup>	10.08	80
5.	Carbon Monoxide (CO)	IS: 5182 (P-10) Gas Chromatography,	mg/m <sup>3</sup>	0.85	4

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

#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

## Test Report

<b>Sample Number:</b>	VEL/MSK/A/02	<b>Report No.:</b>	VEL/A/2203/10/002
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Party:</b>	Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description :</b>	Ambient Air Quality Monitoring	<b>Reporting Date:</b>	14/03/2022
		<b>Period of Analysis:</b>	10/03/2022 to 14/03/2022
		<b>Receipt Date:</b>	10/03/2022

### General Information:-

<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: <b>Loading Area</b>
<b>Instrument Used</b>	: RDS & FPS sampler with all Accessories
<b>Instrument Code</b>	: VEL/RDS/08 & VEL/FPS/08
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>07/03/2022 to 08/03/2022</b>
<b>Time of Monitoring</b>	: 09:30 AM to 09:30 AM
<b>Ambient Temperature (°C)</b>	: Min.25.0°C, Max.34.0°C
<b>Surrounding Activity</b>	: Human & Vehicular Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Control Measure if Any</b>	: No
<b>Sampling &amp; Analysis Protocol</b>	: IS-5182 CPCB Guidelines
<b>Parameter Required</b>	: PM <sub>2.5</sub> , PM <sub>10</sub> , NO <sub>2</sub> , SO <sub>2</sub> & CO

### TEST RESULTS

S. No.	Parameter	Protocol	Unit	Result	NAAQS*
1.	Particulate Matter (PM <sub>2.5</sub> )	*SOP No. VEL/SOP/01, Section No. SP 63	µg/m <sup>3</sup>	73.72	60
2.	Particulate Matter (PM <sub>10</sub> )	IS: 5182 (P-23), Gravimetric Method	µg/m <sup>3</sup>	142.86	100
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182 (P-6), Jacob & Hochheiser	µg/m <sup>3</sup>	29.80	80
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182 (P-2) Modified West and Gaeke	µg/m <sup>3</sup>	11.82	80
5.	Carbon Monoxide (CO)	IS: 5182 (P-10) Gas Chromatography,	mg/m <sup>3</sup>	0.90	4

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

#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



## Test Report

<b>Sample Number:</b>	<b>VEL/MSK/A/03</b>	<b>Report No.:</b>	<b>VEL/A/2203/10/003</b>
<b>Issued To:</b>	<b>M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
<b>Name &amp; Address of Party:</b>	<b>Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Sample Description :</b>	<b>Ambient Air Quality Monitoring</b>	<b>Reporting Date:</b>	<b>14/03/2022</b>
		<b>Period of Analysis:</b>	<b>10/03/2022 to 14/03/2022</b>
		<b>Receipt Date:</b>	<b>10/03/2022</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 sampler with all Accessories
<b>Instrument Code</b>	: VEL/RDS/09 & VEL/FPS/09
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>07/03/2022to 08/03/2022</b>
<b>Time of Monitoring</b>	: 10:00 AM to 10:00 AM
<b>Ambient Temperature (°C)</b>	: Min.25.0°C, Max.34.0°C
<b>Surrounding Activity</b>	: Stone loading activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Control Measure if Any</b>	: No
<b>Sampling &amp; Analysis Protocol</b>	: IS-5182 CPCB Guidelines
<b>Parameter Required</b>	: PM <sub>2.5</sub> , PM <sub>10</sub> , NO <sub>2</sub> , SO <sub>2</sub> & CO

### TEST RESULTS

S. No.	Parameter	Protocol	Unit	Result	NAAQS*
1.	<b>Particulate Matter (PM<sub>2.5</sub>)</b>	#SOP No. VEL/SOP/01, Section No. SP 63	µg/m <sup>3</sup>	<b>65.62</b>	60
2.	<b>Particulate Matter (PM<sub>10</sub>)</b>	IS: 5182 (P-23), Gravimetric Method	µg/m <sup>3</sup>	<b>130.49</b>	100
3.	<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>	IS: 5182 (P-6), Jacob & Hochheiser	µg/m <sup>3</sup>	<b>20.72</b>	80
4.	<b>Sulphur Dioxide (SO<sub>2</sub>)</b>	IS: 5182 (P-2) Modified West and Gaeke	µg/m <sup>3</sup>	<b>9.86</b>	80
5.	<b>Carbon Monoxide (CO)</b>	IS: 5182 (P-10) Gas Chromatography, RA:2003	mg/m <sup>3</sup>	<b>0.76</b>	4

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

## Test Report

<b>Sample Number:</b>	<b>VEL/MSK/A/04</b>	<b>Report No.:</b>	<b>VEL/A/2203/10/004</b>
<b>Issued To:</b>	<b>M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
<b>Name &amp; Address of Party:</b>	<b>Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Sample Description :</b>	<b>Ambient Air Quality Monitoring</b>	<b>Reporting Date:</b>	<b>14/03/2022</b>
		<b>Period of Analysis:</b>	<b>10/03/2022 to 14/03/2022</b>
		<b>Receipt Date:</b>	<b>10/03/2022</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 sampler with all Accessories
<b>Instrument Code</b>	: VEL/RDS/10& VEL/FPS/10
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>07/03/2022to 08/03/2022</b>
<b>Time of Monitoring</b>	: 10:15 AM to 10:15 AM
<b>Ambient Temperature (°C)</b>	: Min.25.0°C, Max.34.0°C
<b>Surrounding Activity</b>	: Stone transportation activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Control Measure if Any</b>	: No
<b>Sampling &amp; Analysis Protocol</b>	: IS-5182 CPCB Guidelines
<b>Parameter Required</b>	: PM <sub>2.5</sub> , PM <sub>10</sub> , NO <sub>2</sub> , SO <sub>2</sub> & CO

### TEST RESULTS

S. No.	Parameter	Protocol	Unit	Result	NAAQS*
1.	<b>Particulate Matter (PM<sub>2.5</sub>)</b>	#SOP No. VEL/SOP/01, Section No. SP 63	µg/m <sup>3</sup>	<b>67.26</b>	60
2.	<b>Particulate Matter (PM<sub>10</sub>)</b>	IS: 5182 (P-23), Gravimetric Method	µg/m <sup>3</sup>	<b>134.02</b>	100
3.	<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>	IS: 5182 (P-6), Jacob & Hochheiser	µg/m <sup>3</sup>	<b>28.40</b>	80
4.	<b>Sulphur Dioxide (SO<sub>2</sub>)</b>	IS: 5182 (P-2) Modified West and Gaeke	µg/m <sup>3</sup>	<b>8.72</b>	80
5.	<b>Carbon Monoxide (CO)</b>	IS: 5182 (P-10) Gas Chromatography,	mg/m <sup>3</sup>	<b>0.71</b>	4

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

## Test Report

<b>Sample Number:</b>	<b>VEL/MSK/A/05</b>	<b>Report No.:</b>	<b>VEL/A/2203/10/005</b>
<b>Issued To:</b>	<b>M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
<b>Name &amp; Address of Party:</b>	<b>Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Sample Description :</b>	<b>Ambient Air Quality Monitoring</b>	<b>Reporting Date:</b>	<b>14/03/2022</b>
		<b>Period of Analysis:</b>	<b>10/03/2022 to 14/03/2022</b>
		<b>Receipt Date:</b>	<b>10/03/2022</b>

### General Information:-

<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: <b>Village- Atela Kalan</b>
<b>Instrument Used</b>	: RDS & FPS sampler with all Accessories
<b>Instrument Code</b>	: VEL/RDS/07 & VEL/FPS/07
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>08/03/2022 to 09/03/2022</b>
<b>Time of Monitoring</b>	: 10:20 AM to 10:20 AM
<b>Ambient Temperature (°C)</b>	: Min.25.0°C, Max.34.0°C
<b>Surrounding Activity</b>	: Human & Vehicular Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Control Measure if Any</b>	: No
<b>Sampling &amp; Analysis Protocol</b>	: IS-5182 CPCB Guidelines
<b>Parameter Required</b>	: PM <sub>2.5</sub> , PM <sub>10</sub> , NO <sub>2</sub> , SO <sub>2</sub> & CO

### TEST RESULTS

S. No.	Parameter	Protocol	Unit	Result	NAAQS*
1.	<b>Particulate Matter (PM<sub>2.5</sub>)</b>	#SOP No. VEL/SOP/01, Section No. SP 63	µg/m <sup>3</sup>	<b>63.66</b>	60
2.	<b>Particulate Matter (PM<sub>10</sub>)</b>	IS: 5182 (P-23), Gravimetric Method	µg/m <sup>3</sup>	<b>128.26</b>	100
3.	<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>	IS: 5182 (P-6), Jacob & Hochheiser	µg/m <sup>3</sup>	<b>20.86</b>	80
4.	<b>Sulphur Dioxide (SO<sub>2</sub>)</b>	IS: 5182 (P-2) Modified West and Gaeke	µg/m <sup>3</sup>	<b>8.72</b>	80
5.	<b>Carbon Monoxide (CO)</b>	IS: 5182 (P-10) Gas Chromatography,	mg/m <sup>3</sup>	<b>0.62</b>	4

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



## Test Report

<b>Sample Number:</b>	VEL/MSK/A/06	<b>Report No.:</b>	VEL/A/2203/10/006
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Party:</b>	Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description :</b>	Ambient Air Quality Monitoring	<b>Reporting Date:</b>	14/03/2022
		<b>Period of Analysis:</b>	10/03/2022 to 14/03/2022
		<b>Receipt Date:</b>	10/03/2022

### General Information:-

<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: Village-Bilawal
<b>Instrument Used</b>	: RDS & FPS sampler with all Accessories
<b>Instrument Code</b>	: VEL/RDS/08 & VEL/FPS/08
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: 08/03/2022 to 09/03/2022
<b>Time of Monitoring</b>	: 10:35 AM to 10:35 AM
<b>Ambient Temperature (°C)</b>	: Min.25.0°C, Max.34.0°C
<b>Surrounding Activity</b>	: Human & Vehicular Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Control Measure if Any</b>	: No
<b>Sampling &amp; Analysis Protocol</b>	: IS-5182 CPCB Guidelines
<b>Parameter Required</b>	: PM <sub>2.5</sub> , PM <sub>10</sub> , NO <sub>2</sub> , SO <sub>2</sub> & CO

### TEST RESULTS

S. No.	Parameter	Protocol	Unit	Result	NAAQS*
1.	Particulate Matter (PM <sub>2.5</sub> )	#SOP No. VEL/SOP/01, Section No. SP 63	µg/m <sup>3</sup>	58.76	60
2.	Particulate Matter (PM <sub>10</sub> )	IS: 5182 (P-23), Gravimetric Method	µg/m <sup>3</sup>	122.11	100
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182 (P-6), Jacob & Hochheiser	µg/m <sup>3</sup>	19.66	80
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182 (P-2) Modified West and Gaeke	µg/m <sup>3</sup>	7.96	80
5.	Carbon Monoxide (CO)	IS: 5182 (P-10) Gas Chromatography,	mg/m <sup>3</sup>	0.58	4

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

## Test Report

<b>Sample Number:</b>	VEL/MSK/A/07	<b>Report No.:</b>	VEL/A/2203/10/007
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Party:</b>	Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description :</b>	Ambient Air Quality Monitoring	<b>Reporting Date:</b>	14/03/2022
		<b>Period of Analysis:</b>	10/03/2022 to 14/03/2022
		<b>Receipt Date:</b>	10/03/2022

### General Information:-

<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: Village-Atela Khurd
<b>Instrument Used</b>	: RDS & FPS sampler with all Accessories
<b>Instrument Code</b>	: VEL/RDS/09 & VEL/FPS/09
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: 08/03/2022 to 09/03/2022
<b>Time of Monitoring</b>	: 10:40 AM to 10:40AM
<b>Ambient Temperature (°C)</b>	: Min.25.0°C, Max.34.0°C
<b>Surrounding Activity</b>	: Human & Vehicular Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Control Measure if Any</b>	: No
<b>Sampling &amp; Analysis Protocol</b>	: IS-5182 CPCB Guidelines
<b>Parameter Required</b>	: PM <sub>2.5</sub> , PM <sub>10</sub> , NO <sub>2</sub> , SO <sub>2</sub> & CO

### TEST RESULTS

S. No.	Parameter	Protocol	Unit	Result	NAAQS*
1.	Particulate Matter (PM <sub>2.5</sub> )	#SOP No. VEL/SOP/01, Section No. SP 63	µg/m <sup>3</sup>	56.76	60
2.	Particulate Matter (PM <sub>10</sub> )	IS: 5182 (P-23), Gravimetric Method	µg/m <sup>3</sup>	124.26	100
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182 (P-6), Jacob & Hochheiser	µg/m <sup>3</sup>	20.11	80
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182 (P-2) Modified West and Gaeke	µg/m <sup>3</sup>	9.82	80
5.	Carbon Monoxide (CO)	IS: 5182 (P-10) Gas Chromatography,	mg/m <sup>3</sup>	0.55	4

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

## Test Report

<b>Sample Number:</b>	VEL/MSK/A/08	<b>Report No.:</b>	VEL/A/2203/10/008
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Party:</b>	Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description :</b>	Ambient Air Quality Monitoring	<b>Reporting Date:</b>	14/03/2022
		<b>Period of Analysis:</b>	10/03/2022 to 14/03/2022
		<b>Receipt Date:</b>	10/03/2022

### General Information:-

<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: Village-Dohka Moji
<b>Instrument Used</b>	: RDS & FPS sampler with all Accessories
<b>Instrument Code</b>	: VEL/RDS/10 & VEL/FPS/10
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: 08/03/2022 to 09/03/2022
<b>Time of Monitoring</b>	: 11:00 AM to 11:00 AM
<b>Ambient Temperature (°C)</b>	: Min.25.0°C, Max.34.0°C
<b>Surrounding Activity</b>	: Human & Vehicular Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Control Measure if Any</b>	: No
<b>Sampling &amp; Analysis Protocol</b>	: IS-5182 CPCB Guidelines
<b>Parameter Required</b>	: PM <sub>2.5</sub> , PM <sub>10</sub> , NO <sub>2</sub> , SO <sub>2</sub> & CO

### TEST RESULTS

S. No.	Parameter	Protocol	Unit	Result	NAAQS*
1.	Particulate Matter (PM <sub>2.5</sub> )	#SOP No. VEL/SOP/01, Section No. SP 63	µg/m <sup>3</sup>	52.86	60
2.	Particulate Matter (PM <sub>10</sub> )	IS: 5182 (P-23), Gravimetric Method	µg/m <sup>3</sup>	110.76	100
3.	Nitrogen Dioxide (NO <sub>2</sub> )	IS: 5182 (P-6), Jacob & Hochheiser	µg/m <sup>3</sup>	17.28	80
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS: 5182 (P-2) Modified West and Gaeke	µg/m <sup>3</sup>	8.52	80
5.	Carbon Monoxide (CO)	IS: 5182 (P-10) Gas Chromatography,	mg/m <sup>3</sup>	0.51	4

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



## Test Report

**Sample Number:** VEL/MSK/AN/01 **Report No.:** VEL/AN/2203/10/001  
**Issued To:** M/s MSK (JV) **Format No.:** 7.8 F-01  
**Name & Address of Party:** S-571, Greater Kailash Part- II, New Delhi-110048 **Party Reference No.:** NIL  
**Name & Address of Party:** Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR) **Reporting Date:** 14/03/2022  
**Receipt Date:** 10/03/2022  
**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** : 07/03/2022 to 08/03/2022  
**Time of Monitoring** : 06:00 AM to 06:00AM  
**Surrounding Activity** : Human, Vehicular & mining related Activities  
**Scope of Monitoring** : Regulatory Requirement  
**Control Measure if Any** : No Any  
**Sampling & Analysis Protocol** : IS-9989  
**Sampling Duration** : 24 Hours  
**Parameter Required** :  $L_{max}$ ,  $L_{min}$ ,  $L_{eq}$

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	$L_{max}$	IS 9989	79.2	62.8	dB(A)
2.	$L_{min}$	IS 9989	57.2	44.2	dB(A)
3.	$L_{eq}$	IS 9989	73.86	60.12	dB(A)
4.	#DGMS Limits in dB(*A) Leq ( Mining Area)	--	75.0	70.0	dB(A)

#DGMS:-Directorate General of Mine Safety.\*A “decibel” is a unit in which noise is measured.



**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>	<b>VEL/ MSK/AN/02</b>	<b>Report No.:</b>	<b>VEL/AN/2203/10/002</b>
<b>Issued To:</b>	<b>M/s MSK (JV)</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
	<b>S-571, Greater Kailash Part- II, New Delhi-110048</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Name &amp; Address of Party:</b>	<b>Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)</b>	<b>Reporting Date:</b>	<b>14/03/2022</b>
<b>Sample Description :</b>	<b>AMBIENT NOISE LEVEL MONITORING</b>	<b>Receipt Date:</b>	<b>10/03/2022</b>

### General Information:-

<b>Sample collected by</b>	: Vardan EnviroLab 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>07/03/2022 to 08/03/2022</b>
<b>Time of Monitoring</b>	: 6:00 AM to 6:00AM
<b>Surrounding Activity</b>	: Human & Vehicular Activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Control Measure if Any</b>	: No Any
<b>Sampling &amp; Analysis Protocol</b>	: IS-9989
<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>83.4</b>	<b>63.6</b>	dB(A)
2.	$L_{min}$	IS 9989	<b>58.2</b>	<b>45.7</b>	dB(A)
3.	$L_{eq}$	IS 9989	<b>71.890</b>	<b>59.96</b>	dB(A)
4.	<b>#DGMS Limits in dB(*A) Leq ( Mining Area)</b>	--	<b>75.0</b>	<b>70.0</b>	dB(A)

#DGMS:-Directorate General of Mine Safety.\*A “decibel” is a unit in which noise is measured.



**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>	<b>VEL/ MSK/AN/03</b>	<b>Report No.:</b>	<b>VEL/AN/2203/10/003</b>
<b>Issued To:</b>	<b>M/s MSK (JV)</b> <b>S-571, Greater Kailash Part- II, New Delhi-110048</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
<b>Name &amp; Address of Party:</b>	<b>Stone Mine of AtelaKalan , Village- AtelaKalan,</b> <b>Tehsil- Charkhi Dadri, District- Bhiwani (HR)</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Sample Description :</b>	<b>AMBIENT NOISE LEVEL MONITORING</b>	<b>Reporting Date:</b>	<b>14/03/2022</b>
		<b>Receipt Date:</b>	<b>10/03/2022</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>	: Sound Level Meter
<b>Instrument Calibration Status</b>	: Calibrated
<b>Meteorological condition during monitoring</b>	: Clear Sky
<b>Date of Monitoring</b>	: <b>07/03/2022 to 08/03/2022</b>
<b>Time of Monitoring</b>	: 06:00 AM to 6:00AM
<b>Surrounding Activity</b>	: Stone transportation activities
<b>Scope of Monitoring</b>	: Regulatory Requirement
<b>Control Measure if Any</b>	: No Any
<b>Sampling &amp; Analysis Protocol</b>	: IS-9989
<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>78.4</b>	<b>60.7</b>	dB(A)
2.	$L_{min}$	IS 9989	<b>54.9</b>	<b>43.2</b>	dB(A)
3.	$L_{eq}$	IS 9989	<b>68.76</b>	<b>56.92</b>	dB(A)
4.	<b>#DGMS Limits in dB(*A) Leq ( Mining Area)</b>	--	<b>75.0</b>	<b>70.0</b>	dB(A)

#DGMS:-Directorate General of Mine Safety.\*A “decibel” is a unit in which noise is measured.



**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/MSK/AN/04	<b>Report No.:</b>	VEL/AN/2203/10/004
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Party:</b>	Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description :</b>	AMBIENT NOISE LEVEL MONITORING		
<b>Reporting Date:</b>	14/03/2022	<b>Receipt Date:</b>	10/03/2022

### General Information:-

Sample collected by	: Vardan EnviroLab Representative
Sampling Location	: <b>Haul Road</b>
Instrument Used	: Sound Level Meter
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: <b>07/03/2022 to 08/03/2022</b>
Time of Monitoring	: 06:00 AM to 06:00AM
Surrounding Activity	: Mining activities
Scope of Monitoring	: Regulatory Requirement
Control Measure if Any	: No Any
Sampling & Analysis Protocol	: IS-9989
Sampling Duration	: 24 Hours
Parameter Required	: $L_{max}$ , $L_{min}$ , $L_{eq}$

S. No.	Parameters	Protocol	Test Result dB (A)		Unit
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 06:00 am)	
1.	$L_{max}$	IS 9989	<b>75.9</b>	<b>58.1</b>	dB(A)
2.	$L_{min}$	IS 9989	<b>47.6</b>	<b>43.0</b>	dB(A)
3.	$L_{eq}$	IS 9989	<b>70.84</b>	<b>53.96</b>	dB(A)
4.	#DGMS Limits in dB(*A) Leq ( Mining Area)	--	<b>75.0</b>	<b>70.0</b>	dB(A)

#DGMS:-Directorate General of Mine Safety.\*A “decibel” is a unit in which noise is measured.



**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>	<b>VEL/ MSK/AN/05</b>	<b>Report No.:</b>	<b>VEL/AN/2203/10/005</b>
<b>Issued To:</b>	<b>M/s MSK (JV)</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
	<b>S-571, Greater Kailash Part- II, New Delhi-110048</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Name &amp; Address of Party:</b>	<b>Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)</b>	<b>Reporting Date:</b>	<b>14/03/2022</b>
<b>Sample Description :</b>	<b>AMBIENT NOISE LEVEL MONITORING</b>	<b>Receipt Date:</b>	<b>10/03/2022</b>

### General Information:-

<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: <b>Village-Atela Kalan</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>08/03/2022 to 09/03/2022</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>Control Measure if Any</b>	: No Any
<b>Control measure if Any</b>	: Human & Vehicular Activities
<b>Sampling &amp; Analysis Protocol</b>	: IS-9989
<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>64.8</b>	<b>54.9</b>	dB(A)
2.	$L_{min}$	IS 9989	<b>45.6</b>	<b>38.9</b>	dB(A)
3.	$L_{eq}$	IS 9989	<b>53.68</b>	<b>44.07</b>	dB(A)
4.	<b>CPCB Limits in dB (*A) Leq ( Residential Area)</b>	--	<b>55.0</b>	<b>45.0</b>	dB(A)

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



**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 Number:** VEL/MSK/AN/06 **Report No.:** VEL/AN/2203/10/006  
**Issued To:** M/s MSK (JV) **Format No.:** 7.8 F-01  
S-571, Greater Kailash Part- II, New Delhi-110048 **Party Reference No.:** NIL  
**Name & Address of Party:** Stone Mine of AtelaKalan, Village- AtelaKalan, **Reporting Date:** 14/03/2022  
Tehsil- Charkhi Dadri, District- Bhiwani (HR) **Receipt Date:** 10/03/2022  
**Sample Description :** AMBIENT NOISE LEVEL MONITORING

### General Information:-

**Sample collected by** : Vardan EnviroLab Representative  
**Sampling Location** : **Village-Bilawal**  
**Instrument Used** : Sound Level Meter  
**Instrument Calibration Status** : Calibrated  
**Meteorological condition during monitoring** : Clear Sky  
**Date of Monitoring** : **08/03/2022 to 09/03/2022**  
**Time of Monitoring** : 06:00 AM to 06:00AM  
**Surrounding Activity** : Human & Vehicular Activities  
**Scope of Monitoring** : Regulatory Requirement  
**Control Measure if Any** : No Any  
**Sampling & Analysis Protocol** : IS-9989  
**Sampling Duration** : 24 Hours  
**Parameter Required** :  $L_{max}$ ,  $L_{min}$ ,  $L_{eq}$

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	67.1	58.9	dB(A)
2.	$L_{min}$	IS 9989	46.2	35.2	dB(A)
3.	$L_{eq}$	IS 9989	51.98	43.65	dB(A)
4.	CPCB Limits in dB (*A) Leq ( Residential Area)	--	55.0	45.0	dB(A)

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



**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 Number:** VEL/ MSK/AN/07 **Report No.:** VEL/AN/2203/10/007  
**Issued To:** M/s MSK (JV) **Format No.:** 7.8 F-01  
**Name & Address of Party:** S-571, Greater Kailash Part- II, New Delhi-110048 **Party Reference No.:** NIL  
**Name & Address of Party:** Stone Mine of AtelaKalan , Village- AtelaKalan, **Reporting Date:** 14/03/2022  
 Tehsil- Charkhi Dadri, District- Bhiwani (HR) **Receipt Date:** 10/03/2022  
**Sample Description :** AMBIENT NOISE LEVEL MONITORING

### General Information:-

**Sample collected by** : Vardan EnviroLab Representative  
**Sampling Location** : **Village- Atela Khurd**  
**Instrument Used** : Sound Level Meter  
**Instrument Calibration Status** : Calibrated  
**Meteorological condition during monitoring** : Clear Sky  
**Date of Monitoring** : **08/03/2022 to 09/03/2022**  
**Time of Monitoring** : 06:00 AM to 06:00AM  
**Surrounding Activity** : Human & Vehicular Activities  
**Scope of Monitoring** : Regulatory Requirement  
**Control Measure if Any** : No Any  
**Sampling & Analysis Protocol** : IS-9989  
**Sampling Duration** : 24 Hours  
**Parameter Required** :  $L_{max}$ ,  $L_{min}$ ,  $L_{eq}$

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	63.9	53.9	dB(A)
2.	$L_{min}$	IS 9989	43.4	37.2	dB(A)
3.	$L_{eq}$	IS 9989	52.60	43.75	dB(A)
4.	CPCB Limits in dB (*A) Leq (Residential Area)	--	55.0	45.0	dB(A)

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



**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/MSK/AN/08	<b>Report No.:</b>	VEL/AN/2203/10/008
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Party:</b>	Stone Mine of AtelaKalan, Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description :</b>	AMBIENT NOISE LEVEL MONITORING	<b>Reporting Date:</b>	14/03/2022
		<b>Receipt Date:</b>	10/03/2022

### General Information:-

<b>Sample collected by</b>	: Vardan EnviroLab Representative
<b>Sampling Location</b>	: <b>Village- Dohka Moji</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>08/03/2022 to 09/03/2022</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>Control Measure if Any</b>	: No Any
<b>Sampling &amp; Analysis Protocol</b>	: IS-9989
<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	62.8	57.2	dB(A)
2.	$L_{min}$	IS 9989	41.9	35.7	dB(A)
3.	$L_{eq}$	IS 9989	50.86	41.73	dB(A)
4.	CPCB Limits in dB (*A) Leq ( Residential Area)	--	55.0	45.0	dB(A)

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



**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>	<b>VEL/MSK/W/01</b>	<b>Report No.:</b>	<b>VEL/W/2111/11/001</b>
<b>Issued To:</b>	<b>M/s MSK (JV)</b>	<b>Format No.:</b>	<b>7.8 F-01</b>
	<b>S-571, Greater Kailash Part- II, New Delhi-110048</b>	<b>Party Reference No.:</b>	<b>NIL</b>
<b>Name and Address of Party:</b>	<b>Stone Mine of Atela Kalan ,Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)</b>	<b>Reporting Date:</b>	<b>16/11/2021</b>
		<b>Period of Analysis:</b>	<b>11/11/2021 to 16/11/2021</b>
<b>Sample Description:</b>	<b>Ground Water Sample</b>	<b>Receipt Date:</b>	<b>11/11/2021</b>
<b>Sampling Location:</b>	<b>Near Mine site</b>	<b>Sampling Date:</b>	<b>10/11/2021</b>
<b>Sample Collected by:</b>	<b>Vardan Enviro Lab Representative</b>	<b>Type of Sampling:</b>	<b>Grab</b>
<b>Sampling &amp; Analysis Protocol:</b>	<b>IS 3025 &amp;APHA, 23<sup>rd</sup> Edition 2017</b>	<b>Sampling Quantity:</b>	<b>2.0 Ltr.</b>
		<b>Preservation:</b>	<b>Icebox</b>

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	7.52	--	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	224.62	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	54.64	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	APHA , 2320 B, Titrimetric Method	187.95	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl B, Argentometric Method	65.04	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	21.47	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	360.00	mg/l	500	2000
13.	Sulphate as SO <sub>4</sub>	APHA , 4500 E, Turbidimetric Method	39.04	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F D, SPADNS Method	0.35	mg/l	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	IS 3025 (P-34) ,Chromotropic Method	12.66	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.38	mg/l	1.0	No relaxation
17.	Aluminium as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.05	No Relaxation



**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)



## Test Report

Sample No.: VEL/MSK/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 °C)	APHA, 2510 B, Conductivity Meter Method	554	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 0.05 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)	1.05	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 15185:2002(RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 15185:2002 (RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	

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



**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)

## Test Report

<b>Sample Number:</b>	VEL/MSK/W/02	<b>Report No.:</b>	VEL/W/2111/11/002
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name and Address of Party:</b>	Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description:</b>	Ground Water Sample	<b>Reporting Date:</b>	16/11/2021
<b>Sampling Location:</b>	Village -Bilawal	<b>Period of Analysis:</b>	11/11/2021 to 16/11/2021
<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 <sup>rd</sup> Edition 2017	<b>Sampling Date:</b>	10/11/2021
		<b>Type of Sampling:</b>	Grab
		<b>Sampling Quantity:</b>	2.0 Ltr.
		<b>Preservation:</b>	Icebox

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	7.69	--	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	298.59	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	63.66	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	APHA , 2320 B, Titrimetric Method	279.40	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl <sup>-</sup> B, Argentometric Method	72.66	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	33.96	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	460.00	mg/l	500	2000
13.	Sulphate as SO <sub>4</sub>	APHA , 4500 E, Turbidimetric Method	43.68	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F <sup>-</sup> D, SPADNS Method	0.48	mg/l	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	IS 3025 (P-34) ,Chromotropic Method	18.48	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.26	mg/l	1.0	No relaxation
17.	Aluminium as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.05	No Relaxation



**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/MSK/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 °C)	APHA, 2510 B, Conductivity Meter Method	708	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 0.05 mg/l)	mg/l	1.0	No Relaxation
23.	Anionic Detergents as MBAS	Annex K, IS 13428/IS 3025 (P-68)	*BDL(**DL 0.05 mg/l)	mg/l	0.2	1.0
24.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	0.35	mg/l	5	15
25.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.13	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 0.0005mg/l)	mg/l	0.001	No Relaxation
32.	Total Coliform	IS 15185:2002(RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 15185:2002 (RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	

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



**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)



## Test Report

<b>Sample Number:</b>	VEL/MSK/W/01	<b>Report No.:</b>	VEL/W/2201/06/001
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name and Address of Party:</b>	Stone Mine of Atela Kalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description:</b>	Ground Water Sample	<b>Reporting Date:</b>	11/01/2022
<b>Sampling Location:</b>	Near Mine site	<b>Period of Analysis:</b>	06/01/2022 to 11/01/2022
<b>Sample Collected by:</b>	Vardan EnviroLab Representative	<b>Receipt Date:</b>	06/01/2022
<b>Sampling &amp; Analysis Protocol:</b>	IS 3025 & APHA, 23 <sup>rd</sup> Edition 2017	<b>Sampling Date:</b>	05/01/2022
		<b>Type of Sampling:</b>	Grab
		<b>Sampling Quantity:</b>	2.0 Ltr.
		<b>Preservation:</b>	Icebox

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	7.60	--	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	245.50	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	60.32	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	APHA , 2320 B, Titrimetric Method	206.14	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl <sup>-</sup> B, Argentometric Method	68.11	mg/l	250	1000
10.	Cyanide as CN	IS:3025 (P-27)	*BDL(**DL 0.02 mg/l)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	APHA , 3500 Mg B, Calculation Method	23.09	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	390.00	mg/l	500	2000
13.	Sulphate as SO <sub>4</sub>	APHA , 4500 E, Turbidimetric Method	36.45	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F D, SPADNS Method	0.41	mg/l	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	IS 3025 (P-34) ,Chromotropic Method	22.45	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.42	mg/l	1.0	No relaxation
17.	Aluminium as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.05	No Relaxation



**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)

## Test Report

Sample No.: VEL/MSK/W/01			Report No: VEL/W/2201/06/001			
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	600	µS/cm	—	—
21.	Phenolic Compounds	APHA, 5530 Chloroform Extraction Method	*BDL(**DL 0.0004 mg/l)	mg/l	0.001	0.002
22.	Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)	mg/l	1.0	No Relaxation
23.	Anionic Detergents as MBAS	Annex K, IS 13428/IS 3025 (P-68)	*BDL(**DL 0.05 mg/l)	mg/l	0.2	1.0
24.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	0.42	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 15185:2002(RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 15185:2002 (RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	

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



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 | lab@vardanenvirolab.com

## Test Report

<b>Sample Number:</b>	VEL/MSK/W/02	<b>Report No.:</b>	VEL/W/2201/06/002
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name and Address of Party:</b>	Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description:</b>	Ground Water Sample	<b>Reporting Date:</b>	11/01/2022
<b>Sampling Location:</b>	Village -Bilawal	<b>Period of Analysis:</b>	06/01/2022 to 11/01/2022
<b>Sample Collected by:</b>	Vardan EnviroLab Representative	<b>Receipt Date:</b>	06/01/2022
<b>Sampling &amp; Analysis Protocol:</b>	IS 3025 & APHA, 23 <sup>rd</sup> Edition 2017	<b>Sampling Date:</b>	05/01/2022
		<b>Type of Sampling:</b>	Grab
		<b>Sampling Quantity:</b>	2.0 Ltr.
		<b>Preservation:</b>	Icebox

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	7.56	--	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	218.11	mg/l	200	600
7.	Calcium as Ca	APHA, 3500 Ca B, EDTA Titrimetric Method	56.19	mg/l	75	200
8.	Alkalinity as CaCO <sub>3</sub>	APHA , 2320 B, Titrimetric Method	180.50	mg/l	200	600
9.	Chloride as Cl	APHA, 4500-Cl <sup>-</sup> B, Argentometric Method	59.66	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	18.93	mg/l	30	100
12.	Total Dissolved Solids	APHA , 2540 C, Gravimetric Method	475.00	mg/l	500	2000
13.	Sulphate as SO <sub>4</sub>	APHA , 4500 E, Turbidimetric Method	34.84	mg/l	200	400
14.	Fluoride as F	APHA , 4500-F D, SPADNS Method	0.32	mg/l	1.0	1.5
15.	Nitrate as NO <sub>3</sub>	IS 3025 (P-34) ,Chromotropic Method	18.45	mg/l	45	No Relaxation
16.	Iron as Fe	IS 3025 (P-65):2014(RA:2019)	0.20	mg/l	1.0	No relaxation
17.	Aluminium as Al	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.03	0.2
18.	Boron	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.5	2.4
19.	Total Chromium as Cr	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.05	No Relaxation



**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/MSK/W/02			Report No: VEL/W/2201/06/002			
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	731	µS/cm	—	—
21.	Phenolic Compounds	APHA, 5530 Chloroform Extraction Method	*BDL(**DL 0.0004 mg/l)	mg/l	0.001	0.002
22.	Mineral Oil	Clause 6 of IS:3025(Part 39)	*BDL(**DL 0.05 mg/l)	mg/l	1.0	No Relaxation
23.	Anionic Detergents as MBAS	Annex K, IS 13428/IS 3025 (P-68)	*BDL(**DL 0.05 mg/l)	mg/l	0.2	1.0
24.	Zinc as Zn	IS 3025 (P-65):2014(RA:2019)	0.31	mg/l	5	15
25.	Copper as Cu	IS 3025 (P-65):2014(RA:2019)	0.08	mg/l	0.05	1.5
26.	Manganese as Mn	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.01 mg/l)	mg/l	0.1	0.3
27.	Cadmium as Cd	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.003	No Relaxation
28.	Lead as Pb	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
29.	Selenium as Se	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.001 mg/l)	mg/l	0.01	No Relaxation
30.	Arsenic as As	IS 3025 (P-65):2014(RA:2019)	*BDL(**DL 0.002 mg/l)	mg/l	0.01	No Relaxation
31.	Mercury as Hg	IS 3025 (P-65):2014(RA:2019)	*BDL (**DL 0.0005 mg/l)	mg/l	0.001	No Relaxation
32.	Total Coliform	IS 15185:2002(RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	
33.	E. Coli	IS 15185:2002 (RA- 2016)	Absent	/100ml	Shall not be detectable in any 100 ml sample	

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



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@vardanenvironet.com | lab@vardanenvironet.com

## Test Report

<b>Sample Number:</b>	VEL/MSK/S/01	<b>Report No.:</b>	VEL/S/2203/10/001
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Party:</b>	Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description:</b>	Soil Sample	<b>Reporting Date:</b>	14/03/2022
<b>Sampling Location:</b>	Near Mine Site	<b>Period of Analysis:</b>	10/03/2022 to 14/03/2022
<b>Sample Collected by:</b>	Vardan EnviroLab Representative	<b>Receipt Date:</b>	10/03/2022
<b>Sampling &amp; Analysis Protocol:</b>	IS 2720, USEPA 3050B & USDA SOP	<b>Sampling Date:</b>	08/03/2022
		<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	7.58	--
2.	Conductivity	IS:14767 by Conductivity meter	0.264	mS/cm
3.	Soil Texture	SOP , SP-87,Issue No.-01 & Issue Date-14/02/2013	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	33.49	%
6.	Bulk density	SOP , SP-80,Issue No.-01 & Issue Date-14/02/2013	1.53	gm/cc
7.	Chloride as Cl	SOP , SP-85,Issue No.-01 & Issue Date-14/02/2013	37.85	mg/100g
8.	Calcium as Ca	SOP , SP-82,Issue No.-01 & Issue Date-14/02/2013	20.70	mg/100g
9.	Sodium as Na	SOP , SP-84,Issue No.-01 & Issue Date-14/02/2013	36.91	mg/kg
10.	Potassium as K	SOP , SP-84,Issue No.-01 & Issue Date-14/02/2013	112.86	kg/hect.
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method	0.32	%
12.	Magnesium as Mg	SOP , SP-83,Issue No.-01 & Issue Date-14/02/2013	9.86	mg/100g
13.	Available Nitrogen as N	IS:14684 Distillation Method	117.54	kg./hec.
14.	Available Phosphorus	SOP , SP-86,Issue No.-01 & Issue Date-14/02/2013	16.85	kg./hec.
15.	Zinc (as Zn)	USEPA 3050B	0.96	mg/kg
16.	Manganese (as Mn )	USEPA 3050B	1.38	mg/kg
17.	Lead (as Pb)	USEPA 3050B	0.41	mg/kg
18.	Cadmium (as Cd )	USEPA 3050B	0.49	mg/kg
19.	Chromium (as Cr)	USEPA 3050B	0.35	mg/kg
20.	Copper (as Cu )	USEPA 3050B	0.78	mg/kg

\*SOP-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 | lab@vardanenvirolab.com

## Test Report

<b>Sample Number:</b>	VEL/MSK/S/02	<b>Report No.:</b>	VEL/S/2203/10/002
<b>Issued To:</b>	M/s MSK (JV) S-571, Greater Kailash Part- II, New Delhi-110048	<b>Format No.:</b>	7.8 F-01
<b>Name &amp; Address of Party:</b>	Stone Mine of AtelaKalan , Village- AtelaKalan, Tehsil- Charkhi Dadri, District- Bhiwani (HR)	<b>Party Reference No.:</b>	NIL
<b>Sample Description:</b>	Soil Sample	<b>Reporting Date:</b>	14/03/2022
<b>Sampling Location:</b>	Village -Bilawal	<b>Period of Analysis:</b>	10/03/2022 to 14/03/2022
<b>Sample Collected by:</b>	Vardan EnviroLab Representative	<b>Receipt Date:</b>	10/03/2022
<b>Sampling &amp; Analysis Protocol:</b>	IS 2720, USEPA 3050B & USDA	<b>Sampling Date:</b>	08/03/2022
		<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	7.64	--
2.	Conductivity	IS:14767 by Conductivity meter	0.284	mS/cm
3.	Soil Texture	SOP , SP-87,Issue No.-01& Issue Date-14/02/2013	Sandy Loam	--
4.	Color	SOP , SP-78,Issue No.-01& Issue Date-14/02/2013	Yellowish Brown	--
5.	Water holding capacity	SOP , SP-81,Issue No.-01& Issue Date-14/02/2013	35.86	%
6.	Bulk density	SOP , SP-80,Issue No.-01& Issue Date-14/02/2013	1.48	gm/cc
7.	Chloride as Cl	SOP , SP-85,Issue No.-01& Issue Date-14/02/2013	40.19	mg/100g
8.	Calcium as Ca	SOP , SP-82,Issue No.-01& Issue Date-14/02/2013	27.06	mg/100g
9.	Sodium as Na	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	38.49	mg/kg
10.	Potassium as K	SOP , SP-84,Issue No.-01& Issue Date-14/02/2013	120.26	kg/hect.
11.	Organic Matter	IS:2720 (P-22) Titrimetric Method	0.38	%
12.	Magnesium as Mg	SOP , SP-83,Issue No.-01& Issue Date-14/02/2013	11.07	mg/100g
13.	Available Nitrogen as N	IS:14684 Distillation Method	148.26	kg./hect.
14.	Available Phosphorus	SOP , SP-86,Issue No.-01& Issue Date-14/02/2013	21.86	kg./hect.
15.	Zinc (as Zn)	USEPA 3050B	0.98	mg/kg
16.	Manganese (as Mn )	USEPA 3050B	1.42	mg/kg
17.	Lead (as Pb)	USEPA 3050B	0.46	mg/kg
18.	Cadmium (as Cd )	USEPA 3050B	0.52	mg/kg
19.	Chromium (as Cr)	USEPA 3050B	0.31	mg/kg
20.	Copper (as Cu )	USEPA 3050B	0.84	mg/kg

\*SOP-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 | lab@vardanenvirolab.com





RETAINING WALL

RETAINING WALL



RETAINING WALL