DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT
&
ENVIRONMENTAL MANAGEMENT PLAN FOR PUBLIC HEARING

Existing Quartz, Pyrophyllite, Red and Yellow Ochre Mining Project with proposed Crusher (400 TPD),

M.L. No.-08/1982 (Revised- 23/2001) Area: 4.96 Hectare (Govt. Land) located at Khasra No.- 1, 902, 148 & 149

(As per EIA Notification 14th September 2006 and its subsequent amendments till date)

Production Capacity: - 8,00,120 TPA (ROM)

PROJECT COST: - 787.0 Lacs. (Rs.)

Study Period: - Summer Season (March-May,2025)

Near Village- Maharana, Tehsil- Buhana, District- Jhunjhunu (Rajasthan)

APPLICANT	EIA CONSULTANT
M/s. Ashoka Mineral Grinding Mills Correspondence Address- Shahpura Road, Neem Ka Thana, District- Neem Ka Thana, Rajasthan. - 332713	COSMOS ENVIRO CONSULTANCY Office Address: - B-25-B, 10B Scheme, Riddhi Siddhi Chouraha, GopalPura Bypass, Jaipur Rajasthan - 302018 (Raj.)Certificate No.: - NABET/EIA/24-27/IA 0148 {Validity: - 19/11/2027} Email: info.cecjaipur@gmail.com

INDEX

INDEX

INDEX

LIST OF TABLES

INDEX

INDEX

LIST OF FIGURES

INDEX

LIST OF ANNEXURES

सत्यमेव जयते

File No.: RJ/25/SEAC2(06)/MIN/TOR/0535
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Level Expert Appraisal Committee(SEAC), RAJASTHAN)
****

Dated **08/07/2025**

To,

Ashok kumar
Ashok kumar
S/o Budh Ram Agarwal, Joshi Colony, Ward No. 3, Shahapura road, Neem ka Thana, nimkathana town, Sikar, Neem ka Thana, SIKAR, RAJASTHAN, 332713
ashokminerals2025@outlook.com

Subject: Grant of Standard Terms of Reference (ToR) to the proposed Project under the EIA Notification 2006-and as amended thereof-regarding.

Sir/Madam,

This is in reference to your application submitted to SEAC vide proposal number SIA/RJ/MIN/536489/2025 dated 23/05/2025 for grant of Terms of Reference (ToR) to the project under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) ToR Identification No.	TO25B0000RJ5352233N
(ii) File No.	RJ/25/SEAC2(06)/MIN/TOR/0535
(iii) Clearance Type	Fresh ToR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	Existing Quartz, Pyrophyllite, Red and Yellow Ochre Mining Project with proposed Crusher Plant (400 TPD), M.L. No.-08/1982 (Revised- 23/2001) Area: 4.96 Hectare (Govt. Land) located at Khasra No.- 1, 902, 148 & 149 Near Village- Maharana, Tehsil- Buhana, District- Jhunjhunu (Rajasthan) in favor of M/s Ashoka Mineral Grinding Mills.
(viii) Name of Company/Organization	Ashok kumar
(ix) Location of Project (District, State)	JHUNJHUNU, RAJASTHAN
(x) Issuing Authority	SEAC
(xi) Applicability of General Conditions	NO

1. The proposal has examined in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further

amendments thereto, and in pursuance of OM dated 06.05.2022 (Mechanism for handling of ToR applications for issuance of Standard ToR) & OM dated 08.12.2023 (Reforms undertaken in PARIVESH 2.0) after detailed examination hereby decided to grant Standard Terms of Reference to the instant proposal of **M/s.Ashok kumar** under the provisions of the aforementioned Notification.

2. The brief about products and by products as submitted by the Project proponent in Form-1 (Part A, B) and Standard Terms of Reference are annexed to this letter as Annexure (1).

3. Air quality modelling shall also be carried out for prediction of impact of entire cluster (as defined in Notification dated 01.07.2016) on the air quality of the area to capture all the possible externalities. The EIA report is required to incorporate production capacity of the cluster, the impact of movement of vehicles for transportation of mineral and related issues, replenishment and recharge issues, geo- hydrological study of the cluster. The air quality contours maybe shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation.

4. The Competent Authority reserves the right to stipulate additional TORs, if found necessary.

5. The Standard Terms of Reference (ToR) to the aforementioned project is under provisions of EIA Notification, 2006 and as amended thereof. It does not tantamount to approvals/consent/permissions etc required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

6. The granted letter, all the documents submitted as a part of application viz. Form-1 Part A and Part B are available on PARIVESH portal which can be accessed by scanning the QR Code above.

Copy To

N/A

Annexure 1

Standard Terms of Reference for conducting Environment Impact Assessment Study for Mining of minerals and information to be included in EIA/EMP report

1.

Sr. No.	Terms of Reference
1.1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994
1.2	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given
1.3	All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee
1.4	All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ toposheet, topographic sheet, geomorphology and geology of the areashould be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone)
1.5	Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics

Sr. No.	Terms of Reference
1.6	Details about the land proposed for mining activities should be givenwith information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority
1.7	It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large,may also be detailed in the EIA Report
1.8	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided
1.9	The study rea will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period
1.10	Land use of the study rea delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given
1.11	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given
1.12	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees
1.13	Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished
1.14	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated
1.15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given
1.16	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted

Sr. No.	Terms of Reference
1.17	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlifeand copy furnished
1.18	A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled- I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost
1.19	Proximity to Areas declared as Critically Polluted or the Project areas likely to come under the Aravali Range, (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered
1.20	Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL. HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority)
1.21	R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report
1.22	One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site- specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given
1.23	Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map
1.24	The water requirement for the Project, its availability and source should be furnished. A detailed water

Sr. No.	Terms of Reference
	balance should also be provided. Fresh water requirement for the Project should be indicated
1.25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided
1.26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided
1.27	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided
1.28	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished
1.29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out
1.30	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same
1.31	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution
1.32	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines
1.33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report
1.34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report
1.35	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed

Sr. No.	Terms of Reference
1.36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations
1.37	Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation
1.38	Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project
1.39	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project
1.40	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given
1.41	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out
1.42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report
1.43	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc
1.44	Besides the above, the below mentioned general points are also to be followed:- a) All documents to be properly referenced with index and continuous page numbering. b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated. c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project. d) Where the documents provided are in a language other than English, an English translation should be provided. e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted. f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed. g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation. h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable. i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area
1.45	An EIA-EMP Report would be prepared for a combined peak capacity of .....MTPA for OC-cum-UG

Sr. No.	Terms of Reference
	project which consists of .... MTPA in an ML/project area of ha for OC and .... MTPA for UG in an ML/project area of ..... ha based on the generic structure specified in Appendix III of the EIA Notification 2006.
1.46	An EIA-EMP Report would be prepared for MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
1.47	The ToRs prescribed for both opencast and underground mining are applicable for opencast – cum-underground mining.
1.48	Information on the following aspects of the corporate Environment Responsibility should also be provided for opencast, underground and opencast-cum-underground Min
1.49	Corporate Environment Responsibility:
1.50	The Company must have a well laid down Environment Policy approved by the Board of Directors.
1.51	The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/ conditions.
1.52	The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
1.53	To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large
1.54	The condition prescribed in standard ToR seperately for opencast and under ground mine to also be followed and also of coal washery if located within lease area or near to the mine lease area
1.55	An EIA-EMP Report shall be prepared for..... MTPA peak capacity in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
1.56	An EIA-EMP Report would be prepared for..... MTPA peak capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
1.57	If the washery is located within the mine lease or near to the mine lease its location should be cited seperately also, providing pillar cordinates and site layout plan. Insuch cases cumulative impact of mine operation with washery to be assessd and EMP measure to be drawn to the worst scenario
1.58	Plan of mechanized transportation of coal to coal washery also for rejects and washed coal to be drawn

Sr. No.	Terms of Reference
1.59	Propoer KML file with pin drop and coordinate of mine at 500-1000 m interval be provided
1.60	A toposheet specifying locations of the State, District and Project site should be provided.
1.61	A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries, mines, washery and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given. The above details to be furnished in tabular form also.
1.62	Land use map (1: 50,000 scale) based on a recent satellite imagery of the study area may also be provided with explanatory note on the land use.
1.63	Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.
1.64	A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
1.65	A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.
1.66	In case of any proposed diversion of nallah/canal/river, the proposed route of diversion/modification of drainage and their realignment, construction of embankment etc. should also be shown on the map as per the approval of Irrigation and flood control Department of the concerned state.
1.67	Catchment area with its drainage map of 25 km area within and outside the mine shall be provided with names, details of rivers/ riverlet system and its respective order. The map should clearly indicate drainage pattern of the catchment area with basin of major rivers. Diversion of drains/ river need eloboration in form of lengthe, quantity and quality of water to be diverted
1.68	Prior in principle approval from the respective state govt shall be required in cases where PP proposes diversion of river/ stream/ nallah/ drains. However, state approval shall not be finally considered before the appraisal by EAC. PP shall have submitted detailed project report in case where diversion is required with emphasis on hydrological study
1.69	Similarly if the project involves diversion of any road/railway line passing through the ML/project area, the proposed route of diversion and its realignment should be shown in the map along with the status of the approval of the competent authority.

Sr. No.	Terms of Reference
1.70	Break up of lease/project area as per different land uses and their stage of acquisition should be provided. LANDUSE DETAILS FOR OPENCAST PROJECT should be given as per the following table: Sl. No. / Landuse / Within ML area/project area (ha) / Outside ML area/project area (ha) / Total 1 Agricultural land 2 Forest land 3 Wasteland 4 Grazing land 5 Surface water bodies 6 Settlements 7 Others (specify) Total
1.71	Break-up of lease/project area as per mining plan should be provided.
1.72	Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
1.73	Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
1.74	One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided. The detail of NABL/ MoEF&CC certification of the respective laboratory and NABET accreditation of the consultant to be provided.
1.75	Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
1.76	For proper baseline air quality assessment, Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ shall be planned by the collection of air quality data by adequate monitoring stations in the downwind areas. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area. In case of expansion, the displayed data of CAAQMS and its comparison with the monitoring data to be provided

Sr. No.	Terms of Reference
1.77	A detailed traffic study along with presence of habitation in 100 mts distance from both side of road, the impact on the air quality with its proper measures and plan of action with timeline for widening of road. The project will increase the no. of vehicle along the road which will indirectly contribute to carbon emission so what will be the compensatory action plan should be clearly spell out in EIA/ EMP report.
1.78	The socio-economic study to conducted with actual survey report and a comparative assessment to be provided from the census data should be provided in EIA/ EMP report also occupational status & economic status of the study area and what economically project will contribute should be clearly mention. The study should also include the status of infrastructural facilities and amenities present in the study area and a comparative assessment with census data to be provided and to link it with the initialization and quantification of need based survey for CSR activities to be followed.
1.79	The Ecology and biodiversity study should also indicate the likely impact of change in forest area for surface infrastructural development or mining activity in relation to the climate change of that area and what will be the compensatory measure to be adopted by PP to minimize the impact of forest diversion.
1.80	Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted
1.81	Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
1.82	Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
1.83	Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing though the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
1.84	Forest diversion shall be only proposed for coal bearing areas. No non-essential infrastructure, office, workshop etc shall be propsed or developed in forest area. No forest area shall be used for OB dump, accordingly Mine plan to be prepared
1.85	Detail of OB recovery for reutilization of minerals from mining shall be explored
1.86	OB dump management from its extraction, transportation to reutilization, disposal / backfilling, to be carry on in a manner to mininmize its impact. A detail to be furnished in EIA/EMP report
1.87	Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.
1.88	Flow chart of water balance should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be done.
1.89	PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of

Sr. No.	Terms of Reference
	Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs
1.90	PP shall propose and explore to use LNG/CNG based mining machineries and trucks for mining operation and transportation of coal. The measures adopted to conserve energy or use of renewable sources shall be submitted.
1.91	PP to evaluate the green house emission gases from the mine operation/ washery plant and corresponding carbon absorption plan.
1.92	Site specific impact assessment with its respective measure to be provided
1.93	Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
1.94	Impact of blasting, noise and vibrations should be given.
1.95	Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
1.96	Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
1.97	Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
1.98	Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28o angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
1.99	Efforts be made for maximising progressive internal dumping of O.B., sequential mining, external dump on coal bearing area and later rehandling into the mine void.--to reduce land degradation.
1.100	Impact of change in land use due to mining operations and plan for restoration of the mined area to its original land use should be provided.
1.101	Progressive Green belt and ecological restoration /afforestation plan (both in text, figures and in theAdequate greenbelt nearby areas, coal stock yard and transportaion area of coal shall be provided with details of species selected and survival rate. Adequate greenbelt nearby areas, coal stock yard and transportaion area of coal shall be provided with details of species selected and survival rate Greenbelt development should be undertaken particularly around the transport route and CHP. Table 2 : Stage Wise Cumulative Plantation

Sr. No.	Terms of Reference
	H341 S.N. Land use Category — Present (1st Year) — 5th Year — 10th Year — 20th Year — 24th Year (end of mine life)* 1 Backfilled Area(Reclaimed with plantation) 2 Excavated Area (not reclaimed)/void 3 External OB dump Reclaimed with plantation) 4 Reclaimed Top soil dump 5 Green Built Area 6 Undisturbed area (brought under plantation) 7 Roads (avenue plantation) 8 Area around buildings and Infrastructure Total 6 S. No. YEAR* — Green Belt — External Dump — Backfilled Area — Others(Undisturbed Area/etc)) — TOTAL 1 1st year 2 3rd year 3 5th year 4 10th year 5 15th year 20th year 7 25th year 8 30th year 9 34th year(end of mine life) 10 34- 37th Year (Post-mining)
1.102	Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre-mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished. Table 3: Post-Mining Landuse Pattern of ML/Project Area (ha) S.N. Land use during Mining — Land Use (ha): Plantation — Water Body — Public Use — Undisturbed — Total 1 External OB Dump 2 Top soil Dump 3 Excavation 4 Roads 5 Built up area 6 Green Belt 7 Undisturbed Area Total

Sr. No.	Terms of Reference
1.103	Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
1.104	Site specific Risk Assessment and Disaster Preparedness and Management Plan should be provided.
1.105	(iIntegration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
1.106	Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
1.107	Details of R&R. Detailed project specific R&R Plan with data on the existing socio- economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
1.108	CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
1.109	a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
1.110	b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
1.111	c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
1.112	d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
1.113	f) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
1.114	Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the time bound action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
1.115	Status of any litigations/ court cases filed/pending on the project should be provided.
1.116	Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
1.117	Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.
1.118	FOREST CLEARANCE: Details on the Forest Clearance should be given as per the format given:

Sr. No.	Terms of Reference
	TOTAL ML/PROJECT AREA (ha) TOTAL FORESTL AND (ha) Date of FC If more than, provide details of each FC Balance area for which FC is yet to be obtained Status of appl for. diversion of forest land
1.119	PP shall submit clarification from PCCF that mine does not falls under corridors of any National Park and Wildlife Sanctuary with certified map showing distance of nearest sanctuary.
1.120	Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users in the upstream and downstream of the project site. should be given.
1.121	In case of expansion of the proposal, the status of the work done/activities as per mining plan and mine closure plan and progressive reclamation of OB dump shall be detailed in EIA/ EMP report
1.122	A copy of application submitted for 5 star rating system to Ministry of coal for expansion cases may be provided. Certificate /rating given to project shall be provided with EIA-EMP report
1.123	PP shall carry out survey through drone highlighting the ground reality for atleast 10 minutes
1.124	Detailed Chronology of the project starting from the first lease deed alloted/Block allotment/ Land acquired to its No. of renewals, CTO /CTE with details of no. renewals, previous EC(s) granted details and its compliance details, NOC details from various Govt bodies like Forest NOC(s), CGWA permissions, Power permissions, etc as per the requisites respectively to be furnished in tabular form.
1.125	The first page of the EIA/ EMP report must mention the peak capacity production, area, detail of PP, Consultant (NABET acrreditation) and Laboratory (NABL / MoEF & CC certification)
1.126	The compliances of ToR must be properly cited with respective chapter section and page no in tabular form and also mention sequence of the respective ToR complied within the EIA-EMP report in all the chapter,s section.
1.127	An EIA-EMP Report shall be prepared for peak capacity (.....MTPA)operation in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
1.128	An EIA-EMP Report would be prepared for peak capacity operation to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
1.129	A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries, mines, coal washery and other polluting sources. In case of

Sr. No.	Terms of Reference
	ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given. The above details to be furnished in tabular form also
1.130	(Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
1.131	Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified. Area under Surface Rights S.N ML/Project Land use — Area under Surface Rights(ha) — Area Under Mining Rights(ha) (ha) — Area under Both (ha) 1 Agricultural land 2 Forest Land 3 Grazing Land 4 Settlements 5 Others (specify) S.N. — Details — Area (ha) 1 Buildings 2 Infrastructure 3 Roads 4 Others (specify) Total
1.132	One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided. The detail of NABL/ MoEF&CC certification of the respective laborartory and NABET accreditation of the consultant to be provided.
1.133	Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.
1.134	Study on land subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
1.135	Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the

Sr. No.	Terms of Reference
	competing users should be provided.
1.136	PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of coal. The measures adopted to conserve energy or use of renewable sources shall be explored
1.137	PP shall explore the use of vent gases as generated from under ground Mine for use of energy generation/ in house energy consumption
1.138	Site specific Impact assessment with its mitigation measures, Risk Assessment and Disaster Preparedness and Management Plan should be provided.
1.139	Impact of stowing by using coal washery rejects/ flyash/ bottom ash shall be assessed in term of leachate generation and its characteristics
1.140	Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
1.141	Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
1.142	The number and efficiency of mobile/static water jet, Fog cannon sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
1.143	Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.
1.144	Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre-mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.
1.145	Adequate greenbelt nearby areas, coal stock yard and transportaion area of coal shall be provided with details of species selected and survival rate Greenbelt development should be undertaken particularly around the transport route and CHP.
1.146	e) Environment Managament Cell and its responsibilities to be clearly spleel out in EIA/ EMP report
1.147	Details on the Forest Clearance should be given as per the format given: Total Project Area (ha) / ML Total Forest land (ha) If more than one provide details of each FC / Date of FC / Extent of Forest Land / Balance area for which FC is yet to be obtained / Status of appl For diversion of forest land

Sr. No.	Terms of Reference
1.148	In case of expansion of the proposal, the status of the work done as per mining plan and approved mine closure plan shall be detailed in EIA/ EMP report

2. Standard Terms of reference (ToR) for 1(a) Mining of minerals

Sr. No.	Terms of Reference
2.1	"Besides the above, the below mentioned general points are also to be followed:- a) All documents to be properly referenced with index and continuous page numbering. b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated. c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project. d) Where the documents provided are in a language other than English, an English translation should be provided. e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted. f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed. g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation. h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable. i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

Additional Terms of Reference

(i) The applicant will assess the impact of mining on environment from the entire cluster (as per cluster certificate) as well as from the applicant's individual mine, will get the public consultation done the entire cluster in conformity with EIA Notification dated 14.09.2006 as amended till date. HOWEVER, the applicant will propose the EMP (environmental management plan), CER (corporate environmental responsibility), budgetary allocation for labour welfare, etc. for his own mine only and NOT for other lessees/ proponent those are part or member of the cluster but NOT participating in the process of EIA/EMP. The applicant will not make any commitment on behalf of other member lessee of cluster. The proposal will be appraised by the Committee for EC to the applicant's LoI/mine on its merit and NOT for approval of EIA/EMP for the cluster in which the applicant's LoI/mine is falling/located.

(ii) As per notification dated 20.02.2025

"S.O. 924 (E). In exercise of the powers conferred by clause (e) of section 3 of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957), the Central Government hereby makes the following amendment in the notification of the Government of India, in the Ministry of Mines, published in the Gazette of India, Extraordinary, Part II. Section 3, Sub-section (ii), vide number S.O. 423(E), dated the 10th February, 2015. namely:-

In the said notification, minerals specified in items (iii), (xiv), (xxii) and (xxv) shall be omitted."

In light of above EIA/EMP shall be prepared in accordance of major mineral category. The PP shall also

present approved Mining Plan form IBM/ Acknowledgement for registration at the time of final presentation for EC.

Annexure 2

Details of Products & By-products

Name of the product /By-product	Product / By-product	Quantity	Unit	Mode of Transport / Transmission	Remarks (eg. CAS number)
Quartz, Pyrophyllite, Red and Yellow Ochre	Product	800120	Tons per Annum (TPA)	Road	NA

COMPLIANCE OF AUTO TOR POINTS

	ToR Point	Compliance	Ref. in EIA/EMP Report
1.	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.	Mine is closed since 2003-2004.	--
2.	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.	Lease has been granted in the name of the lessee on 25.02.1983. Copy of same is enclosed.	Chapter 2, Para 1.2 Copy of Lease Documents ***Annexure-I***
3.	All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.	All documents including approved mine plan, EIA and Public Hearing are compatible with one another in term of following aspects: -	Details given in of Chapter-2 of the EIA/EMP report.

Particulars	As per Mining Plan (ha)	As per EIA/EMP Report (ha)
Area	4.96 hectare	4.96 hectare
Production Capacity (TPA)	8,00,120 TPA (ROM)	8,00,120 TPA (ROM)
Waste Generation & Management	Dump in Mine Site	Dump in Mine Site
Mining Technology	Open Cast Semi- mechanized	Open Cast Semi- mechanized

4.	All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/ toposheet, topographic sheet, geomorphology and geology of the areas should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/ Toposheet, topographic sheet, geomorphology and geology of the areas is provided in this EIA/EMP Report.	Details given Chapter-2 of the EIA/EMP report.
5.	Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.	Information provided on high resolution satellite image with geological map of the area, geomorphology land-forms of the area, existing minerals & water bodies, streams and rivers are incorporated in this EIA/EMP Report. Soil characteristics of the area have been analyzed & incorporated in this EIA/EMP Report.	Satellite Image of Lease area given in Chapter-3 of the EIA/EMP report.
6.	Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.	The land proposed for mining activity is a Pvt. Land. Lease has been granted in the name of the lessee on 25.02.1983. Copy of same is enclosed.	Chapter 2, Para 1.2 Copy of Lease Documents ***Annexure-I***
7.	It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for	Proprietorship	--

	ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large may also be detailed in the EIA Report.		
8.	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.	Issues relating to Mine Safety, including slope study in case of open cast mining, blasting study etc. is detailed &incorporated in this EIA/EMP Report.	Details given in Chapter-10 of the EIA/EMP report.
9.	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.	The study area comprises of 10 km zone around the mine lease from lease periphery. The data contained in the EIA such as waste generation etc. are for the life of the mine / lease period.	10 Km radius Map on Page Chapter-2 of the EIA/EMP report. Details of Waste Generation is given in Chapter-2 EIA/EMP Report.
10.	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features are indicated. Land use plan of the mine lease area is prepared to encompass preoperational, operational and post operational phases are incorporated in this EIA/EMP Report.	Details given in Chapter-3 of the EIA/EMP report.
11.	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should	Initially the waste will be dumped in the mine lease area as shown in the plate of individual lease. No R	Details given in Chapter-2 of the EIA/EMP report.

	be given.	& R issues involved.	
12.	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.	No forest land is involved. **DCF Certificate** was issued by DCF, Jhunjhunu vide letter no. 8986 dated: 18.10.2003 and Application regarding distance from mine to NP/WLS has been forwarded from Mining Engineer, Jhunjhunu to DCF, Jhunjhunu vide letter no. ME/Jhunjhunu/Ma.Chi/ML 8/82/2024/2473 dated 03.12.2024.	***Annexure-V***
13.	Status of forestry clearance for the broken-up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.	Not applicable, as there is no involvement of forest land in this project.	--
14.	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.	Not applicable, as there is no involvement of forest land in this project.	--
15.	The vegetation in the RF/PF areas in the study area, with necessary details, should be given.	The vegetation in the RF / PF areas in the study area, with necessary details is incorporated in this EIA/EMP Report.	Details given in Chapter-3 of the EIA/EMP report.
16.	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact	A detailed biological study for the study area has been carried out and details incorporated in this	Details given in Chapter-3 of the EIA/EMP report.

	of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.	EIA/EMP Report.	
17.	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.	**DCF Certificate** was issued by DCF, Jhunjhunu vide letter no. 8986 dated: 18.10.2003 and Application regarding distance from mine to NP/WLS has been forwarded from Mining Engineer, Jhunjhunu to DCF, Jhunjhunu vide letter no. ME/Jhunjhunu/Ma.Chi/ML 8/82/2024/2473 dated 03.12.2024	***Annexure-V***
18.	A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.	A detailed biological study for the core zone and study area has been carried out and details incorporated in this EIA/EMP Report.	--
19.	Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come	The mine lease area is not located in Critically Polluted and under	***Annexure-IV***

	under the Aravalli Range, (attracting court restrictions for mining operations), should also be indicated and State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.	Aravalli Range, (attracting court restrictions for mining operations). Aravalli Certificate was issued by Office of Mining Engineer, Mines and Geology Department, Jhunjhunu, vide Letter no. ME/Jhunjhunu/ML/08/82/2024/2461 dated 29.11.2024.	
20.	Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL. HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).	Not Applicable.	
21.	R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.	Not applicable	-
22.	One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season); December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification	One season baseline data for summer season (March to May, 2025) has been collected for ambient air quality, water quality, noise level, soil and flora and	Details given in Chapter-3 of the EIA/EMP report.

	of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.	fauna. The location of the monitoring stations is being kept such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. The selection criterion for monitoring location has been discussed in Chapter-3 of the EIA/EMP report.	
23.	Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.	Air quality modelling is being carried out for prediction of impact of the project on the air quality of the area and the same will be incorporated in the EIA/EMP report.	Ref Chapter 4
24.	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated	The details regarding water requirement for the Project, its availability and source has been furnished in Chapter-2 of the EIA/EMP report.	Details given in Chapter-2 of the EIA/EMP report.
25.	Necessary clearance from the Competent Authority for drawl of requisite quantity of	Not applicable, as there is no requirement of groundwater for the proposed project. Water	-

	water for the Project should be provided.	Requirement will be met available through Tankers from nearby village- Buchara.	
26.	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	Description of water conservation measures proposed to be adopted in the Project has been given. Details of rainwater harvesting proposed in the Project has been given in Chapter-7 of the EIA/EMP report.	Details given in Chapter-7 of the EIA/EMP report.
27.	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.	Impact of the Project on the water quality, both surface and groundwater has been assessed and necessary safeguard measures are provided. Monitoring reports are incorporated in the EIA/EMP report.	Details given in Chapter-3 of the EIA/EMP report.
28.	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.	Working will not intersect the ground water table as the ultimate working limit is well above the water table. So the same is not anticipated.	Details given in Chapter-2 of the EIA/EMP report.
29.	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the	There is no such stream, seasonal or otherwise, passing through the lease area.	Details given in Chapter-1 of the EIA/EMP report. -

	hydrology should be brought out.		
30.	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.	Information on site elevation, working depth, groundwater table etc. has been provided both in AMSL and bgl and incorporated in the EIA/EMP working depth could not intersect the ground water table.	Details given in Chapter-2 of the EIA/EMP report.
31.	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.	Progressive Greenbelt Development Plan has been prepared and same will be executed up front on commencement of the Project. Phase-wise plan of plantation is being prepared indicating the area to be covered under plantation and the species to be planted. Local and native species which are tolerant to pollution will be preferred.	Details given in Chapter-10 of the EIA/EMP report.
32.	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including	Impact on local transport infrastructure due to the Project has been indicated in Chapter-4 of the EIA/EMP report.	Details given in Chapter-4 of the EIA/EMP report.

	action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.		
33.	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.	Details of the onsite shelter and facilities to be provided to the mine workers has been given in Chapter-2 of the EIA/EMP report.	Details given in Chapter-2 of the EIA/EMP report.
34.	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.	Conceptual post mining land use and Reclamation and Restoration of mined out areas has been given in Chapter-2 of the EIA/EMP report.	Details given in Chapter-2 of the EIA/EMP report.
35.	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Occupational Health impacts of the Project has been anticipated and the proposed preventive measures has been detailed in Chapter-10 of the EIA/EMP report.	Details given in Chapter-10 of the EIA/EMP report.
36.	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	Public health implications of the Project and related activities for the population in the impact zone has been evaluated and the proposed remedial measures has been detailed along with budgetary allocations with this EIA/EMP report.	Details given in Chapter-3 of the EIA/EMP report.
37.	Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as	Measures of socio-economic significance and influence to the local community has been detailed	--

	possible, quantitative dimensions may be given with time frames for implementation.	in Chapter-8 of the EIA/EMP report.	
38.	Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.	Detailed environmental management plan (EMP) to mitigate the environmental impacts has been given in in Chapter-10 of the EIA/EMP report.	--
39.	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.	Public hearing is yet to be done.	
40.	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.	There is no litigation pending against the project and the affidavit regarding the same has been submitted along with the proposal for grant of ToR.	--
41.	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP has been detailed in Chapter-8 of the EIA/EMP report.	--
42.	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	A Disaster management Plan has been prepared and included in the EIA/EMP Report.	Details given in Chapter-7 of the EIA/EMP report.
43.	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	The benefit of the project is being detailed in Chapter-8 of the EIA/EMP report.	--

44.	Besides the above, the below mentioned general points are also to be followed:		
A.	All documents to be properly referenced with index and continuous page numbering.	All documents are properly referenced with index and continuous page numbering	
B.	Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.	Noted, wherever data are presented in the report especially in Tables, the period in which the data were collected and the sources is clearly indicated.	
C.	Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF & CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.	All the analysis/testing reports of water, air, soil, noise etc. using the MoEF & CC/NABL accredited laboratories has been incorporated with this EIA/EMP report	-
D.	Where the documents provided are in a language other than English, an English translation should be provided.	All the documents provided are in English and Hindi language.	
E.	The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.	Dully filled questionnaire for environmental appraisal of mining project will be submitted with final EIA report.	
F.	While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF & CC vide O.M. No. J- 11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.	Instructions issued by MoEF & CC vide O.M. No. J- 11013/41/2006-IA.II (I) dated 4th August, 2009 for the Proponents and instructions for the Consultants	--
G.	Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public	Agreed.	--

	Hearing changes in structure and content of the final EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.		
H.	As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable	PP has applied for EC for the first time.	--
I.	The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area measurements, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.	(i) Surface plan of the area indicating contours of main topographic features, drainage and mining area measurements, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps have been incorporated in this EIA/EMP report.	Surface map are enclosed as with Mining Plan
45.	An EIA-EMP Report would be prepared for a combined peak capacity of ..... MTPA for OC-cum-UG project which consists of .... MTPA in an ML/project area of ha for OC and .... MTPA for UG in an ML/project area of ha based on the generic structure specified in Appendix III of the EIA Notification 2006.	EIA Report has been prepared for total excavation- peak capacity, based on the generic structure specified in Appendix III of the EIA Notification 2006.	Chapter 2
46	An EIA-EMP Report would be prepared for MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air,	EIA-EMP Report has been prepared accordingly.	--

	water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for. MTPA of coal production based on approved project/Mining Plan for. MTPA. Baseline data collection can be for any season (three months) except monsoon.		
47.	The ToRs prescribed for both opencast and underground mining are applicable for opencast – cum- underground mining.	Agreed	
48	Information on the following aspects of the corporate Environment Responsibility should also be provided for opencast, underground and opencast-cum-underground Mine.	Noted	
49	Corporate Environment Responsibility	Lessee will do all the requisite activities under CER.	
50	The Company must have a well laid down Environment Policy approved by the Board of Directors.	Lessee is a sole proprietorship	
51	The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/ conditions	Noted	
52	The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.	Lessee is a sole proprietorship.	
53	To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental	Agreed and complied with	

	norms to the Board of Directors of the company and/or shareholders or stakeholders at large.		
54	The condition prescribed in standard ToR separately for opencast and underground mine to also be followed and also of coal washery if located within lease area or near to the mine lease area.	Agreed and complied with	
55	An EIA-EMP Report shall be prepared for..... MTPA peak capacity in an ML/project area of ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.	EIA Report has been prepared for total excavation- peak capacity, based on the generic structure specified in Appendix III of the EIA Notification 2006.	Chapter 2
56	An EIA-EMP Report would be prepared for..... MTPA peak capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for MTPA of coal production based on approved project/Mining Plan for. MTPA. Baseline data collection can be for any season (three months) except monsoon.	EIA-EMP Report has been prepared accordingly.	
57	If the washery is located within the mine lease or near to the mine lease its location should be cited separately also, providing pillar coordinates and site layout plan. In such cases cumulative impact of mine operation with washery to be assessed and EMP measure to be drawn to the worst scenario.	Not Applicable	

58	Plan of mechanized transportation of coal-to-coal washery also for rejects and washed coal to be drawn.	This is non-coal mining project	
59	Propoer KML file with pin drop and coordinate of mine at 500-1000 m interval be provided.	Complied with	
60	A toposheet specifying locations of the State, District and Project site should be provided.	Environmental Sensitivity map has been given.	Chapter 2
61	A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries, mines, washery and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given. The above details to be furnished in tabular form also.	Environmental Sensitivity map has been given.	Chapter 2
62	Land use map (1: 50,000 scale) based on a recent satellite imagery of the study area may also be provided with explanatory note on the land use.	Land use map (1: 50,000 scale) based on a recent satellite imagery of the study area has been provided	Chapter 3
63	Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along	Environmental Sensitivity map has been given.	Chapter 2

	with other physical features such as water bodies, etc should be furnished.		
64	A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.	Drainage Map has been given in this report.	Chapter 2
65	A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.	Land Use with Environmental sensitivity map has been given.	Chapter 2 and 3.
66	In case of any proposed diversion of nallah/canal/river, the proposed route of diversion/modification of drainage and their realignment, construction of embankment etc. should also be shown on the map as per the approval of Irrigation and flood control Department of the concerned state.	Not Applicable	
67	Catchment area with its drainage map of 25 km area within and outside the mine shall be provided with names, details of rivers/ rivulet system and its respective order. The	Drainage Map has been given in this report. No diversion is proposed.	Chapter 2

	map should clearly indicate drainage pattern of the catchment area with basin of major rivers. Diversion of drains/ river need elaboration in form of length, quantity and quality of water to be diverted		
68	Prior in principle approval from the respective state govt shall be required in cases where PP proposes diversion of river/ stream/ nallah/ drains. However, state approval shall not be finally considered before the appraisal by EAC. PP shall have submitted detailed project report in case where diversion is required with emphasis on hydrological study.	No diversion is proposed.	
69	Similarly if the project involves diversion of any road/railway line passing through the ML/project area, the proposed route of diversion and its realignment should be shown in the map along with the status of the approval of the competent authority.	Not applicable	
70	Break up of lease/project area as per different land uses and their stage of acquisition should be provided. LANDUSE DETAILS FOR OPENCAST PROJECT should be given as per the following table: Sl. Landuse Within ML area/project area Outside ML area/project area Total No. (ha) (ha) 1 Agricultural land 2 Forest land 3 Wasteland 4 Grazing land 5 Surface water bodies 6 Settlements Others (specify) Total	The lease area is private land. And Land use of the lease area is given in Chapter 2	Chapter 2
71	Break-up of lease/project area as per mining plan should be provided.	Land use of the lease area is given in Chapter 2	Chapter 2

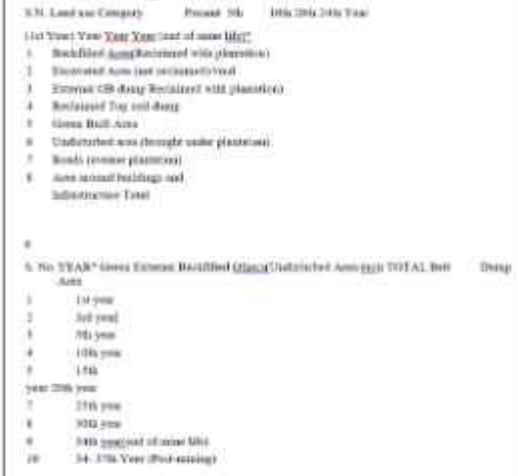
72	Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.	Land use of the lease area is given in Chapter 2. Mitigative measures are given in chapter 4	Chapter 2 Chapter 4
73	Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.	A detailed biological study for the core zone and study area has been carried out and details incorporated in this EIA/EMP Report.	
74	One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided. The detail of NABL/ MoEF&CC certification of the respective laboratory and NABET accreditation of the consultant to be provided.	One season baseline data for summer season (March to May, 2025) has been collected for ambient air quality, water quality, noise level, soil and flora and fauna. The location of the monitoring stations is being kept such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. The selection criterion for monitoring location has been discussed in Chapter-3 of the EIA/EMP report.	Details given in Chapter-3 of the EIA/EMP report.
75	Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other	All maps regarding the sampling/monitoring locations has	Chapter 3

	industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non- impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.	been incorporated in this EIA Report	
76	For proper baseline air quality assessment, Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ shall be planned by the collection of air quality data by adequate monitoring stations in the downwind areas. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area. In case of expansion, the displayed data of CAAQMS and its comparison with the monitoring data to be provided	Noted and Complied with	
77	A detailed traffic study along with presence of habitation in 100 mts distance from both side of road, the impact on the air quality with its proper measures and plan of action with timeline for widening of road. The project will increase the no. of vehicle along the road which will indirectly contribute to carbon emission so what will be the compensatory action plan should be clearly spell out in EIA/ EMP report.	A detailed traffic study has been carried out. Details are given in chapter 4	Chapter 4
78	The socio-economic study to conducted with actual survey report and a comparative assessment to be provided from the census data should be provided in EIA/ EMP report also occupational status & economic status of the study area and what economically project will contribute should be clearly mention. The study should also include the status of infrastructural facilities and amenities present in the study area and a comparative assessment with census data to be provided and to link it with the initialization and quantification of need-based survey for CSR activities to be followed.	The socio-economic study to conducted with actual survey report and same has been incorporated in this EIA/EMP Report.	Chapter 4

79	The Ecology and biodiversity study should also indicate the likely impact of change in forest area for surface infrastructural development or mining activity in relation to the climate change of that area and what will be the compensatory measure to be adopted by PP to minimize the impact of forest diversion.	No forest diversion is proposed	--
80	Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted	HG study has been conducted and same has been incorporated in this EIA/EMP Report.	Chapter 7
81	Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.	All the requisite details are incorporated in his EIA/EMP Report.	Chapter 2 Mining Plan is enclosed as **Annexure II**
82	Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.	Details are given in Chapter 2	
83	Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing though the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.	There is no surface water body present in the study area.	
84	Forest diversion shall be only proposed for coal bearing areas. No non-essential infrastructure, office, workshop etc shall be propsed or developed in forest area. No forest area shall be used for OB dump, accordingly Mine plan to be prepared	Not Applicable	
85	Detail of OB recovery for reutilization of minerals from mining shall be explored	The lessee may sale the waste after crushing and grinding or as it as per requirement. The waste will be used for construction of approach roads, site services etc. Some waste may be used by local habitants. The waste may also use as M sand	Chapter 2

<table>
<tr><td></td><td></td><td>as per government policy.</td><td></td></tr>
<tr><td>86</td><td>OB dump management from its extraction, transportation to reutilization, disposal / backfilling, to be carry on in a manner to mininmize its impact. A detail to be furnished in EIA/EMP report</td><td>Waste will be dumped at designated site as per the Approved mining plan with height of 3 m and stabilized by retaining walls of rubble stone to arrest the rolling down. The drain towards lower side with a siltation tank will be provided</td><td>Chapter 2</td></tr>
<tr><td>87</td><td>Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.</td><td><table><tr><th>S. No.</th><th>Project Proponent</th><th>Quantity (in KLD)</th></tr><tr><td>1.</td><td>Domestic</td><td>1.9</td></tr><tr><td>2.</td><td>Dust-Suppression</td><td>1.00</td></tr><tr><td>3.</td><td>Green belt</td><td>4.9</td></tr><tr><td>4.</td><td>Process</td><td>1.2</td></tr><tr><td colspan="2">Total</td><td>9.0</td></tr></table></td><td>Chapter 2</td></tr>
<tr><td>88</td><td>Flow chart of water balance should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be done</td><td><table><tr><th>S. No.</th><th>Project Proponent</th><th>Quantity (in KLD)</th></tr><tr><td>1.</td><td>Domestic</td><td>1.9</td></tr><tr><td>2.</td><td>Dust-Suppression</td><td>1.00</td></tr><tr><td>3.</td><td>Green belt</td><td>4.9</td></tr><tr><td>4.</td><td>Process</td><td>1.2</td></tr><tr><td colspan="2">Total</td><td>9.0</td></tr></table>No STP/ETP has been proposed</td><td>Chapter 2</td></tr>
<tr><td>89</td><td>PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs</td><td>details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan has been given in this EIA/EMP Report</td><td>Chapter 4</td></tr>
<tr><td>90</td><td>PP shall propose and explore to use LNG/CNG based mining machineries and trucks for mining operation and transportation of coal. The measures adopted to conserve energy or use of renewable sources shall be submitted</td><td>Noted</td><td></td></tr>
<tr><td>91</td><td>PP to evaluate the green house emission gases from the mine operation/ washery plant and corresponding carbon absorption plan.</td><td>All mitigative measured will be adopted for carbon absorption.</td><td></td></tr>
<tr><td>92</td><td>Site specific impact assessment with its respective measure to be provided</td><td>Site specific impact assessment with its respective measure has been provided</td><td>Chapter 4</td></tr>
</table>

93	Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.	HG study has been carried out and same is incorporated in this EIA/EMP Report.	Chapter 7
94	Impact of blasting, noise and vibrations should be given.	Impact and mitigative measures are incorporated in this EIA/EMP Report.	Chapter 4
95	Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided	Impacts of mining on the AAQ and predictions based on modelling using AERMOD Cloud has been carried out and incorporated in this EIA/EMP Report.	Chapter 4
96	Impacts of mineral transportation within the mining area and outside the lease/project along with flow- chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.	Impact on local transport infrastructure due to the Project has been indicated in Chapter-4 of the EIA/EMP report.	Details given in Chapter-4 of the EIA/EMP report.
97	Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.	This is a case of non-coal mining.	
98	Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 280 angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.	Details of waste OB and topsoil generated with their management has been given in chapter 2	Chapter 2
99	Efforts be made for maximising progressive internal dumping of O.B., sequential mining, external dump on coal bearing area and later rehandling into the mine void.--to reduce land degradation	Agreed and complied with	

100	Impact of change in land use due to mining operations and plan for restoration of the mined area to its original land use should be provided	Total 1637 saplings will be planted over an area of 1.637-hectare area out of which 1.35 ha will be planted in 7.5 m safety barrier zone of the mine lease area and unworked area and remaining 0.287 ha will be planted outside the lease area, which will be 33% of total mining lease area. At the conceptual stage, the total excavated area will be 3.60 ha which will be converted into a water reservoir, aiding in groundwater recharge. The source of water for this reservoir will rely entirely on rainwater during the monsoon. Therefore, the conceptual land use plan will ensure better land utilization for the area	Chapter 11
101	Progressive Green belt and ecological restoration /afforestation plan (both in text, figures and in theAdequate greenbelt nearby areas, coal stock yard and transportaion area of coal shall be provided with details of species selected and survival rate. Adequate greenbelt nearby areas, coal stock yard and transportaion area of coal shall be provided with details of species selected and survival rate Greenbelt development should be undertaken particularly around the transport route and CHP. Table 2 : Stage Wise Cumulative Plantation 	Progressive Greenbelt Development Plan has been prepared and same will be executed up front on commencement of the Project. Phase-wise plan of plantation is being prepared indicating the area to be covered under plantation and the species to be planted. Local and native species which are tolerant to pollution will be preferred.	Details given in Chapter-10 of the EIA/EMP report.
102	Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological	Total 1637 saplings will be planted over an area of 1.637-hectare area out of which 1.35 ha will be planted	Chapter 11

	restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished. Table 3: Post-Mining Landuse Pattern of ML/Project Area (ha) S.N. Land use during Mining Land Use (ha) Plantation Water Body Public Use Undisturbed Total External OB Dump Top soil Dump Excavation Roads Built up area Green Belt Undisturbed Area Total	in 7.5 m safety barrier zone of the mine lease area and unworked area and remaining 0.287 ha will be planted outside the lease area, which will be 33% of total mining lease area. At the conceptual stage, the total excavated area will be 3.60 ha which will be converted into a water reservoir, aiding in groundwater recharge. The source of water for this reservoir will rely entirely on rainwater during the monsoon. Therefore, the conceptual land use plan will ensure better land utilization for the area	
103	Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given	Occupational Health impacts of the Project has been anticipated and the proposed preventive measures has been detailed in Chapter-10 of the EIA/EMP report.	Details given in Chapter-10 of the EIA/EMP report.
104	Site specific Risk Assessment and Disaster Preparedness and Management Plan should be provided.	A Disaster management Plan has been prepared and included in the EIA/EMP Report.	Details given in Chapter-7 of the EIA/EMP report.
105	Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.	Impact and mitigative measures to minimizing use of natural resources - water, land, energy, etc has been incorporated in this EIA/EMP Report	Chapter 4
106	Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.	Project cost -787 Lakhs inclusive of 61.88 lakhs (capital) & 11.998 lakhs (Recurring) EMP Cost.	Chapter 11
107	Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along	Not Applicable	

	with the schedule of the implementation of the R&R Plan should be given.		
108	CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.	Complied with	Chapter 3
109	a) The Company must have a well laid down Environment Policy approved by the Board of Directors.	Lessee is a sole proprietorship	
110	b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.	Noted	
111	c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.	Lessee is a sole proprietorship.	
112	d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.	Agreed and complied with	
113	f) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.	Agreed and complied with	
114	Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the time bound action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.	Yet to be done	
115	Status of any litigations/ court cases filed/pending on the project should be provided.	There is no litigation pending against the project and the affidavit regarding the same has been submitted along with the proposal for grant of ToR.	
116	Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.	This is case of non-coal mining project	

117	Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.	Not applicable	
118	FOREST CLEARANCE: Details on the Forest Clearance should be given as per the format given: TOTALTOTAL Balance area for Status of appl for. ML/PROJECT AREA FORESTL AND Date of FC which FC is yet to be diversion of forest (ha) (ha) obtained land If more than, provide details of each FC	Not applicable	
119	PP shall submit clarification from PCCF that mine does not falls under corridors of any National Park and Wildlife Sanctuary with certified map showing distance of nearest sanctuary.	DCF Certificate was issued by DCF, Jhunjhunu vide letter no. 8986 dated: 18.10.2003 and Application regarding distance from mine to NP/WLS has been forwarded from Mining Engineer, Jhunjhunu to DCF, Jhunjhunu vide letter no. ME/Jhunjhunu/Ma.Chi/ML 8/82/2024/2473 dated 03.12.2024	
120	Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à- vis the competing users in the upstream and downstream of the project site. should be given.	Will be obtained from the nearby villages through tankers	
121	In case of expansion of the proposal, the status of the work done/activities as per mining plan and mine closure plan and progressive reclamation of OB dump shall be detailed in EIA/ EMP report	Not a case of expansion.	
122	A copy of application submitted for 5 star rating system to Ministry of coal for expansion cases may be provided. Certificate /rating given to project shall be provided with EIA-EMP report	This is case of non-coal mining project	
123	PP shall carry out survey through drone highlighting the ground reality for atleast 10 minutes	Noted	
124	Detailed Chronology of the project starting from the first lease deed alloted/Block allotment/ Land acquired to its No. of renewals, CTO /CTE with details of no. renewals, previous EC(s) granted details and its compliance details, NOC details from various Govt bodies like Forest NOC(s), CGWA permissions, Power permissions, etc as per the requisites respectively to be furnished in tabular form.	Same is given in Chapter 1	

125	The first page of the EIA/ EMP report must mention the peak capacity production, area, detail of PP, Consultant (NABET accreditation) and Laboratory (NABL / MoEF & CC certification)	Noted and Compiled with	
126	The compliances of ToR must be properly cited with respective chapter section and page no in tabular form and also mention sequence of the respective ToR complied within the EIA-EMP report in all the chapter,s section.	Noted	
127	An EIA-EMP Report shall be prepared for peak capacity (…..MTPA) operation in an ML/project area of. ha b structure specified in Appendix III of the EIA Notification, 2006.	EIA Report has been prepared for total excavation- peak capacity, based on the generic structure specified in Appendix III of the EIA Notification 2006.	Chapter 2
128	An EIA-EMP Report would be prepared for peak capacity operation to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for. MTPA of coal production based on approved project/Mining Plan for. MTPA. Baseline data collection can be for any season (three months) except monsoon.	EIA-EMP Report has been prepared accordingly.	--
129	A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries, mines, coal washery and other polluting sources. In case of	Environmental Sensitivity map has been given.	Chapter 2
130	ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given. The above details to be furnished in tabular form also	Environmental Sensitivity map has been given.	Chapter 2
131	(Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and	Mining plan with Progressive Mine Closure Plan was approved by Superintending Minig Engineer,	**Annexure II**

	progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.	Department of Mines & Geology, Jaipur vide order no. SME/JP/MP/P-471/2024 dated – 26.11.2024	
132	Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified. Area under Surface Rights S.N ML/Project Land use Area under Surface Area Under Mining Rights(ha) Area under Both (ha) Rights(ha) (ha) 1 Agricultural land 2 Forest Land 3 Grazing Land 4 Settlements 5 Others (specify) S.N. Details Area (ha) 1 Buildings 2 Infrastructure 3 Roads Others (specify) Total	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features are indicated. Land use plan of the mine lease area is prepared to encompass preoperational, operational and post operational phases are incorporated in this EIA/EMP Report.	Details given in Chapter-3 of the EIA/EMP report.
133	One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided. The detail of NABL/ MoEF&CC certification of the respective laborartory and NABET	One season baseline data for summer season (March to May, 2025) has been collected for ambient air quality, water quality, noise level, soil and flora and fauna.	Details given in Chapter-3 of the EIA/EMP report.

	accreditation of the consultant to be provided.	The location of the monitoring stations is being kept such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. The selection criterion for monitoring location has been discussed in Chapter-3 of the EIA/EMP report.	
134	Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.	Complied with	
135	Study on land subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.	Not applicable as this is an opencast non-coal mining project.	
136	Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.	The details regarding water requirement for the Project, its availability and source has been furnished in Chapter-2 of the EIA/EMP report.	Details given in Chapter-2 of the EIA/EMP report.
137	PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of coal. The measures adopted to conserve energy or use of renewable sources shall be explored	Noted	
138	PP shall explore the use of vent gases as generated from under ground Mine for use of energy generation/ in house energy consumption	Not applicable as this is an opencast mine.	
139	Site specific Impact assessment with its mitigation measures, Risk Assessment and Disaster Preparedness and Management Plan should be provided.	A Disaster management Plan has been prepared and included in the EIA/EMP Report.	Details given in Chapter-7 of the EIA/EMP report.
140	Impact of stowing by using coal washery rejects/ flyash/ bottom ash shall be assessed in term of leachate generation and its characteristics	Not applicable	

141	Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.	Impact and mitigative measures has been incorporated in this EIA/EMP Report	Chapter 4
142	Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.	Details of the onsite shelter and facilities to be provided to the mine workers has been given in Chapter-2 of the EIA/EMP report.	Details given in Chapter-2 of the EIA/EMP report.
143	The number and efficiency of mobile/static water jet, Fog cannon sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.	Impact and mitigative measures has been incorporated in this EIA/EMP Report	Chapter 4
144	Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.	Not applicable as this is an opencast non-coal mining project	
145	Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.	Total 1637 saplings will be planted over an area of 1.637-hectare area out of which 1.35 ha will be planted in 7.5 m safety barrier zone of the mine lease area and unworked area and remaining 0.287 ha will be planted outside the lease area, which will be 33% of total mining lease area. At the conceptual stage, the total excavated area will be 3.60 ha which will be converted into a water reservoir, aiding in groundwater recharge. The source of water for this reservoir will rely entirely on rainwater during the monsoon. Therefore, the conceptual land use plan will ensure better land utilization for the area	Chapter 11
146	Adequate greenbelt nearby areas, coal stock yard and transportation area of coal shall be provided with details of species selected and survival rate Greenbelt	Not applicable as this is an opencast non-coal mining project	

	development should be undertaken particularly around the transport route and CHP.		
147	e) Environment Management Cell and its responsibilities to be clearly spleel out in EIA/ EMP report	Noted	
148	Details on the Forest Clearance should be given as per the format given: Total ML Total Project Area Forest Date of Extent of Balance area for which Status of appl For FC Forest Land FC is yet to be obtained diversion of forest land (ha) land (ha) If more than one provide details of each FC	Not Applicable	
149	In case of expansion of the proposal, the status of the work done as per mining plan and approved mine closure plan shall be detailed in EIA/ EMP report	This is not a case of expansion. However, this is an existing mine but was shut down since 2003-2004. PP has applied for EC for first time.	
150	"Besides the above, the below mentioned general points are also to be followed:- a) All documents to be properly referenced with index and continuous page numbering. b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated. c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project. d) Where the documents provided are in a language other than English, an English translation should be provided. e) The Questionnaire for environmental	All documents are properly referenced with index and continuous page numbering Noted, wherever data are presented in the report especially in Tables, the period in which the data were collected and the sources is clearly indicated. All the analysis/testing reports of water, air, soil, noise etc. using the MoEF & CC/NABL accredited laboratories has been incorporated with this EIA/EMP report. All the documents provided are in English and Hindi language.	

	appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.	Dully filled questionnaire for environmental appraisal of mining project will be submitted with final EIA report.	
	f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.	Instructions issued by MoEF & CC vide O.M. No. J- 11013/41/2006-IA.II (I) dated 4th August, 2009 for the Proponents and instructions for the Consultants	
	g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation. h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.	Agreed.	
	i) The EIA report should also include (ii) surface plan of the area indicating contours of main topographic features, drainage and mining area, (iii) geological maps and sections and (iv) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.	(i) Surface plan of the area indicating contours of main topographic features, drainage and mining area measurements, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps have been incorporated in this EIA/EMP report.	
Additional Terms of Reference			
	(i) The applicant will assess the impact of mining on environment from the entire cluster (as per cluster certificate) as well as from the applicant's individual mine, will get the public consultation done the entire cluster in conformity with EIA	Agreed and complied with. This is not a case of Cluster.	

	Notification dated 14.09.2006 as amended till date. HOWEVER, the applicant will propose the EMP (environmental management plan), CER (corporate environmental responsibility), budgetary allocation for labour welfare, etc. for his own mine only and NOT for other lessees/ proponent those are part or member of the cluster but NOT participating in the process of EIA/EMP. The applicant will not make any commitment on behalf of other member lessee of cluster. The proposal will be appraised by the Committee for EC to the applicant's LoI/mine on its merit and NOT for approval of EIA/EMP for the cluster in which the applicant's LoI/mine is falling/located. (ii) As per notification dated 20.02.2025 "S.O. 924 (E). In exercise of the powers conferred by clause (e) of section 3 of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957), the Central Government hereby makes the following amendment in the notification of the Government of India, in the Ministry of Mines, published in the Gazette of India, Extraordinary, Part II. Section 3, Sub-section (ii), vide number S.O. 423(E), dated the 10th February, 2015. namely:- In the said notification, minerals specified in items (iii), (xiv), (xxii) and (xxv) shall be omitted." In light of above EIA/EMP shall be prepared in accordance of major mineral category. The PP shall also present approved Mining Plan form IBM/ Acknowledgement for registration at the time of final presentation for EC.		

CHAPTER- 1
INTRODUCTION

1.1 PURPOSE OF THE REPORT

The main purpose of this report is to present a comprehensive statement following the analysis of the significant impacts of the project, along with the recommended measures to mitigate, reduce, and address these impacts.

All the information presented in this report is intended to:

- The proponent is expected to implement the proposal in an environmentally and socially responsible manner;
- The responsible authority is tasked with making an informed decision regarding the proposal, including the imposition of any terms and conditions that should accompany approval or authorization; and
- The public is provided with a clear understanding of the proposal and its potential impacts on both people and the environment.

1.2 IDENTIFICATION OF PROJECT & PROJECT PROPONENT

1.2.1 IDENTIFICATION OF PROJECT

A. PROPOSED PROJECT WITH SCREENING CATEGORY

Existing Quartz, Pyrophyllite, Red and Yellow Ochre Mining Project with proposed Crusher (400 TPD), M.L. No.-08/1982 (Revised- 23/2001) Area: 4.96 Hectare (Pvt. Land) located at Khasra No.-1, 902, 148 & 149 Near Village- Maharana, Tehsil- Buhana, District- Jhunjhunu (Rajasthan).

As per EIA Notification dated 14.09.2006, as amended thereof, the project falls under S. No. '1' (Mining of Minerals), Project or Activity '1(a) (4)', Category "B".

Application has been applied for obtaining EC for the First time.

B. MINING LEASE STATUS

- **Mining Lease of 121 ha** was initially granted in the name of M/s. Ashoka Minerals Grinding Mills for **Pyrophyllite, Red and Yellow Ochre** vide order dated 31.12.1982 and same was executed on 10.02.1983 registered on 25.02.1983 which was valid for 20 years (24.02.2003).
- PP applied for the partial surrender of an area of 78.50 ha w.e.f 23.02.1988 and the same has been accepted vide Government order dated 21.02.1992 and an area of 42.5 ha is remained in possession of the lessee. Rider agreement for the same with mineral **Pyrophyllite, Red and Yellow Ochre** was executed on 21.03.1996.
- PP applied for the inclusion of mineral Silica sand and Quartz in the said Mining Lease and the State Govt. have conveyed their approval for the **inclusion of mineral silica sand and Quartz** vide order dated 20.05.1997. Rider agreement for the same was executed on 03.09.1997.
- PP applied for first renewal vide application dated 30.07.2001.
- PP surrendered the area of 37.54 ha on 15.05.2004 after retaining the 4.96 ha.
- Mining Plan for 4.96 ha was approved on 28.12.2004 for **Pyrophyllite, Quartz, Red and Yellow Ochre.**

- CTO has been granted in favor of **M/s Ashoka Mineral Grinding Mills** by RSPCB, Regional Office (Jaipur- North), Jaipur for mineral **Quartz, Pyrophyllite, Red and Yellow Ochre** with Production Capacity of 5 MT/day, vide order no.- RPCB/RO-JP(N)Jhu/Min/4/427 on dated 12.05.2004. [Validity – 19.09.2003 to 19.09.2004]
- Mining work was asked to stop due to expiry of Pollution permission on dated 18.09.2008 vide order no. ME/Sikar/Major/ML-23/01 (R)/7700 dated 03.11.2008 issued by Mining Engineer Sikar.
- Mining Activity was shut down till the further orders by SC as the mining lease area falls into Aravalli Hills and in compliance of the orders of the Hon'ble SC. Vide letter no. ME/Sikar/Major/ML-23/01/903 Dated 05.03.2010.
- Application for first renewal was pending but as per the Section 8A of MMDR Act 2015 and its amendments the validity of the lease area was auto- re newed till 24.02.20233. Vide order dated 20.02.2015.

C. STATUS OF APPROVAL OF MINING PLAN & PROGRESSIVE MINE CLOSURE PLAN

Mining plan with Progressive Mine Closure Plan was approved by Superintending Minig Engineer, Department of Mines & Geology, Jaipur vide order no. SME/JP/MP/P-471/2024 dated – 26.11.2024. Copy of same is enclosed as ***Annexure II***

D. STATUS OF CLUSTER, ARAVALLI, DCF CERTIFICATE

Cluster Certificate – Not Applicable as the lease area was executed and registered before 09.09.2013 notification. ***Annexure III***

Aravalli Certificate was issued by Office of Mining Engineer, Mines and Geology Department, Jhunjhunu, vide Letter no. ME/Jhunjhunu/ML/08/82/2024/2461 dated 29.11.2024. Copy of same is enclosed as ***Annexure IV***

DCF Certificate was issued by DCF, Jhunjhunu vide letter no. 8986 dated: 18.10.2003 and Application regarding distance from mine to NP/WLS has been forwarded from Mining Engineer, Jhunjhunu to DCF, Jhunjhunu vide letter no. ME/Jhunjhunu/Ma.Chi/ML 8/82/2024/2473 dated 03.12.2024. Copy of same is enclosed as ***Annexure V***

E. STATUS OF DSR

As Per Gazette Notification (Extraordinary) No. So, 2827 Wednesday, July-25 2018 Of Ministry of Environment, Forest and Climate Change, Govt. of India (MoEF&CC), DSR for Jhunjhunu district has been signed by Mining Engineer.

1.2.2 INTRODUCTION OF PROJECT PROPNENT

Table 1.1
Details of Project Proponent

PARTICULARS	DETAILS
Name of Project Proponent	M/s. Ashoka Mineral Grinding Mills
Correspondence Address	Shahpura Road, Neem Ka Thana, District- Neem Ka Thana, Rajasthan. - 332713

1.3 BRIEF DESCRIPTION OF NATURE, SIZE, LOCATION OF THE PROJECT AND ITS IMPORTANCE TO THE COUNTRY, REGION

A. NATURE AND SIZE OF THE PROJECT

Existing Quartz, Pyrophyllite, Red and Yellow Ochre Mining Project with proposed Crusher (400 TPD), M.L. No.-08/1982 (Revised- 23/2001) Area: 4.96 Hectare (Pvt. Land) located at Khasra No.-1, 902, 148 & 149 Near Village- Maharana, Tehsil- Buhana, District- Jhunjhunu (Rajasthan).

B. LOCATION OF THE PROJECT

Table 1.2
Location of the Project

S.No.	PARTICULARS	DETAILS
1.	Village	Maharana
2.	Tehsil	Buhana
3.	District	Jhunjhunu
4.	State	Rajasthan
5.	Khasra No.	902, 148, 149, 9
6.	Latitude & Longitude	<table><tr><th>Pillar No.</th><th>Latitude(N)</th><th>Longitude(E)</th></tr><tr><td>A.</td><td>28°08'50.94"</td><td>75°49'09.23"</td></tr><tr><td>B.</td><td>28°08'50.57"</td><td>75°49'00.15"</td></tr><tr><td>C.</td><td>28°08'57.06"</td><td>75°48'59.82"</td></tr><tr><td>D.</td><td>28°08'57.43"</td><td>75°49'08.09"</td></tr></table> *Source: Aravalli certificate*
7.	SOI Toposheet No.	44 P/12, 44P/16

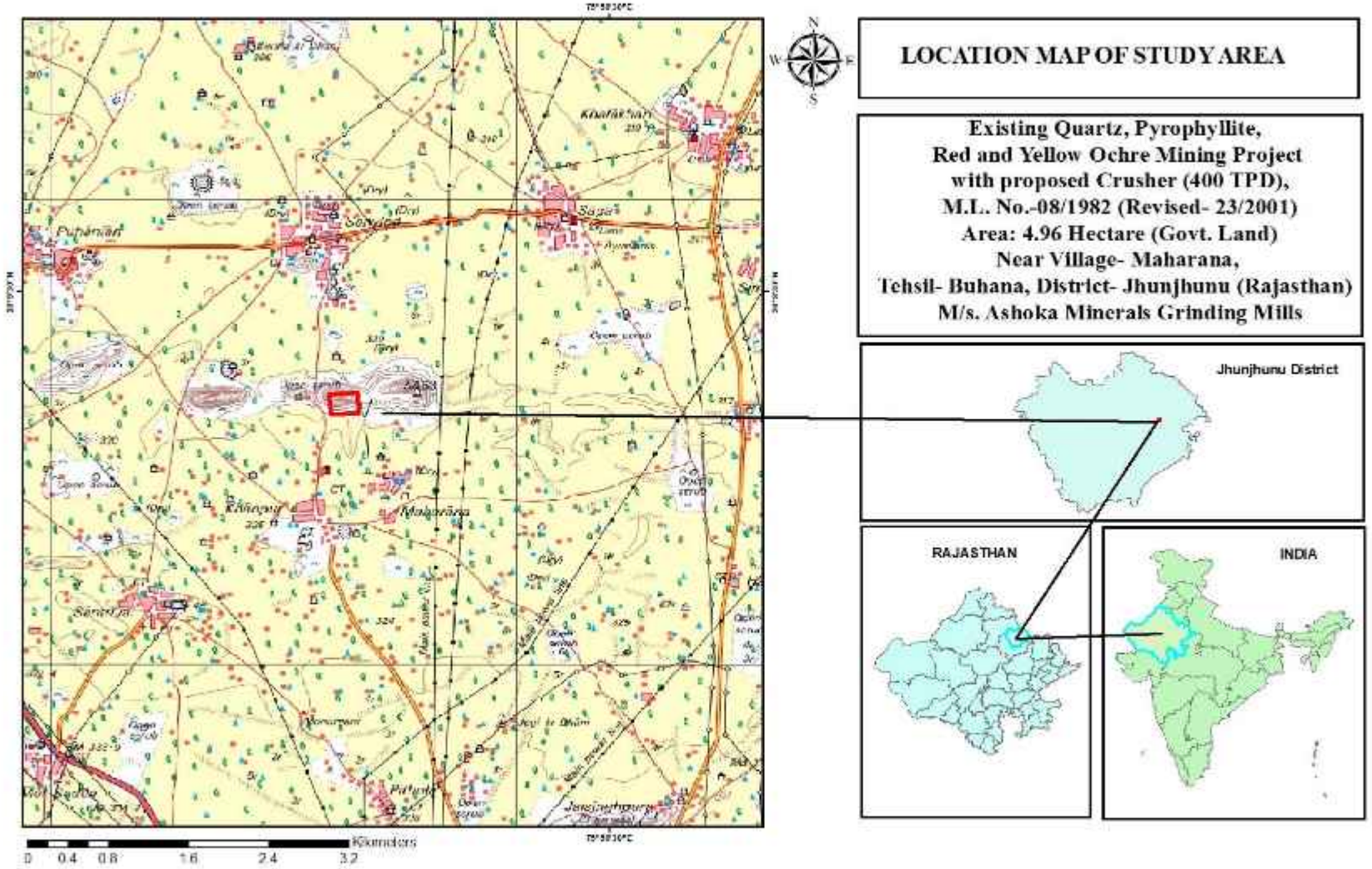


Figure 1: Location Map

C. IMPORTANCE OF THE PROJECT TO THE COUNTRY AND REGION

In India, the minerals Quartz, Yellow Ochre, Red Ochre, and Pyrophyllite play a significant role in both national development and regional livelihoods.

Quartz is widely used in the country's glass, ceramic, and electronics industries, and its demand is growing rapidly due to its applications in solar panels and semiconductors. Major quartz-producing states like Rajasthan, Andhra Pradesh, Tamil Nadu, and Karnataka benefit from mining-related employment and the growth of allied industries.

Yellow Ochre, predominantly found in Rajasthan (especially Jodhpur and Nagaur), is an important natural pigment used in paints, cement coloring, and traditional Indian art forms such as Madhubani and Warli painting. It also holds cultural value, particularly among tribal communities, and supports local craft-based economies.

Red Ochre, similar in composition but richer in hematite content, has both cultural and industrial significance. Historically used in prehistoric cave art like that of Bhimbetka in Madhya Pradesh, it continues to be employed in rural India for rituals, folk art, and natural paints. Rajasthan, Madhya Pradesh, and Andhra Pradesh are key contributors to India's red ochre supply. Its use in natural paint and coatings also creates opportunities for eco-friendly product industries.

Meanwhile, Pyrophyllite, mainly extracted in Madhya Pradesh (especially in Chhatarpur and Tikamgarh), Uttar Pradesh, and Andhra Pradesh, is a vital raw material in ceramics, refractories, paper, insecticides, and paints. It supports regional ceramic clusters and small industries while also contributing to India's export economy, especially to markets in East Asia.

Collectively, these minerals not only strengthen India's industrial base but also enhance rural employment, support traditional art and cultural heritage, and generate export revenues. Their presence in mineral-rich regions ensures a steady source of income for local communities and plays a key role in the socio-economic development of various parts of the country.

Additionally, the project will create employment opportunities for the local population. In addition to mining operations, afforestation efforts will be undertaken within the mine area, which will help enhance the local environment to some extent. Furthermore, the project will address the gap between the demand and supply of above-said minerals, benefiting consumers. Overall, the project will contribute to the region's economic growth and development.

1.4 SCOPE OF THE STUDY- DETAILS OF REGULATORY SCOPING CARRIED OUT.

Scope of this study covers all the points given in the Auto Terms of Reference (ToR) prescribed by the SEIAA, Rajasthan Vide letter dated 08.07.2025.

The various steps involved in Environmental Impact Assessment study of the mine site are as follows:

➢ Identification of significant environmental parameters and assessing the existing status within the impact zone with respect to air, water, noise, soil and socioeconomic components of environment.

➢ Study of various mining activities of the proposed mine to identify the area's leading to impact/change in environmental quality.

➢ Quantification/prediction of impact for the identified activities and to study the level of impact on various environmental components.

➢ Evaluation of impacts after superimposing the predicted/quantified scenario over the baseline scenario.

➢ Formulation of Environmental Management Plan for implementation in the proposed project.

Baseline data was collected for the project during Summer Season, 2024 covering the months of March 2024 to May 2024 to assess the existing environmental status of various environmental parameters in the study area. This report presents the baseline scenario, prediction of impacts along with a detailed Environmental Management Plan which will be implemented in the operational phase.

The data generated from various studies for EIA/EMP are presented and discussed in following chapters of this report prepared as per Appendix-III of the EIA Notification, 2006.

Chapter-1 Introduction

Chapter-2 Project Description

Chapter-3 Description of the Environment

Chapter-4 Anticipated Environmental Impacts and Mitigation Measures

Chapter-5 Analysis of Alternatives (Technology & Site)

Chapter-6 Environmental Monitoring Plan

Chapter-7 Additional Studies

Chapter-8 Project Benefits

Chapter-9 Environment Cost Benefit Analysis

Chapter-10 Environment Management Plan

Chapter-11 Summary & Conclusion

Chapter-12 Disclosure of Consultants Engaged

LAWS APPLICABLE TO THIS PROJECT

1. The Water (Prevention & Control of Pollution) Acts 1974/Rules 1975
2. The Air (Prevention & Control of Pollution) Acts 1981/Rules 1982
3. The Environment (Protection) Acts 1986/Rules 1986
4. The Environmental Impact Assessment (EIA) Notification, 2006
5. Rajasthan Minor Mineral Concession Rules, 1986
6. Rajasthan Minor Mineral Concession Rules, 2017
7. Mines minerals Development Restoration and Rehabilitation Act 1957
8. Mineral Conservation and Development Rules, 2017
9. Mines & Minerals (Contribution to District Mineral Foundation) Rules, 2015
10. Wildlife protection Act 1972

CHAPTER- 2
PROJECT DESCRIPTION

2.1 TYPE OF THE PROJECT

Existing Quartz, Pyrophyllite, Red and Yellow Ochre Mining Project with proposed Crusher (400 TPD), M.L. No.-08/1982 (Revised- 23/2001) Area: 4.96 Hectare (Pvt. Land) located at Khasra No.-1, 902, 148 & 149 Near Village- Maharana, Tehsil- Buhana, District- Jhunjhunu (Rajasthan).

As per EIA Notification dated 14.09.2006, as amended thereof, the project falls under S. No. '1' (Mining of Minerals), Project or Activity '1(a) (4)', Category "B"

2.2 NEED OF THE PROJECT

PP has proposed to obtain EC for his Existing Quartz, Pyrophyllite, Red and Yellow Ochre Mining Project with proposed Crusher (400 TPD), M.L. No.-08/1982 (Revised- 23/2001) Area: 4.96 Hectare (Pvt. Land) located at Khasra No.-1, 902, 148 & 149 Near Village- Maharana, Tehsil- Buhana, District- Jhunjhunu (Rajasthan) and to address the gap between the demand and supply of above said minerals, benefiting consumers. Overall, the project will contribute to the region's economic growth and development.

In India, the minerals Quartz, Yellow Ochre, Red Ochre, and Pyrophyllite play a significant role in both national development and regional livelihoods.

Quartz is widely used in the country's glass, ceramic, and electronics industries, and its demand is growing rapidly due to its applications in solar panels and semiconductors. Major quartz-producing states like Rajasthan, Andhra Pradesh, Tamil Nadu, and Karnataka benefit from mining-related employment and the growth of allied industries.

Yellow Ochre, predominantly found in Rajasthan (especially Jodhpur and Nagaur), is an important natural pigment used in paints, cement coloring, and traditional Indian art forms such as Madhubani and Warli painting. It also holds cultural value, particularly among tribal communities, and supports local craft-based economies.

Red Ochre, similar in composition but richer in hematite content, has both cultural and industrial significance. Historically used in prehistoric cave art like that of Bhimbetka in Madhya Pradesh, it continues to be employed in rural India for rituals, folk art, and natural paints. Rajasthan, Madhya Pradesh, and Andhra Pradesh are key contributors to India's red ochre supply. Its use in natural paint and coatings also creates opportunities for eco-friendly product industries.

Meanwhile, Pyrophyllite, mainly extracted in Madhya Pradesh (especially in Chhatarpur and Tikamgarh), Uttar Pradesh, and Andhra Pradesh, is a vital raw material in ceramics, refractories, paper, insecticides, and paints. It supports regional ceramic clusters and small industries while also contributing to India's export economy, especially to markets in East Asia.

Collectively, these minerals not only strengthen India's industrial base but also enhance rural employment, support traditional art and cultural heritage, and generate export revenues. Their presence in mineral-rich regions ensures a steady source of income for local communities and plays a key role in the socio-economic development of various parts of the country.

Additionally, the project will create employment opportunities for the local population. In addition to mining operations, afforestation efforts will be undertaken within the mine area, which will help enhance the local environment to some extent.

2.3 LOCATION (Maps showing general location, specific location, project boundary & project site layout)

Location Details are incorporated in Chapter 1, 1.3 (B) with Figure 1.1 showing General and Specific location of the mine.

2.3.1 PROJECT SITE LAYOUT

A. LAND DETAILS

The Mining lease area is 4.96 hectare Comprising of Private Land. Mine Site does not involve any forest land. There is no forest area within 500 m of mining lease area. DCF Certificate was issued by DCF, Jhunjhunu has been enclosed. Letter regarding presence and distance of WLS/NP has been forwarded to DCF Jhunjhunu from Mining Engineer, Jhunjhunu vide letter dated 03.12.2024.

This is running mine and the application is for obtaining EC for the first time. Therefore, no additional land will be required.

B. GEOLOGY AND GEOMORPHOLOGY OF MINE SITE

Regional Geology

Geologically, the district is mostly covered by blown sand. Apart from these, small isolated outcrop of the rocks of Delhi Super Group and Malani igneous suite are found in Khetri, Udaipurwati, Buhana and Jhunjhunun blocks of the district. The Alwar Groups of rocks are exposed in the southeastern part (around Udaipurwati) and northeastern part (around Khetri), with Ajabgarh Group of rocks, but here they as thin and narrow outcrops only. The Alwar Groups are represented by quartzite, schist, grit, arkose etc. These have been intruded by Post Delhi intrusives such as amphibolites, granite, pegmatite, quartz veins etc. The Ajabgarhs are represented by phyllites, biotite schists, calc gneisses etc. intruded by Post Delhi intrusives viz. amphibolite, granite, albitites, pegmatites, epidiorite, quartz veins etc. The basic intrusives include epidiorite, diorite amphibolite etc.

Super Group	Group	Formation
	Recent to Sub-Recent	Alluvium, Aeolian sand
	Post –Delhi	Pegmatite- Erinpura Granite
	Intrusives	Epidiorite, dolerite, albitite, granite (Malani Igneous Suite) amphibolite.
Delhi	Ajabgarh	Phyllites, phyllites interbedded with quartzites, biotiteschiest, calcgneissesetc
	Alwar	Quartzite, schist, flaggy quartzite, grit, arkose, felspathic quartzite etc.
	Malani Plutonic	

Source:

https://phedwater.rajasthan.gov.in/content/dam/doitassets/water/Ground%20Water/Pdf/PublicReports/Groundwater_Atlas/Districts/Districtwise%20Atlas%20-%20Jhunjhunun.pdf

Local Geology

Recent	Soil	
Intrusive	Quartz	
Delhi Super Group	Ajabgarh Group	Phyrophyllite, Ochers, Quartzite.

The study area, within a 10 km radius of the Quartz, Pyrophyllite, Red and Yellow Ochre Mining Project (M.L. No. 08/1982), is underlain by three main geological units:

1. Ajabgarh Group (Delhi Supergroup) – Comprising phyllites, schists, quartzites, and calc-silicate rocks, occurring in the southeastern part of the buffer zone.
2. Alwar Group (Delhi Supergroup) – Dominated by hard, massive quartzites forming prominent ridges in the southwest and south-central areas.
3. Undifferentiated Fluvial/Aeolian Sediments – Predominantly unconsolidated sand, silt, and clay, covering most of the central and northern parts, including the lease area.

The lease block lies within the alluvial–aeolian plain but is in proximity to the quartzite ridges of the Delhi Supergroup, which are favourable host rocks for pyrophyllite and ochre mineralization.

Project Site layout showing Geology and Geomorphology of the area is given below:

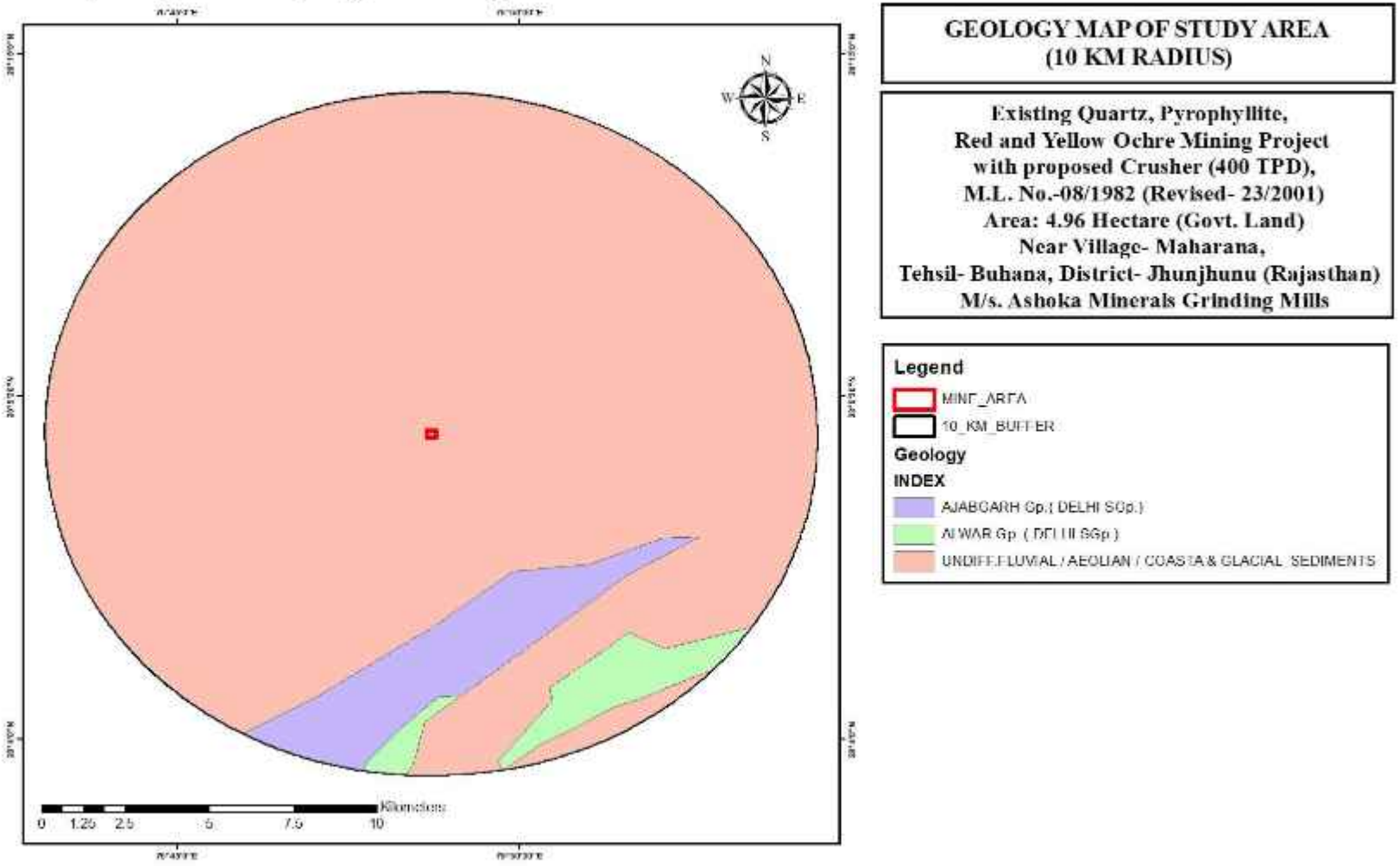


Fig 2.1: Geology Map of the Lease area

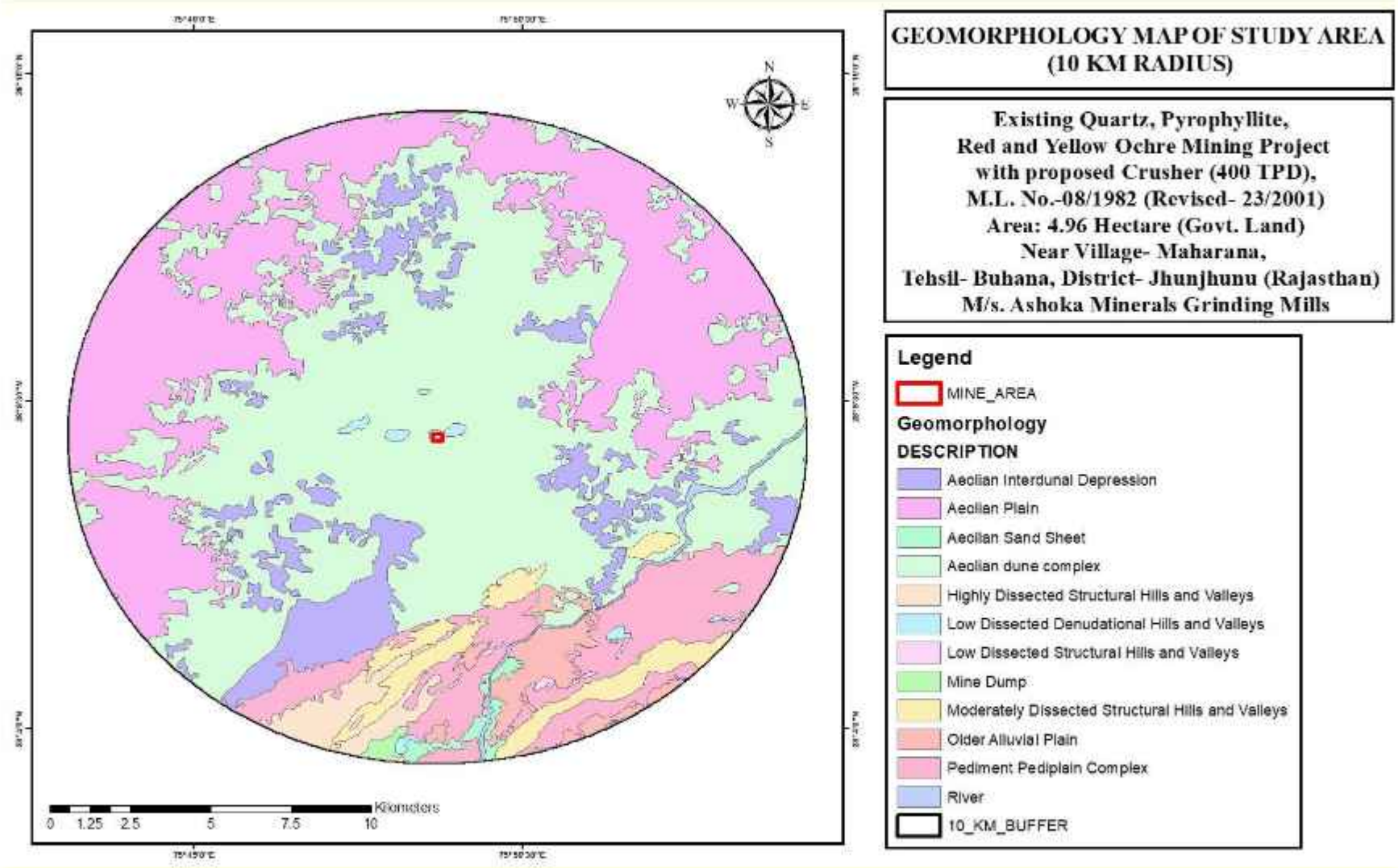


Fig 2.2: Geomorphological Map of the Lease area

C. FEATURES OF MINE SITE

The Mine lease is square in shape.

At present 0.45 ha area has been excavated. No production since 2003-2004.

The lease area comprises small-mound trending roughly E-W

The highest and lowest contour of the lease area is 325-400 mRL.

No major river is passing through the project site. No Habitation falls within the lease area.

No PWD road passes through the area.

2.4 SIZE OR MAGNITUDE OF OPERATION (incl. Associated activities required by or for the project)

Table 2.1
Mining Details

S. No.	PARTICULARS	DETAILS
1.	Method of Mining	Semi –mechanized Opencast Mining
2.	Mineable Reserves (Tonnes)	4603700
3.	Life of Mine	~8.65 years says 9 years
4.	Proposed Production	8,00,120 (ROM) (Mineral- 6,00,090 TPA + Waste- 2,00,030 TPA)
5.	Elevation Range	325-400 mRL
6.	General Ground level	300 mRL
7.	Ground Water Table	60-70 m bgl
8.	Ultimate Working Depth of Pit	20m i.e. 280 mRl
9.	Number of Working Days/Year	300
10.	Number of shifts per day	1
11.	Total Waste generation at the end of fifth year	8,03,430 T

Source: Approved Mining Plan with PMCP

2.4.1 ASSOCIATED ACTIVITIES/FACILITIES

- Drinking water will be available from the nearby village by tractor tank manually by the laborers working at site.
- The office cum rest room is proposed.
- Store
- Fire aid station
- Toilets and other facilities shall also be provided.

2.5 PROPOSED SCHEDULE FOR APPROVAL AND IMPLEMENTATION

Mining plan with Progressive Mine Closure Plan was approved by Superintending Minig Engineer, Department of Mines & Geology, Jaipur vide order no. SME/JP/MP/P-471/2024 dated – 26.11.2024.

Table 2.2
PROPOSED SCHEDULE FOR APPROVAL

Sr. No.	PARTICULARS	TIME FRAME
1	TOR GRANT	08.07.2025
2	BASELINE STUDY	March to May, 2025
3	SUBMISSION OF DRAFT EIA/EMP REPORT	August, 2025
4	PUBLIC HEARING	September-October, 2025
5	SUBMISSION OF FINAL EIA/EMP REPORT TO SEIAA, RAJASTHAN	October- November, 2025
6	FINAL EC PRESENTATION AT SEAC	November, 2025
7	PRESENTATION AT SEIAA, IF REQUIRED	November, 2025
8	GRANT OF EC BY SEIAA, RAJASTHAN	November-December, 2025

IMPLEMENTATION

Implementation of the project will be in accordance with the existing Acts and Rules applicable to mining operations as well as in accordance with any Act/Rule/Guidelines issued by Central or State government time to time. The implementation of the mining project will be done as per the Approved Review of Mining Plan and Progressive Mine Closure Plan.

2.6 TECHNOLOGY AND PROCESS DESCRIPTION

MINING METHOD & PROCESS

The mine has remained non-operational for an extended period of time.

Mining will be done open cast semi-mechanized method with the help of hydraulic machineries, deep and short hole blasting. The lessee will install the crusher in the lease are with capacity of 400 TPD.

The bench height would not be kept greater then (the statutory provisions of the prevailing Act) the width of the benches, benches of 6m height have been planned with width more than height of the bench. The required Barrier along the Mining lease boundary shall be kept 7.5m as shown in the Plates.

REMOVAL OF TOPSOIL ⟶ DRILLING ⟶ BLASTING ⟶ EXCAVATION ⟶ TRANSPORTATION

- DRILLING
  The drilling will be done with the compressor and jack hammer.
- BLASTING
  Blasting is required only for removing waste rock. The blasting shall be controlled, so that it does not damage mineral. Conventional blasting will be done. The blasting shall be on contract basis by the licensed person/agency.

  Blasting will be done by using conventional type of blasting such as : Slurry explosive class 2 viz. Neoprime (Special), Power gel, Acquadyne, Superdyne etc. Initiation is proposed by half second delay detonators.

No Secondary blasting will be required. As Rock breaker will be used.

Storage of Explosives

The mining operation is of a limited scale; therefore, requirement of explosive will be very low. Therefore, no explosive will be stored at the mine site.

Explosive required for blasting will be transported from nearby magazine in an approved explosive van and the residue explosive after blasting will be returned to the same magazine.

Safety Precautions

Steps will be taken to prevent any person approaching the shot. The Safety precautions like efficient siren will be blown prior to the blasting and at the clearance of blasting.

- EXCAVATION/LOADING
  Excavation of mineral and waste will be by hydraulic machineries.

  The Rock breakers and pneumatic breakers will also be used for breaking the rocks if free face is available.

  The overburden will be removed with the help of JCB on hire basis as and when required.

- TRANSPORTATION
  The minerals will be transported to designated places from mine in tippers.

MINING DETAILS

Details are given in table 2.2

PRODUCTION

This is an Existing Mine but the no production has been carried out since 2003-2004.

Table 2.3
Year wise Production & Waste Generation

Year	Total Excavation ROM (Tonnes)	Minerals in (Tonnes)	Waste in (Tonnes)
First Year	2,29,320	1,71,990	57,330
Second Year	5,84,210	4,38,160	1,46,050
Third Year	7,99,970	5,99,980	1,99,990
Fourth Year	8,00,120	6,00,090	2,00,030
Fifth Year	8,00,120	6,00,090	2,00,030
Total	32,13,740	24,10,310	8,03,430

SOIL & WASTE MANAGEMENT

The soil generated will be used for plantation.

Waste will be dumped at designated site as per the Approved mining plan with height of 3 m and stabilized by retaining walls of rubble stone to arrest the rolling down. The drain towards lower side with a siltation tank will be provided.

The lessee may sale the waste after crushing and grinding or as it as per requirement.

The waste will be used for construction of approach roads, site services etc. Some waste may be used by local habitants.

The waste may also use as M sand as per government policy.

CONCEPTUAL PLAN

At the conceptual stage 3.60 ha will be converted into water reservoir.

Water reservoir will help in recharging the local ground water table and will also fulfil the water demand of the nearby villages. A greenbelt will also be developed in the statutory boundary barrier.

Table 2.4
Land Use Pattern

S. No.	Land use Category	Pre - operational	Operational	Post-operational
1	Excavation (Voids Only)	0.45	3.30	3.60
2	Topsoil stack	--	--	--
3	Dump of overburden	--	0.01	--
4	Mineral/Sub-grade stack	--	--	--
5	Infrastructure, Site services	--	0.01	--
6	Road/approach road	0.02	0.02	0.01
7	Greenbelt	0.01*	0.20	1.35
8	Reclamation	--	--	--
9	Other Plant	--	0.10	--
10	Undisturbed Area	4.39	1.32	--
Total		4.96	4.96	4.96

*The Plantation destroyed by local habitants during the long-closed period.

Note: *The mining lease holder shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc". as per 16.01.2020 OM of MOEF&CC.*

2.7 PROJECT DESCRIPTION

2.7.1 ENVIRONMENTAL SENSITIVITY

Table 2.5

Particulars	Details
ENVIRONMENTAL SENSITIVITY	
Ecological Sensitive Areas (National Park, Wild Life Sanctuary, Biosphere Reserve, etc.) within 10 Km radius	None, within 10 km radius area of the mine lease boundary.
Archaeological Important Place	None, within 10 km radius area of the mine lease boundary.
Inter-District Boundary	None, within 10 km radius area of the mine lease boundary.
Areas protected under international conventions, national or local legislation for	None, within 10 km radius area of the mine lease boundary.

<table>
<tr><td>their ecological, landscape, cultural or other related value</td><td></td></tr>
<tr><td>River/ Seasonal Nallah</td><td>• Sukh Nadi N/v Muradpur is at ~6.8 km towards ESE direction.</td></tr>
<tr><td>Forest Area (Reserve Forest/ Protected Forest) & Water Bodies.</td><td>• Gujarwas PF is at ~4.5 km towards SE direction
• Kharakhohra PF is at ~6.5 km towards South direction.
• Bhodan PF is at ~6.0 km towards ESE direction.
• Manota PF is at ~7.5 km towards SE direction.
• Singhana Forest- 7.3 towards SSE direction.</td></tr>
<tr><td>Nearest habitation/town/City</td><td>Village Maharana is About ~0.60 Km towards South direction.</td></tr>
<tr><td>Nearest Airport</td><td>Jaipur International Airport is at ~150.0 Km towards South direction</td></tr>
<tr><td>Nearest Highway</td><td><table>
<tr><th>S. No.</th><th>Highway</th><th>Distance</th><th>Direction</th></tr>
<tr><td>1.</td><td>SH-13 B</td><td>~3.36</td><td>East</td></tr>
<tr><td>2.</td><td>NH-11</td><td>~3.94</td><td>SW</td></tr>
<tr><td>3.</td><td>NH-311</td><td>~6.23</td><td>South</td></tr>
<tr><td>4.</td><td>MDR64</td><td>~8.20</td><td>NE</td></tr>
</table></td></tr>
<tr><td>Nearest Railway Station</td><td>Chirawa Railway Station is about ~18.34 Km towards NW direction</td></tr>
<tr><td>Seismic zone</td><td>Seismic zone–II</td></tr>
</table>

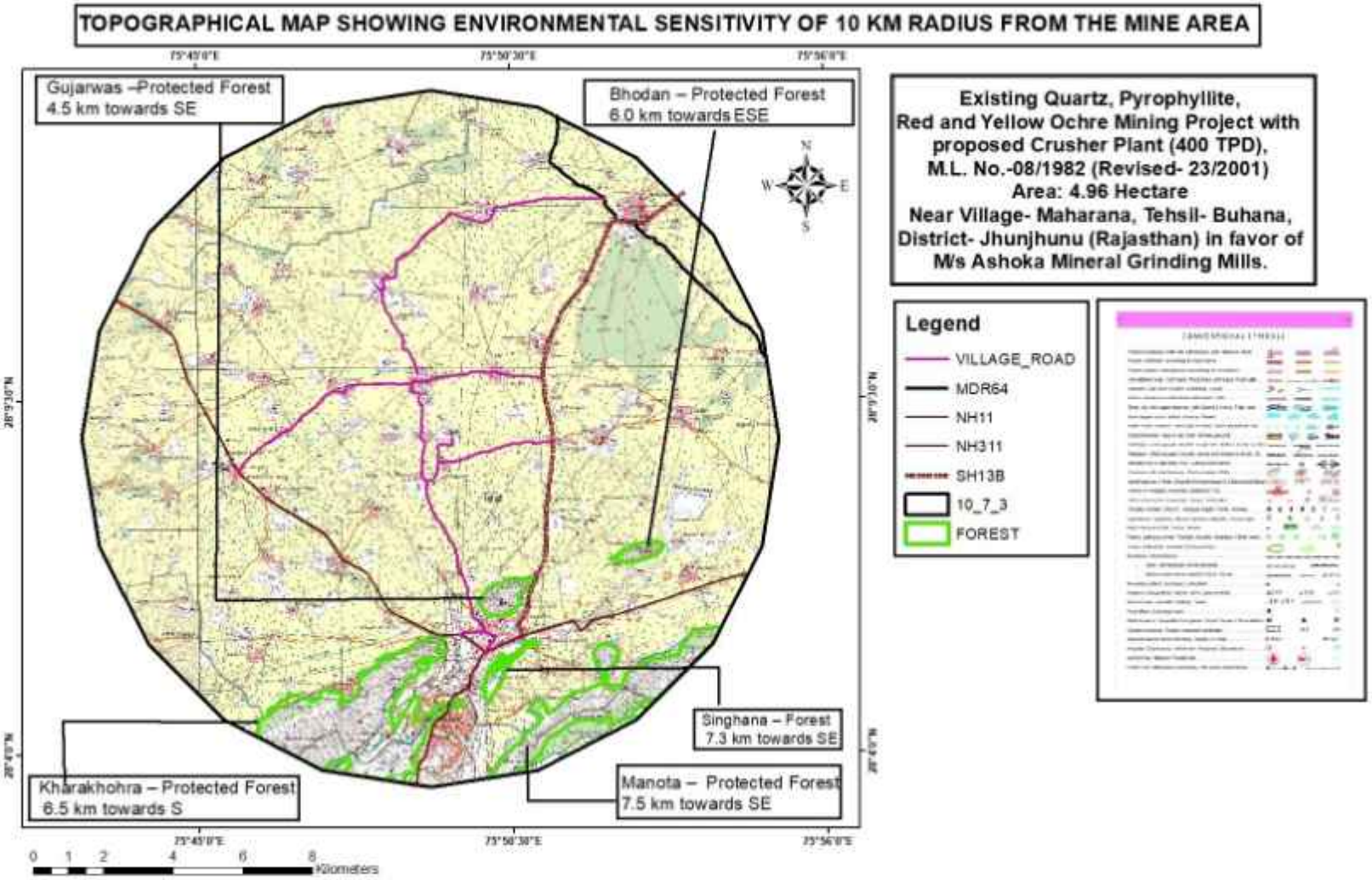


Fig 2.3 : MAP SHOWING ENVIRONMENTAL SENSITIVITY WITHIN THE BUFFER ZONE

2.7.2 PROJECT REQUIREMENTS

2.7.2.1 WATER REQUIREMENT

Total water requirement of the project will be about 9.0 KLD for drinking, spraying, sanitation and greenbelt and process. Water will be available through water tankers from nearby village. Detail of water requirement in KLD is given below:

Table 2.6
WATER REQUIREMENT

S. No.	Project Proponent	Quantity (in KLD)	Source
1.	Domestic	1.9	Water will be sourced through nearby villages.
2.	Dust-Suppression	1.00	
3.	Green belt	4.9	
4.	Process	1.2	
Total		9.0	

2.7.2.2 POWER/FUEL REQUIREMENT

For the operation of Machinery HSD Fuel will be required. Moreover, the mining will be carried out in day time but in case of requirement power will be supplied by nearest Vidhyut Vitaran Nigam Limited.

2.7.2.3 MANPOWER REQUIREMENT

To ensure safe and systematic mining operations, the mine site will employ sufficient technical and supervisory staff. Preference will be given to local residents for direct employment.

Table 2.7
Breakup of Man Power Requirement

S. No.	Project Proponent	No. of persons
1.	Highly skilled	2
2.	Skilled	10
3.	Semi-Skilled	10
4.	Unskilled	20
	Total	42

2.7.2.4 EXTENT OF MECHANIZATION

The Machinery to be deployed and their Specifications are as follows:

S. No.	Machines	Nos.	Capacity
1.	Hydraulic Excavator/Loader	3	700 tons per shift
2.	Excavator fitted with rock breaker	1 or 2	1000 tons per shift
3.	Long hole drill	1	110 mm bit 6 m deep hole
4.	Wire Saw	1 and 1 standby	As required
5.	Jack Hammers	2	32 mm bit and 1.5 to more long drill rods
6.	Tractor Trolley	2	4 ton
7.	Tippers	8	20 Ton
8.	Tractor tanker	1	5000 liter
9.	Crusher	1	400 TPD
14.	Drill Machine	1	

Source: Approved Mining Plan with PMCP

2.7.3 RESERVES & LIFE OF MINE

The mineral reserves are computed as per UNFC. The reserves are as follows:

Table 2.8
Reserve calculations of the lease

Project Name	Reserve in MT
Proved Mineral Reserves	2911100
Probable Mineral Reserves	1692600
	4603700

Anticipated Life of Mine

Minable Reserves	Excavation during plan period	Reserves left after plan period	Target per year after plan	Life of Mine
4603700	2410310	2193390	600090	5+3.65 = 8.65 years says 9 years

Sources: *Approved Mining Plan with Progressive Mine Closure Plan*

Life of mine is dependent upon time frame for assessing the true potentially of the deposit.

2.7.4 DRAINAGE

The Mining Applied area occupied by Quartz pyrophyllite, red and yellow ochre. The general drainage of the applied area during rainy season is towards SW side of the mining area. General drainage in the surrounding area is South westerly. Rain water flows along the natural slope of the ground the runoff water will be high and percolation of water will be low.

The Mining is will start from above surface level, so there will be no effect on ground water level. The general ground water level in the area is 300 m below ground level and ultimate pit limit is 20 m i.e. 280mRL. Therefore, ground water level will not be intersected till the life of mine.

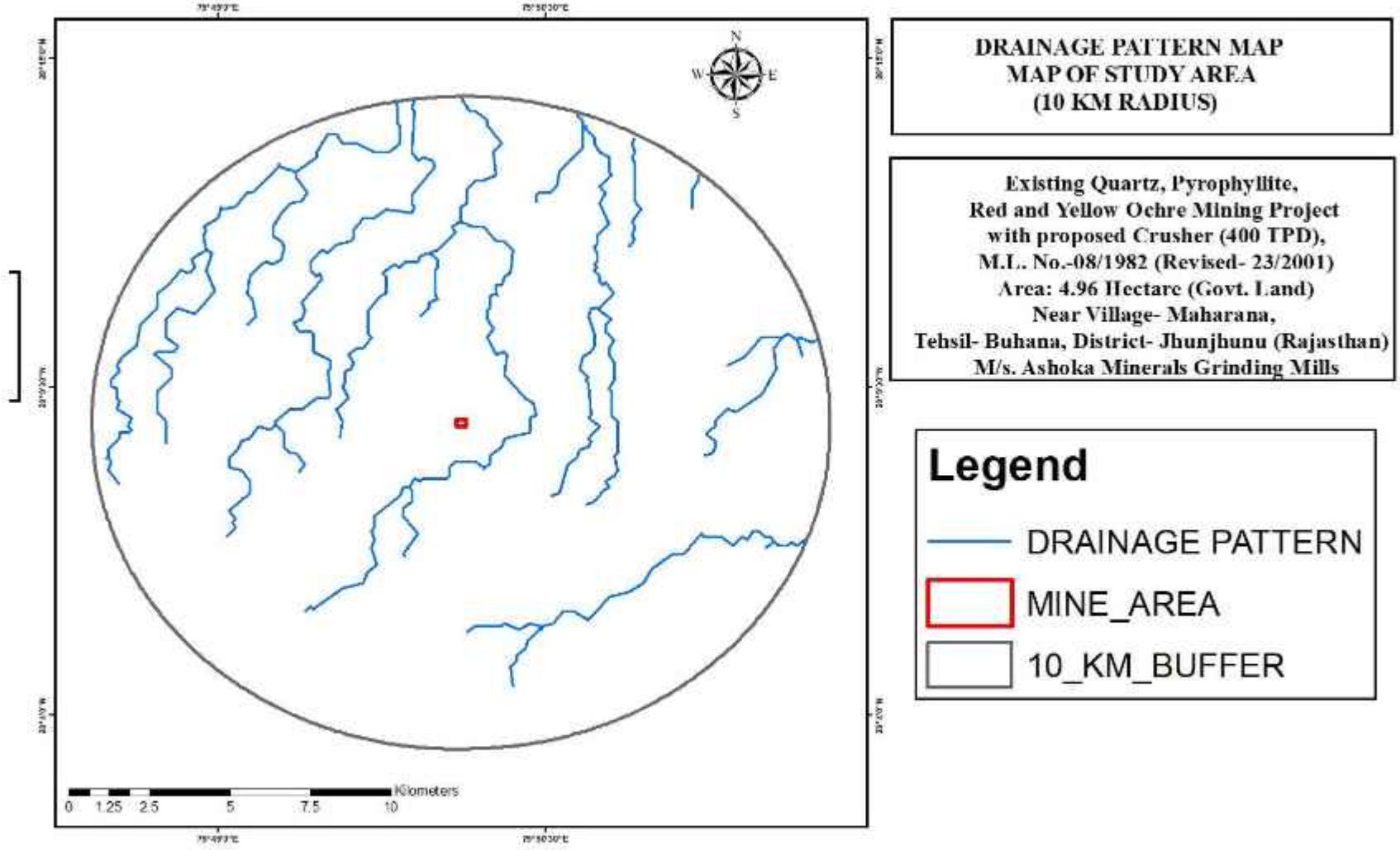


Fig 2.4 - Drainage Map

2.8 DESCRIPTION OF MITIGATION MEASURES INCORPORATED INTO THE PROJECT TO MEET ENVIRONMENTAL STANDARDS, ENVIRONMENTAL OPERATING CONDITIONS OR OTHER EIA REQUIREMENTS.

AIR QUALITY MANAGEMENT

- Covered transportation will be carried out.
- Controlled Blasting will be done.
- Water sprinkling will be done to supress the dust emission.
- PPE kit will be provided to workers.
- Regular maintenance of HEMMs & transportation vehicles will be done.
- Development of Greenbelt in 7.5 m wide safety zone and unworked area covering an area of 1.35 ha.

NOISE LEVEL MANAGEMENT

- Proper maintenance, oiling and greasing of machines.
- Proper designing of machinery by providing inbuilt mechanism like silencers, mufflers and enclosures for noise generating parts.
- Limiting time exposure of workers to excessive noise.
- Providing Protection equipment like earmuffs and ear-plugs to workers.
- Development of Greenbelt in 7.5 m wide safety zone and unworked area covering an area of 1.35 ha
- Adequate silencers will be provided in all the diesel engines.
- Periodic noise level monitoring will be done.

WATER MANAGEMENT

- No waste water will be discharged outside the project Area.
- Construction of garland drain to channelized the surface runoff.
- Development of Rain water harvesting ponds.
- The rain water collected in mining pit will be used for plantation, dust suppression requirements.
- Domestic wastewater generated from the mine office will be treated using a septic tank, followed by upflow filtration, disinfected, and then repurposed for gardening and plantation.
- The working pit will not intersect ground water.

GREENBELT/PLANTATION

Schedule of Greenbelt/Plantation: -

Table 2.9

Green Belt Development

Year	7.5 mtr. Safety barrier of the lease area & Unworked Area		Outside the lease area		Total	
	Area (Ha.)	No. of Trees	Area (Ha.)	No. of Trees	Area (Ha.)	No. of Trees
Existing	0.10	10	--	--	--	--
Plantation destroyed by local habitants during the long-closed period						
1st	0.20	200	0.287	287	0.487	487
2nd	--	--	--	--	--	--
3rd	--	--	--	--	--	--
Maintenance & Replacement of plants						
6th	1.15	1150	--	--	1.15	1150
End of life of mine	Maintenance & Replacement of plants					
Total	1.35	1350	0.287	287	1.637	1637

Total 1637 saplings will be planted over an area of 1.637-hectare area out of which 1.35 ha will be planted in 7.5 m safety barrier zone of the mine lease area and unworked area and remaining 0.287 ha will be planted outside the lease area, which will be 33% of total mining lease area.

Species of Plants to be used for greenbelt/plantation purpose:

1. Magifera indica (Mango)
   - Ecological value: mango trees support biodiversity preservation, soil health, and climate change mitigation.
   - Utility: Providing a delicious and nutritious fruit to contributing to environmental health and supporting local economies, including medicinal uses and timber production.
   - Pollution tolerance: Known for thriving in arid conditions and tolerating pollutants.
2. Azadirachta indica (Neem)
   - Ecological value: Known as a natural pesticide, it supports a variety of beneficial insects.
   - Utility: Used in medicine, for pest control, and its leaves are used for livestock. The wood and fruits have various uses.
   - Pollution tolerance: Highly tolerant to pollution and drought conditions.
3. Prosopis cineraria (Khejri)
   - Ecological value: Supports biodiversity and is drought-tolerant. It improves soil quality through nitrogen fixation.
   - Utility: The tree provides fuelwood, fodder, and timber. Its pods are also edible and used in traditional medicines.
   - Pollution tolerance: Well-adapted to harsh, dry conditions and urban pollution.

Note: - As per O.M. dated 16.01.2020 "The Mining Lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc."

The plant species will be selected in consultation with forest department.

2.9 ASSESSMENT OF NEW & UNTESTED TECHNOLOGY FOR THE RISK OF TECHNOLOGICAL FAILURE.

No evaluation of new or untested technologies for adoption is proposed. The project will utilize the conventional open-cast semi-mechanized mining method, a proven and reliable technique, which involves preparing the deposit for mining. The focus of this method is to ensure the stability of the worked rock mass and the conservation of mineral resources. These operations will be executed in a planned sequence, with each step interdependent to ensure the continuous availability of the surface for mineral extraction, optimal output, safe operation of mining equipment, and overall mineral production from the mine pit.

CHAPTER- 3
DESCRIPTION OF THE ENVIRONMENT

3.1 INTRODUCTION

A field assessment has been conducted to evaluate the current environmental conditions of the area, taking into account various environmental components such as:

1. Land Environment
2. Meteorology
3. Air Environment
4. Noise Environment
5. Water Environment
6. Soil Environment
7. Biological Environment
8. Socio-economic Environment

The baseline environmental status in the vicinity of the proposed mining project reflects the current quality of air, noise, water, soil, ecology, and biodiversity, as well as the socio-economic environment. Based on the baseline data, an environmental impact assessment has been conducted, and an Environmental Management Plan has been prepared.

This chapter and the related discussions contain the results of field studies carried out during Summer Season 2025.

3.2 STUDY AREA

The study area is an area of 10 km radius (aerial distance) from the lease area. The area (within ML boundary) is considered as core zone and rest of the study area around core zone is known as buffer zone.

3.2.1 Location

Location Map is given in Chapter 1

Table 3.1

LOCATION DETAILS

S.No.	PARTICULARS	DETAILS
1.	Village	Maharana
2.	Tehsil	Buhana
3.	District	Jhunjhunu
4.	State	Rajasthan
5.	Khasra No.	902, 148, 149, 9
6.	Latitude & Longitude	See below
7.	SOI Toposheet No.	44 P/12, 44P/16

Pillar No.	Latitude(N)	Longitude(E)
A.	28°08'50.94"	75°49'09.23"
B.	28°08'50.57"	75°49'00.15"
C.	28°08'57.06"	75°48'59.82"
D.	28°08'57.43"	75°49'08.09"

Source: Aravalli certificate

3.2.2 ENVIRONMENTAL SENSITIVITY

Map showing environmental sensitivity of the core and buffer area is given in *Chapter 2*

Table 3.2

ENVIRONMENTAL SENSITIVITY

Particulars	Details
ENVIRONMENTAL SENSITIVITY	
Ecological Sensitive Areas (National Park, Wild Life Sanctuary, Biosphere Reserve, etc.) within 10 Km radius	None, within 10 km radius area of the mine lease boundary.
Archaeological Important Place	None, within 10 km radius area of the mine lease boundary.
Inter-District Boundary	None, within 10 km radius area of the mine lease boundary.
Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	None, within 10 km radius area of the mine lease boundary.
River/ Seasonal Nallah	• Sukh Nadi N/v Muradpur is at –6.8 km towards ESE direction.
Forest Area (Reserve Forest/ Protected Forest) & Water Bodies.	• Gujarwas PF is at –4.5 km towards SE direction • Kharakhohra PF is at –6.5 km towards South direction. • Bhodan PF is at –6.0 km towards ESE direction. • Manota PF is at –7.5 km towards SE direction. • Singhana Forest- 7.3 towards SSE direction.
Nearest habitation/town/City	Village Maharana is About –0.60 Km towards South direction.
Nearest Airport	Jaipur International Airport is at –150.0 Km towards South direction
Nearest Highway	S. No. / Highway / Distance / Direction 1. / SH-13 B / –3.36 / East 2. / NH-11 / –3.94 / SW 3. / NH-311 / –6.23 / South 4. / MDR64 / –8.20 / NE
Nearest Railway Station	Chirawa Railway Station is about –18.34 Km towards NW direction
Seismic zone	Seismic zone–II

3.3 STUDY PERIOD

Baseline study has been carried out during Summer Season, 2025 [March To May, 2025] by a NABL-accredited and MoEF&CC recognized laboratory, in accordance with the EIA guidelines issued by the Ministry of Environment, Forests and Climate Change, Government of India.

3.4 COMPONENTS AND METHODOLOGY

3.4.1 LAND USE & LAND COVER (LULC)

3.4.1.1 Objective

- In compliance with the ToR letter issued by SEIAA/SEAC, Rajasthan, vide file no. RJ/25/SEAC2(06)/MIN/TOR/0535 Dated 08.07.2025.
- ToR Point no. 1.10: Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
- To develop land use & land cover map using land coordinates of the Study area.
- To identify and mark key environmental features based on both primary and secondary data.
- To evaluate the project's impact on existing land use of the Study area.
- To suggest measures for conservation and sustainable use of land.

3.4.1.2 Data Used

The current vintage data from the Indian Remote Sensing Satellite RESOURCESAT-2 (L4FMX) digital FCC (False Color Composite) has been utilized to prepare the Land Use & Land Cover thematic map of the study area. The satellite imagery was sourced from the National Remote Sensing Centre, Hyderabad. A Survey of India toposheet, at a 1:50,000 scale, was used as a reference map for creating the base layer data, including roads, railways, village names, and for geo-referencing the satellite imagery.

Technical details of Data

- Satellite Image - RESOURCESAT-2 (L4FMX)
- Satellite Data Source - NRSC, Hyderabad
- SOI Toposheet No. - 45N/4
- Software Used - Earth Resources Data Analysis System (ERDAS) 9.2
- Instrument Used - GPS (Etrex 30)

3.4.1.3 Methodology

- Preliminary/ Primary Data Collection of the Study Area
  - Satellite data procurement from NRSC Hyderabad
- Secondary Data Collection from Authorized Bodies
  - Survey of India Toposheet (SOI)
  - Mining Plan
  - Cadastral / Khasra Map
  - GPS Coordinates of Mining Lease area
- Processing of satellite data using ERDAS Imagine 9.2 and prepare the land use & land cover maps (e.g. Forest, agriculture, settlements, wasteland, water bodies etc.) by digital image processing (dip) techniques.
  - Geo-Referencing of the Survey of India Toposheet
  - Geo-Referencing of Satellite Imagery with the help of Geo-Referenced Toposheets
  - Enhancement of the Satellite Imagery

- Base Map Layer Creation (Roads, Railway, Village Names and others Secondary data etc.)
- Data Analysis and Classification using Digital Interpretation Techniques.
- Ground Truth Studies or Field Verification.
- Error Fixing / Reclassification
- Final Map Generation

➢ Interpretation of generated Data.

➢ Recommendation.

3.4.1.4 Details of LU/LC

A. Land Use & Land Cover Classes

These are the following LU/LC Classes: -

Water Bodies, Crop land, Fallow Land, Human Settlement, Industrial Area, Mine Quarry, Scrub Land, Plantation, Railway Line, Road Network, Forest Land, Stony Waste Land, Open Land etc as per NRSC Guide Line.

B. Generation & Analysis of Data

➢ Geo-referencing of the Survey of India Toposheet

Scanned surveys of India Toposheets were registered in geographic lat/long projection system with the help of ERDAS imagine software and re-project in UTM WGS 84 with respective zone.

➢ Geo-Referencing of the Satellite Imagery

Registered Toposheet is used as a reference map for Geo-Referencing of Raw satellite imagery by taking suitable Ground Control Points (GCP) like intersection point of railway, Road network, Canal intersection and some other permanent features.

➢ Enhancement of Satellite Image

Satellite data is composed of substantial noise and haze errors due to various environmental factors, which affect the amount of reflectance (information) that can be deciphered. Since mapping of satellite images is based on spectral signatures, it is necessary to normalize the redundant values into near true values. This process of deriving true reflectance values is known as normalization. This enhances interpretability of the satellite image thereby facilitating better identification of land features viewed on satellite imagery. Histogram equalization and radiometric correction has been used for satellite image enhancement.

➢ Base Map Layer Creation

Base map has been prepared using Survey of India Toposheet as a reference map on 1:50000 scale. In base layer linear and point feature like road, rail, canal, village location and other secondary information have been created in vector data format with the help of ArcGIS Software.

➢ Data Analysis and Classification Using Digital Interpretation Technique

Image interpretation is the process of identifying objects or conditions in images and determining their meaning or significance. Satellite imagery are composed of array of grid, each grid have a numeric value that is known as digital number. Smallest unit of this grid is known as a pixel that captures reflectance of ground features represented in terms of Digital number, which represent a specific land feature. Using

image classification technique, the satellite data is converted into thematic information map based on the user's knowledge about the ground area.

Hybrid technique has been used i.e. visual interpretation and digital image processing for identification of different land use and vegetation cover classes based on spectral signature of geographic feature. Spectral signature represents various land use classes. Image interpretation keys are developed for better Interpretation/Classification scheme which is Shape, Size, Color, Tone, Texture Pattern, Association etc. Based on the Interpretation key and Spectral signature Entire satellite imagery is classified in different classes like Water Bodies, Crop land, Fallow Land, Human Settlement, Industrial Area, Mine Quarry, Scrub Land, Plantation, Railway Line, Road Network, Forest Land, Stony Waste Land, Open Land etc.

- Ground Data Collection and Verification

Ground truth/ field verification is an important component in mapping and its validation exercise. Utmost care and planning are required for collecting ground data and verification. To facilitate a good ground truthing exercise the following steps were followed:

- Identifying and listing all the doubtful areas for the ground verification and referring all such areas with respect to the toposheet to know their geographical location and accessibility on the ground.
- Field traverse plan was prepared to cover maximum doubtful areas in the field in such a way that each traverse covers, as many land use and land cover classes as possible, apart from the doubtful areas
- The sufficient number of points was covered for each Land Use Class as required for quality checking as well as accuracy assessment.

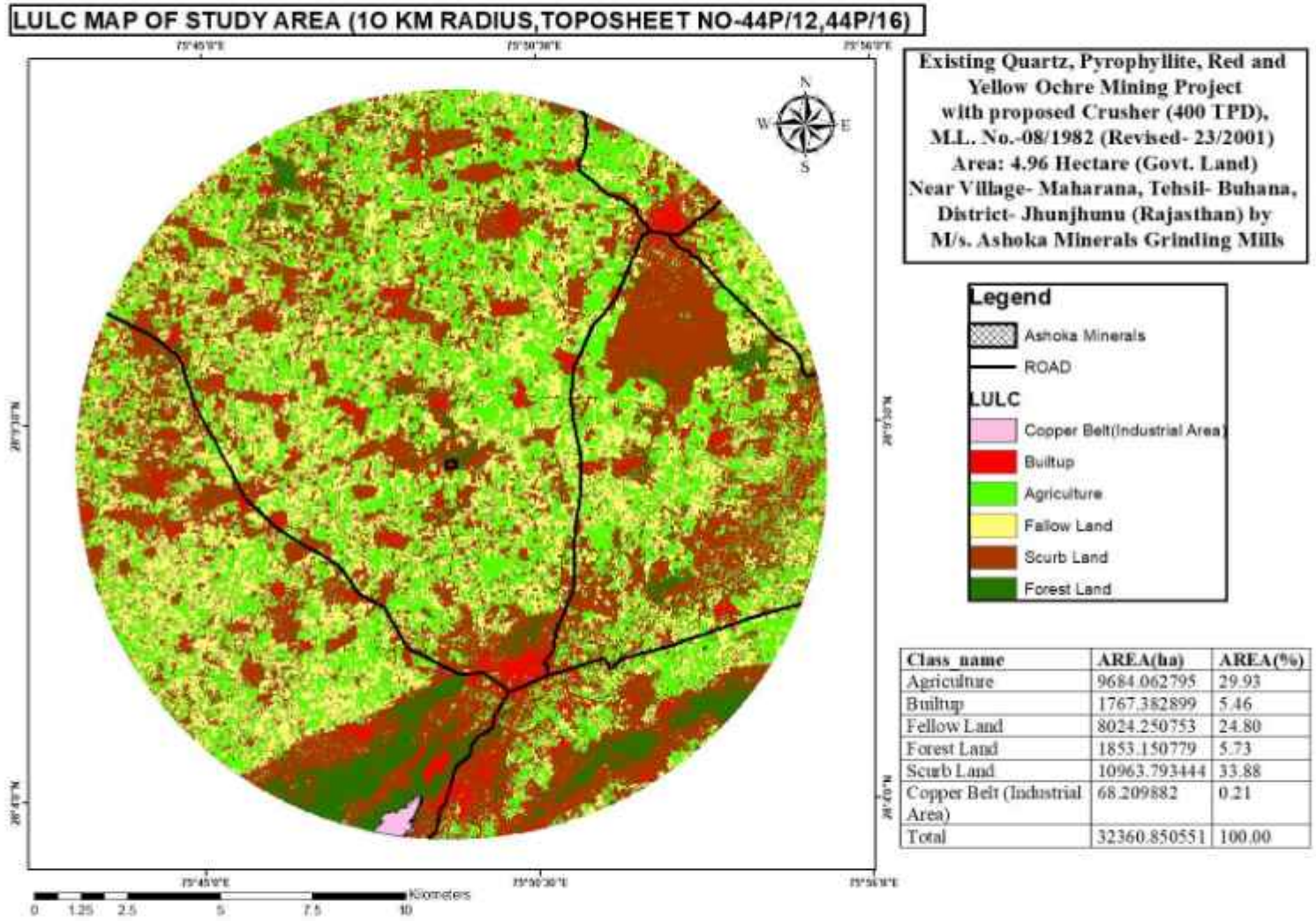
- Error Fixing / Reclassification

Reclassification of Land Use classes was done on the basis of data collected / verified during ground truthing.

- Final Map Generation

Final maps are generated for the core area as well as Buffer area. 3 Pixels is Filtered using Clump and Eliminate Process after ensuring to maintain crucial classes of importance. Base map layers is overlaid on the classified raster data and then thematic maps is generated on the layout consisting of Project name, legend, source of data, Index map, scale bar and North arrow.

A hybrid technique has been used i.e. visual interpretation and digital image processing to generate output Land use & Land cover map of the 10 km buffer area on 1:50000 scale.



Class_name	AREA(ha)	AREA(%)
Agriculture	9684.062795	29.93
Builtup	1767.382899	5.46
Fellow Land	8024.250753	24.80
Forest Land	1853.150779	5.73
Scurb Land	10963.793444	33.88
Copper Belt (Industrial Area)	68.209882	0.21
Total	32360.850551	100.00

FIGURE 3.1: LU/LC MAP OF THE STUDY AREA

The land use/land cover details of the Buffer Zone are given in below:

Table – 3.3
Land Use / Land Cover Details of Study Area

LU/LC Class	Area in hectare	Area (in %)
Agriculture	9684.06	29.93
Builtup	1767.38	5.46
Fallow Land	8024.25	24.8
Forest Land	1853.15	5.73
Scrub Land	10963.79	33.88
Copper belt (Industrial area)	68.21	0.2
Total	32360.85	100.0

Source: LU/LC Map for Buffer Zone

3.4.1.5 Interpretation of the LU/LC Data

- The study area of the buffer zone mainly comprises of Scrub Land with 33.88 %. The area is covered by Agriculture land i.e. 29.93 %. Build-up area is 5.46 %, Forest area- 5.73 % and Industrial area is on 0.2%.
- There is no National Park, Biosphere Reserve, Tiger Reserve, Wildlife Corridor, etc. within 10 km radius.
- There will be certain in the land use when proposed mines operates on proposed capacity.

3.4.2SEISMICITY OF THE AREA

Several regions of the Indian subcontinent have historically experienced high seismic activity. In the past 100 years, seven major earthquakes, each with a magnitude greater than 8 on the Richter scale, have occurred in the western, northern, and eastern parts of India, as well as in neighbouring countries.

In contrast, peninsular India experiences relatively lower seismic activity, with only occasional earthquakes of moderate magnitude. The primary seismogenic zones are linked to the tectonic boundary where the Indian and Eurasian plates collide.

The project site and study area are situated in Zone-II of the Seismic Zoning Map, indicating a region of low seismic hazard according to national standards. Therefore, the risk of an earthquake at the site is minimal, making it considered safe.

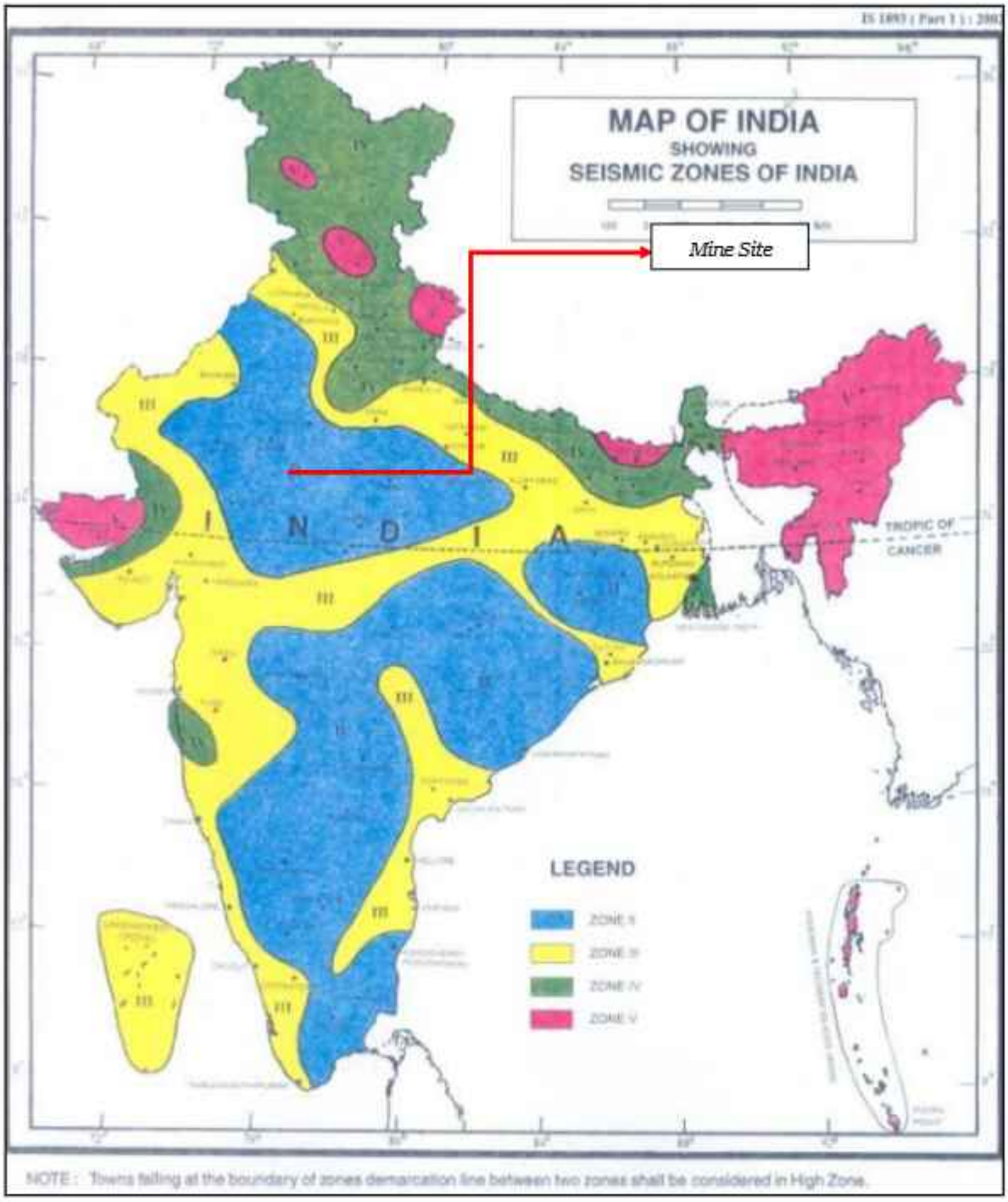


Figure 3.2: SEISMIC ZONE MAP

3.4.3FLOOD HAZARD ZONATION OF THE AREA

According to the "Vulnerability Atlas – 2nd Edition; Peer Group, MoH&UPA; based on digitized data from SOI, GOI; Flood Atlas, Task Force Report, C.W.C., GOI," the project site is not located in an area susceptible to flooding.

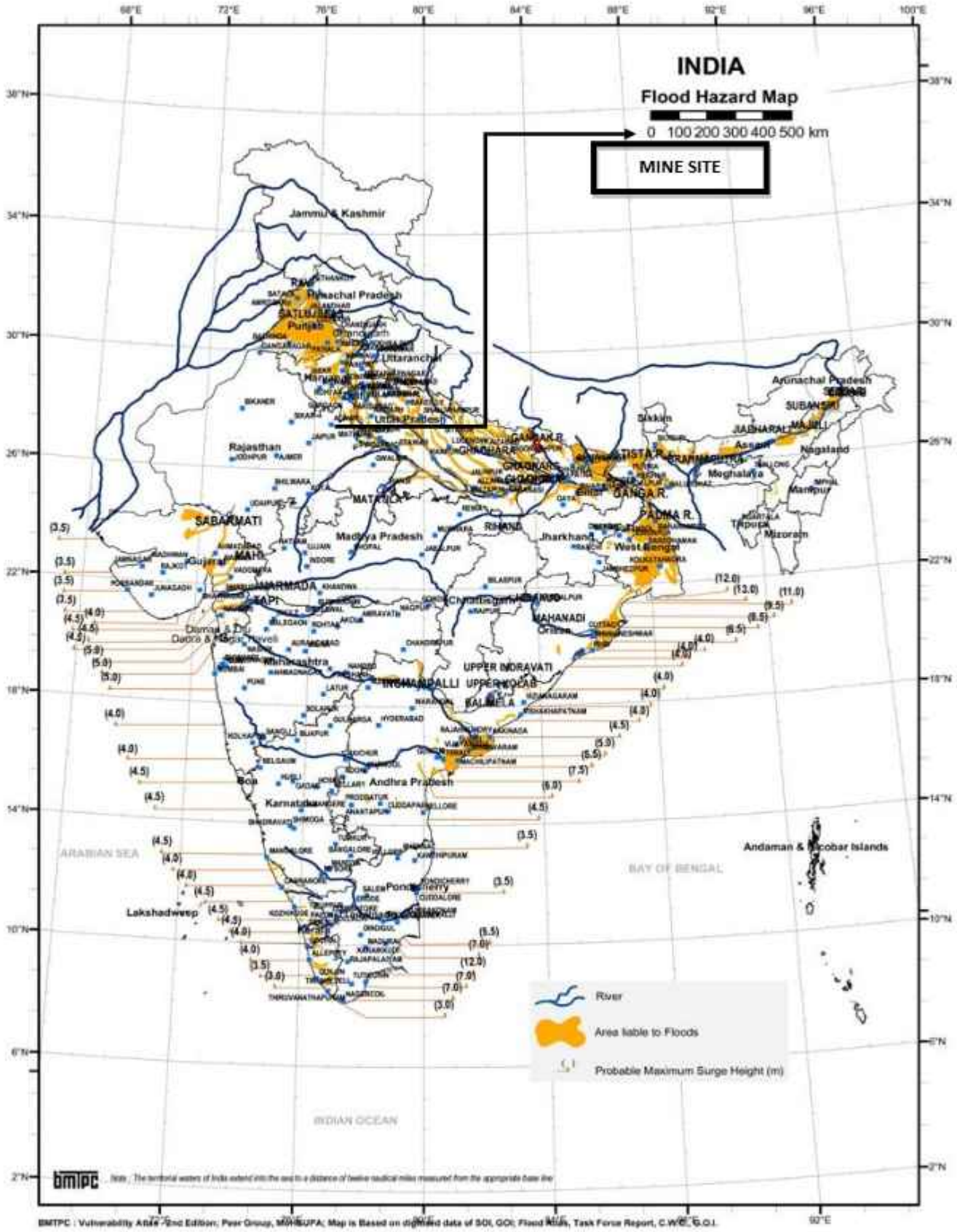


Figure 3.3: FLOOD HAZARD ZONATION MAP

3.4.4 CLIMATE & RAINFALL

The climate of the district can be classified as semi-arid. It is characterised by very hot summers and very cold winters with poor rainfall during south-west monsoon period. In May and June, the maximum temperature may sometimes goes up to 480 C. The potential evapotranspiration rates are quite high, especially during May and June. The total annual potential evapotranspiration is 1502.6mm. The mean annual rainfall of the district, based on 36 years data (1971-2006), works out to be 485.6mm. However normal annual rainfall (1901-71) of the district is 459.5mm. It can be inferred that the rainfall in the district has significantly increased in the recent years. The coefficient of variation is on higher side at 36.6% indicating that the rainfall is slightly unreliable. A perusal of the figure reveals that the district experienced very poor rainfall between the period 1979 to 1991 with the exception of few years in between. Thereafter, the district was fortunate to have very good spell of rainfall continuously for a period of 7 years from 1992 to 1998. The year 1996 was the best with annual rainfall exceeding mean annual rainfall by 85.4%. The district again experienced drought conditions from 1999 to 2002. The year 2002 was the worst with rainfall being 62.3% less than mean annual rainfall.

Source: https://cgwb.gov.in/sites/default/files/2022-10/junjhunu.pdf

Rainfall data of the area for last 12 years is as mentioned in below table:

TABLE - 3.4
Rainfall Data of District: Jhunjhunu (Raj.)

S. No.	Year	Rainfall (in mm)
1.	2013	487
2.	2014	418
3.	2015	404
4.	2016	490
5.	2017	262
6.	2018	418
7.	2019	692
8.	2020	486
9.	2021	494
10.	2022	500.5
11.	2023	615
12.	2024	518

Source https://water.rajasthan.gov.in/wr/#/department-order/142/23/2776/30900

3.5 ESTABLISHMENT OF BASELINE FOR VALUED ENVIRONMENTAL COMPONENTS WITH BASE MAPS OF ENVIRONMENTAL COMPONENTS

3.5.1 BASELINE DATA COLLECTION

3.5.1.1 INSTRUMENTS USED FOR ENVIRONMENTAL BASELINE DATA COLLECTION

The following instruments were used at the site for environmental baseline data collection work by NABL Approved Laboratories.

1. Respirable Dust Sampler with attachment for gaseous Pollutants, Lata Envirotech Services APM 860
2. Fine Particulate Sampler (FPS), APM154
3. Hygrometer
4. Sound Level Meter Model SL – 4023SD
5. Micro Meteorological Station Model EnviroWM 251
6. Global Positioning System (GPS)

7. Water Level Indicator

Apart from collecting samples of air, water and soil from representative sampling points given in proceeding sections, the data on land use, vegetation and agricultural crops were also collected by the field team through interaction with a large number of local inhabitants of the study area and different Government departments / agencies. This provided an excellent opportunity to the members of the field team for obtaining clear scenario of the existing environment of the study area.

3.5.2 METEROLOGY

Meteorology plays a vital role in determining the transport and diffusion pattern of air pollutants released into atmosphere. The principal variables include horizontal convective transport (average wind speed and direction), vertical convective transport (atmospheric stability) and topography of the area.

Meteorological characteristics of an area are very much important in assessing possible environmental impacts and in preparing environmental management plan.

Since meteorological factors show wide fluctuations with time, meaningful interpretation can be drawn only from long-term reliable data. Such source of data is India Meteorological Department (IMD), which maintains a network of meteorological stations at several important locations.

The nearest IMD station to the study area is located at Pilani (approx. 33 km). Based on the IMD data for Summer Season (March to May, 2025), the pre-dominant wind direction – West is considered. Windrose is given as Figure 3.3

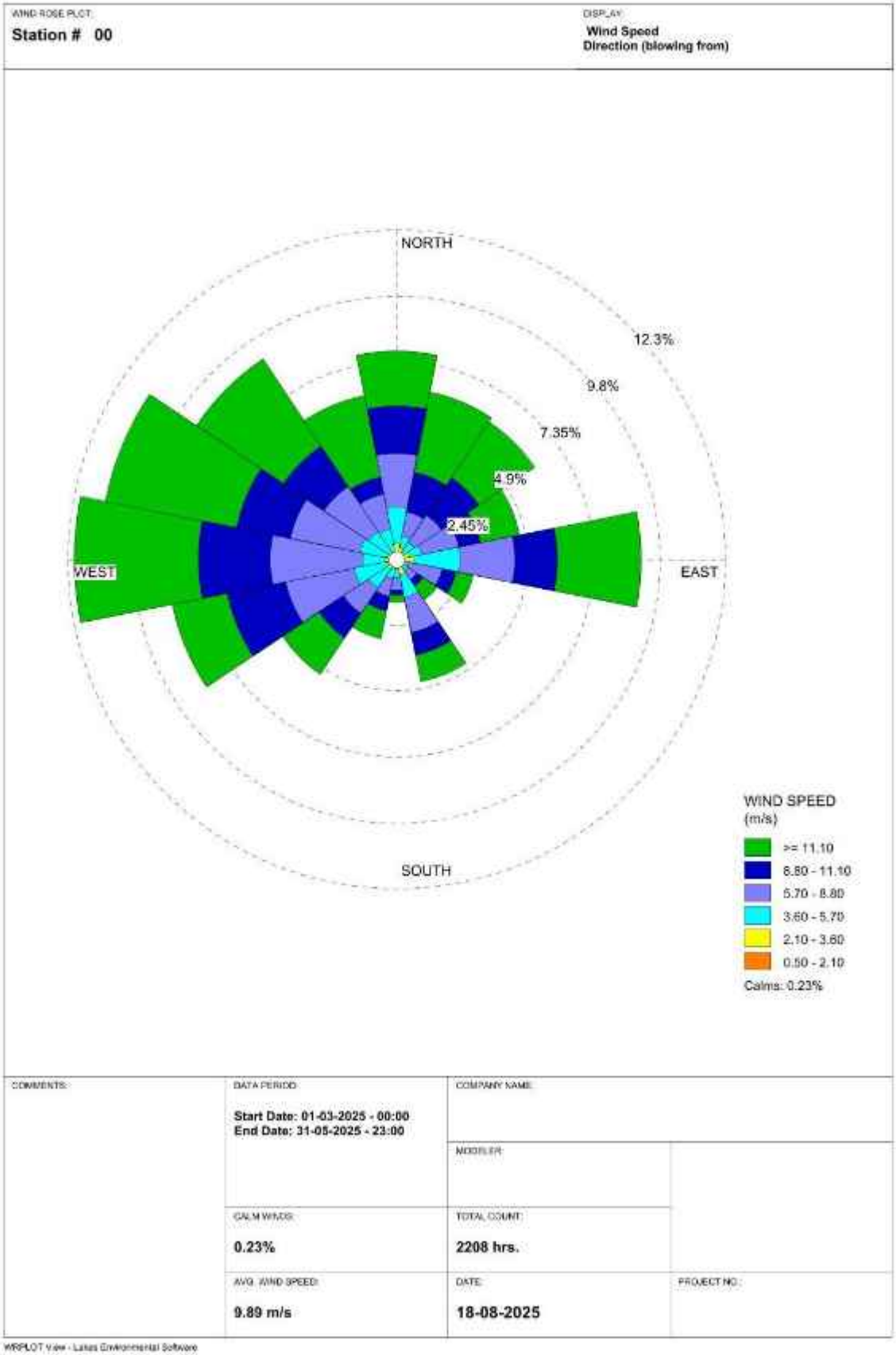


Figure 3.4: Wind Rose Diagram

3.5.2.1 MICRO-METEROLOGY AT SITE

Meteorological station was set-up at site to record surface meteorological parameter during Summer Season (March to May, 2025).

Wind speed and wind direction data recorded during the study period has enabled identifying the influence of meteorology on the air quality of the area. Based on the collected meteorological data, relative percentage frequencies of different wind directions were calculated and plotted as wind roses for twenty-four-hour duration. Maximum and minimum temperatures including percentage relative humidity were also recorded simultaneously. It was observed that the predominant over all wind patterns for the study period was from W.

TABLE: 3.5
Micro-meteorology data
Study period – Summer Season, 2025

Months	Temperature °C		Relative Humidity %		Wind Speed (Km/h)	
	Min.	Max.	Min.	Max.	Min.	Max.
March, 2025	10	38	20	100	0	9
April, 2025	14	43	9	100	0	6
May, 2025	19	45	18	100	0	11

Source: https://www.timeanddate.com/weather/india/jhunjhunu/hourly

3.5.2.2 AMBIENT AIR ENVIRONMENT

Ambient air quality monitoring is done to determine the general background concentration levels. Samples were collected in the 10 km study area to observe pollution trends throughout the region. It helps in providing a data base for evaluation of effects of a project activity in that region. It will be also useful in ascertaining the quality of air environment in conformity to standards of the ambient air quality during operation of mine.

3.5.2.3 Sampling Methodology

The air quality monitoring was done during Summer Season, 2025 within 10 km radius study area.

The samples were collected for the following air quality determinants:

- Sulphur Dioxide (SO_2)
- Oxides of Nitrogen (NO_x)
- Particulate Matter (PM_{10}) and ($PM_{2.5}$)

The sources of air pollution in the region are dust rising from unpaved roads, domestic fuel burning, vehicular traffic, agricultural activities, emission from other industries, etc.

3.5.2.4 Sampling Schedule

The sampling was done for every 8 hours continuously for 24 hours for SO_2, NO_x, $PM_{2.5}$ & PM_{10} with a frequency of twice a week for three months (24 observations for one location).

3.5.2.5 Sampling Location

In order to know the baseline ambient air quality, in and around the project site, ambient air qualities were measured at nearby sites and villages in the study area. Tables showing the locations of the ambient air quality monitoring stations are given in below Table:

Table: 3.6

Locations of Ambient Air Quality Monitoring Stations

Study Period – Summer Season (March to May 2025)

Station	Location	Distance from Mine site with direction	Latitude	Longitude	Selection Criterion For Mine site
AAQ1	Mine Site	--	28° 8'51.82"N	75°49'4.70"E	Core Zone
AAQ2	Near Mine site	500 m, E	28° 8'55.40"N	75°49'27.31"E	As per TOR Point, stating "one location within 500 m of the mine lease in the pre-dominant downwind direction". Falls in Downwind direction.
AAQ3	Near to Puhaniya Village	2.5 km, W	28° 8'46.53"N	75°47'22.37"E	Falls in pre-dominant upwind wind.
AAQ4	Sanwlod Village	0.9 km, N	28° 9'57.83"N	75°48'52.44"E	Falls in 2nd dominant upwind wind direction. Habitation in Buffer Zone.
AAQ5	Singhana Village	5 km, S	28° 5'51.54"N	75°49'26.37"E	Populated area. Near to the Forest Near to NH11 Falls in 2nd dominant downwind direction.
AAQ6	Moi Sadda Village	4.0 km, SW	28° 6'59.36"N	75°47'30.69"E	Habitation in Buffer area Near to NH11
AAQ7	Buhana Village	7.8 km, NE	28°12'2.50"N	75°52'12.64"E	Populated area. Near to SH 13B and MDR 64
AAQ8	Thali Vilage	4.35 km, E	28° 8'57.85"N	75°51'48.97"E	Falls in Downwind direction. Near to Thali Road

Source: *SOI Toposheet*

The wind rose diagram indicates that the predominant wind direction during the study period was from the West, Villages/locations for AAQ monitoring have been selected in the downwind and upwind, directions relative to the activity site.

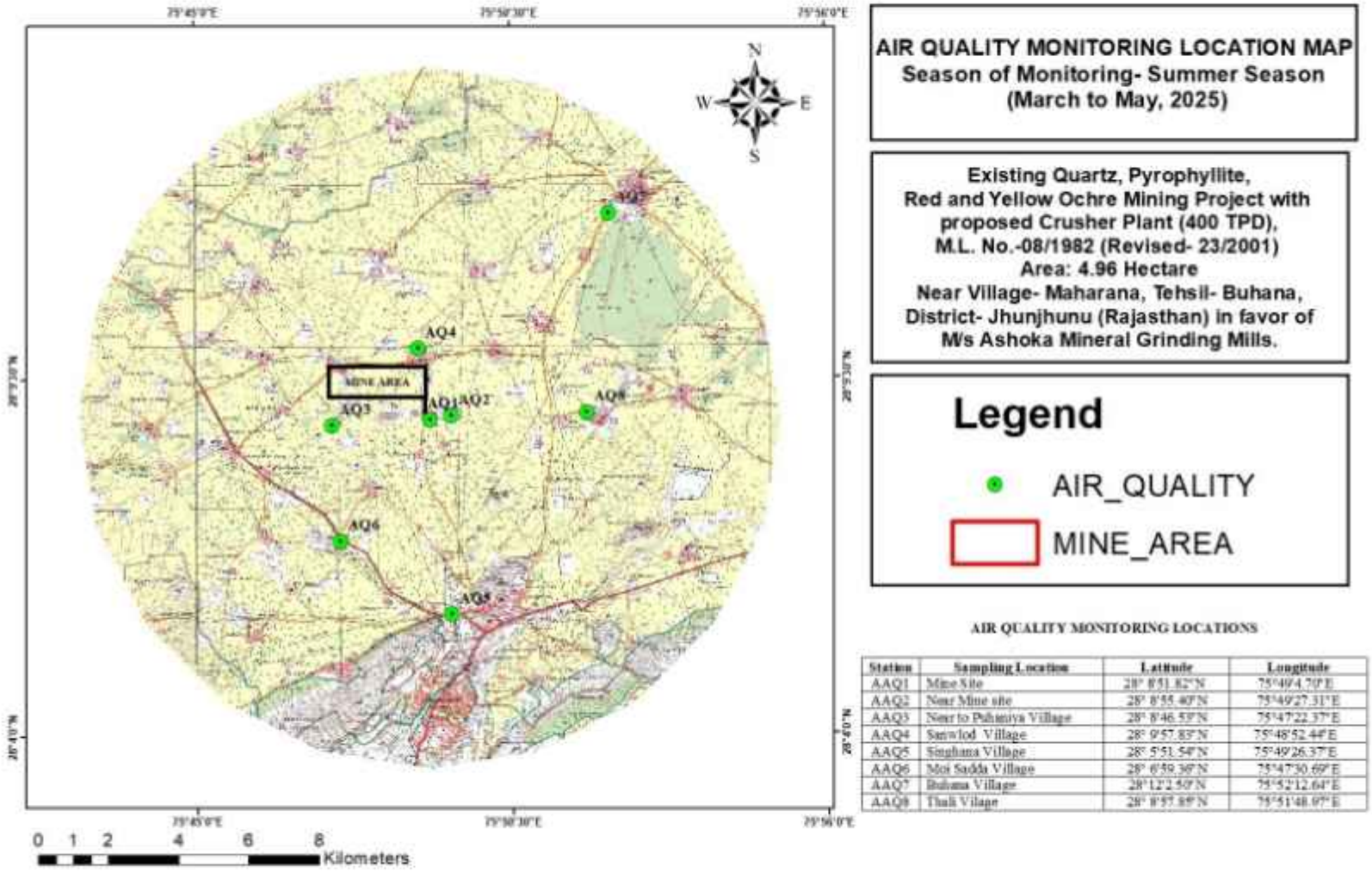


Figure 3.5: KEYPLAN SHOWING AIR QUALITY MONITORING LOCATIONS

3.5.2.6 Ambient Air Quality Monitoring

The following table shows the max. and min. concentrations of the air pollutants monitored at different locations (as mentioned Table:3.6) during the study period.

TABLE: 3.7
Ambient Air Quality Monitoring
Study Period – Summer Season (March To May, 2025)

(Unit in µg/m³)

Station	Sampling Location	PM_{10}		$PM_{2.5}$		SO_2		NO_x	
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
AAQ1	Mine Site	89.2	69.2	54.3	32.9	19.4	11.8	35.9	24.2
AAQ2	Near Mine site	93.5	71.9	52.6	34.7	17.1	10.3	34.2	22.9
AAQ3	Near to Puhaniya Village	81.9	61.7	45.7	30.2	19.4	10.2	31.5	17.6
AAQ4	Sanwlod Village	86.7	62.9	44.7	33.4	17.3	10.2	33.4	176
AAQ5	Singhana Village	92.5	63.2	46.3	33.7	18.2	11.1	35.1	20.8
AAQ6	Moi Sadda Village	85.3	68.3	41.5	31.9	18.1	11.2	32.9	21.9
AAQ7	Buhana Village	91.6	69.6	48.6	32.7	16.2	10.9	30.4	17.3
AAQ8	Thali Vilage	81.4	65.7	40.2	31.5	18.5	10.1	33.5	20.4

Source : Ambient Air Quality Monitoring

TABLE: 3.8
National Ambient Air Quality Standards (CPCB)

S. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air		Method of Measurement
			Industrial Area, Residential Rural & Other Areas	Ecologically Sensitive Area (Notified by Central Govt.)	
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO_2), µg/m³	Annual Average * 24 hours **	50 80	20 80	1. Improved West and Gaeke Method. 2. Ultraviolet fluorescence.
2	Oxides of Nitrogen as NO_xµg/m³	Annual Average * 24 hours **	40 80	30 80	1. Modified Jacob & Hochheiser (Na-Arsenite) Method. 2. Chemiluminescence (Gas phase).
3	Particulate Matter (size less than 10µm) or PM_{10}µg/m³	Annual Average * 24 Hours **	60 100	60 100	1. Gravimetric, 2. TOEM, 3. Beta attenuation.
4	Particulate Matter (size less than 2.5µm) or $PM_{2.5}$µg/m³	Annual Average* 24 Hours **	40 60	40 60	1. Gravimetric, 2. TOEM, 3. Beta attenuation.
5	Ozone (O_3), µg/m³	8 Hours ** 1 Hours *	100 180	100 180	1. UV Photometric, 2. Chemilminescence, 3. Chemical Method.

6	Lead (Pb), $\mu g/m^3$	Annual Average * 24 Hours **	0.50 1.0	0.50 1.0	1. AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper. 2. ED-XRF using Teflon filter.
7	Carbon Monoxide (CO), mg/m^3	8 Hours** 1 Hours	02 04	02 04	Non-Depressive Infrared (NDIR) Spectroscopy.
8	Ammonia (NH_3), $\mu g/m^3$	Annual Average* 24 hours **	100 400	100 400	1. Chemiluminescence (Gas phase). 2. Indophenol blue method.
9	Benzene (C_6H_6), $\mu g/m^3$	Annual Average*	05	05	1. Gas Chromatography based continuous analyzer, 2. Adsorption and Desorption followed by GC analysis.
10	Benzo(α) Pyrene (BaP) – Particulate Phase only, ng/m^3	Annual Average*	01	01	Solvent extraction followed by HPLC'GC analysis.
11	Arsenic (As), ng/m^3	Annual Average*	06	06	AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper.
12	Nickel (Ni), ng/m^3	Annual Average*	20	20	AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper.

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

*24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 95% of the time in a year. 5% of the time, they may exceed the limits but not on two consecutive days of monitoring.

3.5.2.7 Discussion of Results

The AAQ parameters in the study area fall within the prescribed limits, mainly because there are no major air pollution sources from large industrial establishments and the population density is moderate.

The lowest values of PM10 and PM2.5 were recorded at near to Puhaniya Village, which has no major pollution sources. In contrast, higher values were observed near mine site, due to the existing construction and heavy machineries.

A suitable green belt is planned along the mine boundary and at key locations both inside and outside the mine site to help further reduce air pollution.

3.5.3 NOISE ENVIRONMENT

Noise often defined as unwanted sound, interferes with speech communication, causes annoyance, distracts from work, disturb sleep, thus deteriorating quality of human environment.

3.5.3.1 Source of Noise

There are several sources in the area, which contribute to the local noise level of the area. Ambient noise sources in the vicinity of the project include the noise from traffic from rail and road, human activities in villages and agricultural fields. Noise level measurement is therefore essential to assess noise pollution.

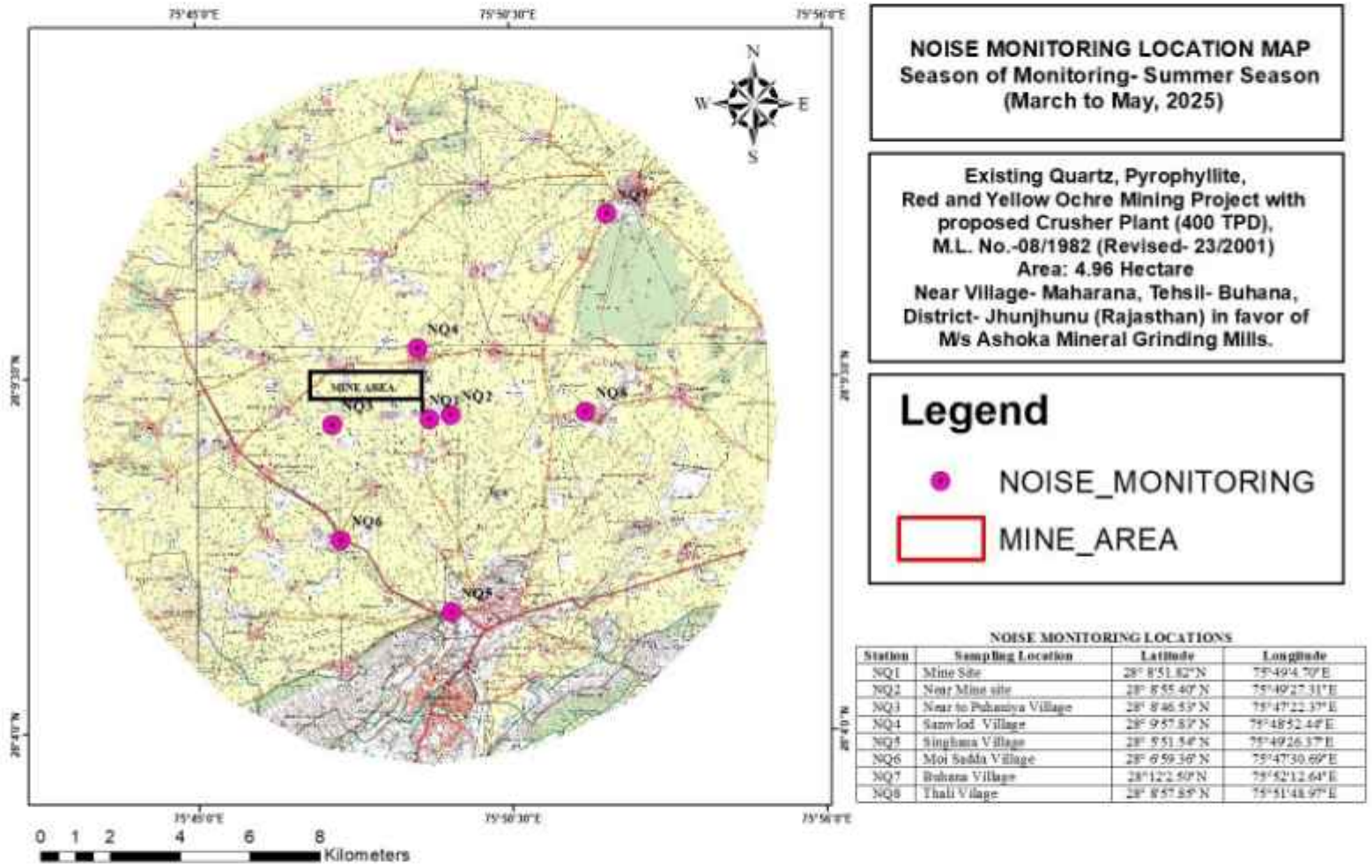
3.5.3.2 Ambient Noise Level

In order to know the baseline noise levels, in and around the mine sites, noise levels were measured at nearby sites and villages in the study area. Locations of the noise monitoring stations are given below:

TABLE: 3.9
Ambient Noise Level Monitoring Stations
Study Period –Summer Season (March To May, 2025)

Station	Location	Distance from Mine site with direction	Latitude	Longitude	Selection Criterion For Mine site
NQ1	Mine Site	--	28° 8'51.82"N	75°49'4.70"E	Core Zone
NQ2	Near Mine site	500 m, E	28° 8'55.40"N	75°49'27.31"E	Falls in Downwind direction.
NQ3	Near to Puhaniya Village	2.5 km, W	28° 8'46.53"N	75°47'22.37"E	Falls in pre-dominant upwind wind.
NQ4	Sanwlod Village	0.9 km, N	28° 9'57.83"N	75°48'52.44"E	Falls in 2nd dominant upwind wind direction. Habitation in Buffer Zone.
NQ5	Singhana Village	5 km, S	28° 5'51.54"N	75°49'26.37"E	Populated area. Near to the Forest; Near to NH11 Falls in 2nd dominant downwind direction.
NQ6	Moi Sadda Village	4.0 km, SW	28° 6'59.36"N	75°47'30.69"E	Habitation in Buffer area Near to NH11
NQ7	Buhana Village	7.8 km, NE	28°12'2.50"N	75°52'12.64"E	Populated area. Near to SH 13B and MDR 64
NQ8	Thali Vilage	4.35 km, E	28° 8'57.85"N	75°51'48.97"E	Falls in Downwind direction. Near to Thali Road

Source: *SOI Toposheet*



NOISE MONITORING LOCATIONS

Station	Sampling Location	Latitude	Longitude
NQ1	Mine Site	28° 8'51.82"N	75°49'4.70"E
NQ2	Near Mine site	28° 8'55.40"N	75°49'27.31"E
NQ3	Near to Pahaniya Village	28° 8'46.53"N	75°47'22.37"E
NQ4	Sanwlod Village	28° 9'57.83"N	75°48'52.44"E
NQ5	Singhana Village	28° 5'51.54"N	75°49'26.37"E
NQ6	Moi Sadda Village	28° 6'59.36"N	75°47'30.69"E
NQ7	Buhana Village	28°12'2.50"N	75°52'12.64"E
NQ8	Thali Village	28° 8'57.85"N	75°51'48.97"E

Figure 3.6: KEYPLAN SHOWING NOISE MONITORING LOCATIONS

3.5.3.3 Ambient Noise Level Monitoring Result

TABLE: 3.10

Ambient Noise Level Monitoring

{Study Period – Summer Season, {March to May, 2025}

S. No.	Locations	Noise level Leq. dB (A)	
		Day time	Night time
NQ1	Mine Site	55.2	42.9
NQ2	Near Mine site	58.6	44.2
NQ3	Near to Puhaniya Village	51.5	41.9
NQ4	Sanwlod Village	55.8	40.5
NQ5	Singhana Village	49.9	43.2
NQ6	Moi Sadda Village	54.6	40.1
NQ7	Buhana Village	50.8	39.2
NQ8	Thali Vilage	56.2	44.3

Source : Ambient Noise level Monitoring

TABLE: 3.11

AREA CODE	CATEGORY OF AREA	LIMITS IN Leq. dB (A)	
		DAY TIME 06.00 am–10.00 pm	NIGHT TIME 10.00 pm–6.00 am
(A)	Industrial Area	75	70
(B)	Commercial Area	65	55
(C)	Residential Area	55	45
(D)	Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.

2: Night Time is reckoned between 10.00 PM to 6.00 AM

3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

Source: Central Pollution Control Board Norm

3.5.3.4 Discussion of Results

The elevated Leq levels during the daytime near mine site are primarily due to nearby construction activities, personal activities, and heavy machineries, whereas the lowest value is found in the village of Puhaniya, where the population is minimal.

The night levels of Leq are low and well within the standards since the all-necessary activities are carried out in day time.

The noise levels at all location are well below the NAAQS standards.

Based on the study and discussions, it can be concluded that the noise levels in the study area are within the prescribed limits set by the Noise Pollution (Regulation and Control) Rules, 2000. However, it is anticipated that the project could increase the noise concentration in the surrounding areas compared to the current baseline levels. To mitigate the expected impacts, appropriate measures will be implemented to reduce noise effects.

3.5.4WATER ENVIRONMENT

3.5.4.1Surface Water Quality

Sukh Nadi present in the buffer zone of the lease area, although it was dry during the study period. Hence, no surface water sources were identified within a 10 km radius of the mine site.

3.5.4.2 Ground Water Quality

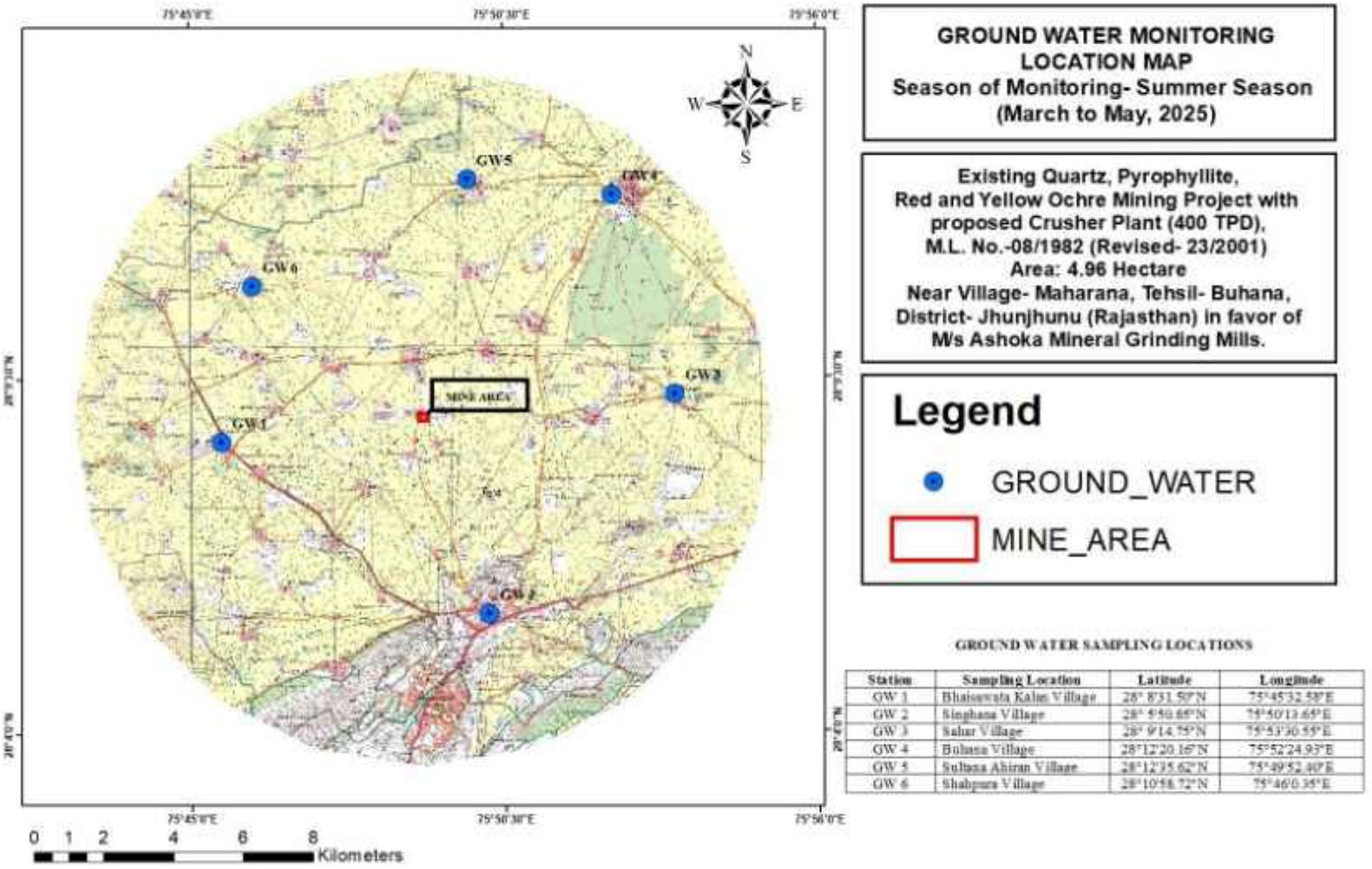
The sources of potable water are the tube-wells, dug-wells, and tap water & Hand pumps in the area. Samples were collected from the available water resources around the mine area. The samples were collected & tested from different sites.

The quality of ground water was studied by collecting 6 water samples from representative hand pumps and tube wells. The water sampling locations are shown below:

Details of ground water sampling locations and their distance & directions are given in Table below:

TABLE: 3.12
Locations of Ground Water Sampling Locations
Study Period- Summer Season (March to May, 2025)

Station	Location	Distance from Mine site with direction	Latitude	Longitude
GW1	Bhaisawata Kalan Village	5.6 km, W	28° 8'31.50"N	75°45'32.58"E
GW2	Singhana Village	5.8 km, S	28° 5'50.85"N	75°50'13.65"E
GW3	Sahar Village	7.2 km, E	28° 9'14.75"N	75°53'30.55"E
GW4	Buhana Village	8.5 km, NE	28°12'20.16"N	75°52'24.93"E
GW5	Sultana Ahiran Village	7 km, NNE	28°12'35.62"N	75°49'52.40"E
GW6	Shahpura Village	6.2 km, NW	28°10'58.72"N	75°46'0.35"E



GROUND WATER SAMPLING LOCATIONS

Station	Sampling Location	Latitude	Longitude
GW 1	Bhaiswata Kalan Village	28° 8'31.50"N	75°45'32.58"E
GW 2	Singhana Village	28° 5'50.68"N	75°50'13.65"E
GW 3	Sahar Village	28° 9'14.75"N	75°53'30.55"E
GW 4	Buhana Village	28°12'20.16"N	75°52'24.93"E
GW 5	Sultana Ahiran Village	28°12'35.62"N	75°49'52.40"E
GW 6	Shahpura Village	28°10'58.72"N	75°46'0.35"E

Figure 3.7: KEYPLAN SHOWING GROUND WATER MONITORING LOCATIONS

TABLE: 3.13
Ground Water Quality Analysis
Study Period –Summer Season (March to May, 2025)

S. No.	Parameter	Unit	GW1	GW2	GW3	GW4	GW5	GW6
1	Colour	Hazen	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	pH Value	-	7.19	7.81	7.24	7.16	7.44	7.26
4	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
6	Total Dissolved Solids	mg/l	416.0	715.0	1426.0	390.0	493.0	484.0
7	Calcium (as Ca)	mg/l	45.0	67.0	124.0	30.0	50.0	56.0
8	Chloride (as Cl)	mg/l	130.0	165.0	516.0	116.0	130.0	126.0
9	Copper (as Cu)	mg/l	BLQ (LOQ=0.01)	BLQ (LOQ=0.01)	BLQ (LOQ=0.01)	BLQ (LOQ=0.01)	BLQ (LOQ=0.01)	BLQ (LOQ=0.01)
10	Fluoride (as F)	mg/l	0.18	0.30	0.38	0.17	0.18	0.24
11	Iron (as Fe)	mg/l	0.16	0.26	0.33	0.13	0.13	0.21
12	Magnesium (as Mg)	mg/l	20.0	34.0	76.0	18.0	18.0	22.0
13	Nitrate (as NO3)	mg/l	4.1	9.1	18.2	3.1	8.4	4.2
14	Phenolic Compound (as C6H5OH)	mg/l	BLQ (LOQ =0.001)	BLQ (LOQ =0.001)	BLQ (LOQ =0.001)	BLQ (LOQ =0.001)	BLQ (LOQ =0.001)	BLQ (LOQ =0.001)
15	Selenium (as Se)	mg/l	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)
16	Sulphate (as SO4)	mg/l	80.0	98.0	340.0	65.0	71.0	81.0
18	Total Alkalinity (as CaCO3)	mg/l	206.0	299.0	514.0	216.0	210.0	230.0
19	Total Hardness (as CaCO3)	mg/l	216.0	305.0	524.0	223.0	218.0	239.0
20	Zinc (as Zn)	mg/l	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)
21	Cadmium (as Cd)	mg/l	BLQ (LOQ=0.003)	BLQ (LOQ=0.003)	BLQ (LOQ=0.003)	BLQ (LOQ=0.003)	BLQ (LOQ=0.003)	BLQ (LOQ=0.003)
22	Lead (as Pb)	mg/l	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ	BLQ (LOQ	BLQ (LOQ

						=0.01)	=0.01)	=0.01)
23	Mercury (as Hg)	mg/l	BLQ (LOQ =0.001)	BLQ (LOQ =0.001)	BLQ (LOQ =0.001)	BLQ (LOQ =0.001)	BLQ (LOQ =0.001)	BLQ (LOQ =0.001)
24	Total Arsenic (as As)	mg/l	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)
25	Total Chromium (as Cr)	mg/l	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)	BLQ (LOQ =0.01)
26	Conductivity at 25°C	µmhos/cm	716	1240	2416	715	714	915
27	Sodium (as Na)	mg/l	90.1	116.8	260.0	80.2	74.3	94.2
28	Potassium (as K)	mg/l	1.6	2.6	3.2	0.6	0.9	1.6
29	E. Coli	E.coli/100ml	Absent	Absent	Absent	Absent	Absent	Absent

Source: Groundwater Quality Analysis Report

3.5.4.3 Remarks

A review of the abovementioned chemical analysis of ground water samples reveals that there is not much variation in chemical composition of water samples from handpump & bore wells from nearby villages.

Analysis results of ground water reveal the following: -

- pH: The pH values range from 7.16 to 7.81, which are within the neutral range (6.5-8.5) for drinking water. This suggests that the water is neither too acidic nor too alkaline, making it suitable for consumption and general use.
- Total hardness: The hardness levels range from 216 mg/l to 524 mg/l, which are relatively high. High hardness can lead to scaling in pipes and appliances but does not pose a direct health risk. Softening methods may be necessary if the water is used for industrial or domestic purposes requiring soft water.
- Total dissolved solids: TDS levels range from 390 mg/l to 1426 mg/l, which are on the higher side. High TDS concentrations can affect the taste and aesthetic quality of the water and may require treatment if used for drinking or irrigation.
- Calcium (as Ca2+) & Magnesium (as Mg2+): Calcium levels range from 30 mg/l to 124 mg/l, and magnesium levels range from 18 mg/l to 76 mg/l. Both are essential minerals but contribute to the overall hardness of the water. The ratios of calcium to magnesium suggest that the water is moderately hard.
- Fluoride (as F): Fluoride levels vary from 0.18 mg/l to 0.38 mg/l. While these levels are within the permissible limit of 1.5 mg/l, higher concentrations can lead to dental or skeletal fluorosis over long periods of exposure. Monitoring these levels is recommended.

Conclusion:

The groundwater samples from the study area show overall good quality with no significant contamination. Parameters such as pH, turbidity, colour, and taste are within acceptable limits for drinking water. While the water has high hardness, it is free from heavy metals, microbial contamination, and other harmful substances. The fluoride and chloride levels are within permissible limits, though careful monitoring is advised, especially for long-term consumption. The water quality is generally suitable for drinking, though treatment may be required to address hardness and high TDS if needed for specific uses.

No waste water is proposed to be drained outside the lease area hence, no adverse impact due to proposed project is envisaged.

3.5.5 SOIL ENVIRONMENT

3.5.5.1 Soil Quality and Characteristics

The soil quality information was gathered from various secondary sources and complemented by the collection and analysis of soil samples from representative locations. To evaluate the baseline soil profile of the project area and its vicinity, the samples were tested for essential physical and chemical parameters.

The sampling locations were finalized with the following considerations:

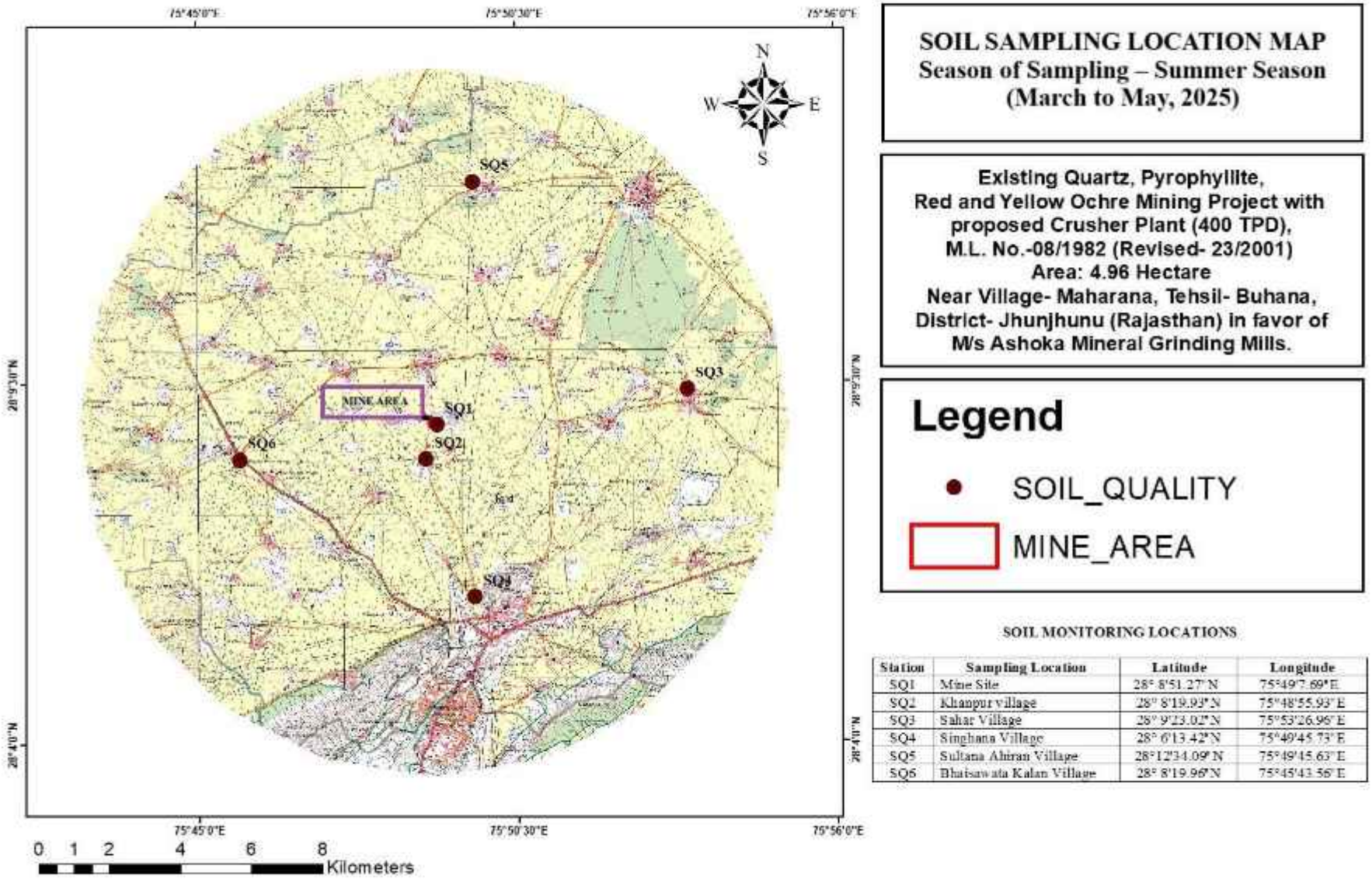
- To enable information on baseline characteristics.
- To determine the impact of mining activities on soil characteristics.

Soil samples were collected from various designated locations within the study area of the mine site. Standard operating procedures were adhered to for sampling and analyzing the physio-chemical parameters. The table below displays the locations of the soil sampling stations.

TABLE: 3.14
Soil Sampling Locations
Study Period – Summer Season, (March to May, 2025)

Station	Location	Distance from Mine site with direction	Latitude	Longitude
SQ1	Mine Site	--	28° 8'51.27"N	75°49'7.69"E
SQ2	Khanpur village	940 m, SSW	28° 8'19.93"N	75°48'55.93"E
SQ3	Sahar Village	7 km, ENE	28° 9'23.02"N	75°53'26.96"E
SQ4	Singhana Village	4.95 km, SSE	28° 6'13.42"N	75°49'45.73"E
SQ5	Sultana Ahiran Village	6.5 km, NNE	28°12'34.09"N	75°49'45.63"E
SQ6	Bhaisawata Kalan Village	5.3 km, WSW	28° 8'19.96"N	75°45'43.56"E

Source: Site Visit & SOI Toposheet



SOIL MONITORING LOCATIONS

Station	Sampling Location	Latitude	Longitude
SQ1	Mine Site	28° 8'51.27"N	75°49'7.69"E
SQ2	Khanpur village	28° 8'19.93"N	75°48'55.93"E
SQ3	Sahar Village	28° 9'23.02"N	75°53'26.96"E
SQ4	Singhana Village	28° 6'13.42"N	75°49'45.73"E
SQ5	Sultana Ahiran Village	28°12'34.09"N	75°49'45.63"E
SQ6	Bhaisawata Kalan Village	28° 8'19.96"N	75°45'43.56"E

Figure 3.8: KEYPLAN SHOWING SOIL SAMPLING LOCATION

TABLE: 3.15

Soil Quality Analysis Report

Study Period – Summer Season (March to May, 2025)

Sr. No.	Parameters	Units	Mine Site	Khanpur Village	Sahar Village	Singhana Village	Sultana Ahiran Village	Bhaisawata Kalan Village
1	pH (1:2 Suspension)	-	7.80	7.71	7.89	8.34	8.05	8.19
2	Electrical Conductivity	dS/m	0.295	0.310	0.324	0.364	0.395	0.214
3	Moisture Content	%	1.76	1.86	1.79	1.51	1.76	1.73
4	Bulk Density	gm/cc	1.3	1.29	1.36	1.34	1.54	1.39
5	Nitrogen (as N)	kg/ha	130.0	110.0	116.0	140.0	84.0	134.0
6	Phosphorus (as P)	kg/ha	61.0	56.0	50.0	51.0	59.0	62.0
7	Potassium (as K)	kg/ha	410.0	318.0	324.0	316.0	415.0	270.0
8	Organic Carbon	%	0.569	0.439	0.274	0.299	0.398	0.279
9	Colour	-	Brown	Brown	Brown	Brown	Brown	Brown
10	Sand	%	70.0	74.0	75.0	66.0	72.0	65.0
11	Silt	%	18.0	14.0	13.0	21.0	18.0	19.0
12	Clay	%	12.0	12.0	12.0	13.0	10.0	16.0

Source: Soil Quality Analysis Report

TABLE: 3.16

Standard Soil Classification

S.No.	Parameters	Classification
1.	pH	<4.5 extremely acidic 4.51 – 5.0 very strong acidic 5.01 – 5.5 strongly acidic 5.51-6.0 moderately acidic 6.1 – 6.5 slightly acidic 6.51-7.3 Neutral 7.31-7.8 slightly alkaline 7.81-8.5 moderately alkaline 8.51 – 9.0 strongly alkaline >9.0 Very strongly alkaline
2.	Salinity Electrical Conductivity (mS/cm)	Up to 1.0 average 1-2 harmful to germination 2-3 harmful to crops
3.	Nitrogen (kg/ha)	Up to 50 very less 51-100 less 110-150 good 151-300 better >300 sufficient
4.	Phosphorus (kg/ha)	Up to 15 very less 15 – 30 less 31-50 medium 51-65 on average sufficient 66-80 sufficient >80 more than sufficient
5.	Potassium (kg/ha)	0-120 very less 120-180 less 180-240 medium 241-300 average

		301-360 better >360 more than sufficient

3.5.5.2Interpretation & Conclusion

Interpretation of Results:

The soil samples collected from the identified locations show the following key findings:

1. pH Value: The pH of the soil ranges from 7.71 to 8.34, indicating that the soil is generally slightly alkaline to moderately alkaline in nature. This pH range suggests that the soil is suitable for most plant growth, although slightly alkaline conditions may affect the availability of certain nutrients for plants.
2. Organic Carbon: Organic carbon content in the soil varies from 0.274 to 0.569. These values are relatively moderate and indicate that the soil has a moderate level of organic matter. Higher organic carbon content supports better soil fertility, moisture retention, and microbial activity, while lower levels may suggest reduced soil fertility and potentially lower productivity in the long term.
3. Phosphorus: Phosphorus levels in the soil are relatively low, ranging from 50 mg/kg to 62 mg/kg. Phosphorus is an essential nutrient for plant growth, and these low levels may limit plant development, particularly in the early stages. The deficiency may require supplementation through fertilizers to ensure optimal plant growth and crop yields in the area.

Conclusion:

The soil analysis reveals that the study area generally has neutral to slightly alk slightly alkaline to moderately alkaline soil with moderate organic carbon content. The low levels of phosphorus and potassium suggest that nutrient supplementation may be necessary to support optimal plant growth. While sodium levels are within an acceptable range, the findings highlight areas where soil fertility management practices, such as the addition of phosphorus and potassium fertilizers, could improve soil quality and agricultural productivity.

3.5.6BIOLOGICAL ENVIRONMENT

3.5.6.1Introduction

An ecological study of the ecosystem is crucial for understanding the effects of industrialization and urbanization on the existing flora and fauna of the study area. Investigating various aspects of the ecosystem is vital for identifying sensitive issues and taking appropriate measures to mitigate any potential impacts.

The biological study was conducted as part of the EIA report to assess the current status of the ecosystem in the study area, compare it with historical conditions using available data, predict potential changes in the biological environment due to ongoing activities, and recommend measures to preserve its health.

A survey was carried out to examine the flora and fauna within a 10 km radius, with some information gathered from local inhabitants. All collected data were categorized to assess the impact of pollution on the region's flora and fauna. The survey covered both wild plants and cultivated crops, and all relevant information was documented.

3.5.6.2Flora & Fauna

A general floral survey was carried out in the study area. The plant species found in the area are mentioned below.

TABLE - 3.17

INVENTORY OF FLORAL DIVERSITY IN THE BUFFER ZONE OF MINE SITE

Scientific Name	Common Name	Life Form

Prosopis cineraria	Khejri	Tree
Acacia nilotica	Desi Babool	Tree
Acacia senegal	Khair	Tree
Azadirachta indica	Neem	Tree
Salvadora persica	Jal/Peelu	Tree
Balanites aegyptiaca	Hingot	Tree
Tecomella undulata	Rohida	Tree
Ziziphus mauritiana	Ber	Tree
Ziziphus nummularia	Bordi/Jharber	Shrub
Capparis decidua	Ker	Shrub
Salvadora oleoides	Mitha Jaal	Tree
Prosopis juliflora	Vilayati Babool (invasive)	Tree
Dalbergia sissoo	Shisham	Tree
Cordia dichotoma	Lasora	Tree
Wrightia tinctoria	Dudhi	Tree
Morinda pubescens	Noni/Indian mulberry	Tree
Ailanthus excelsa	Ardu	Tree
Cassia fistula	Amaltas	Tree
Ficus religiosa	Peepal	Tree
Ficus benghalensis	Banyan	Tree
Calotropis procera	Aak	Shrub
Leptadenia pyrotechnica	Khimp	Shrub
Calligonum polygonoides	Phog	Shrub
Cassia auriculata	Avaram	Shrub
Withania somnifera	Ashwagandha	Shrub
Abutilon indicum	Kanghi	Shrub
Indigofera cordifolia	Indigofera	Herb/Shrub
Cenchrus ciliaris	Buffel grass	Grass
Cenchrus biflorus	Indian sandbur	Grass
Cynodon dactylon	Doob	Grass
Lasiurus scindicus	Sewan	Grass
Aristida adscensionis	Wire grass	Grass

Source: Site Visit, inputs from locals and Perusal from Secondary Literature #Habit & Forest Division Working Plan

TABLE - 3.18
INVENTORY OF FAUNAL DIVERSITY IN THE BUFFER ZONE OF MINE SITE

MAMMALS		
Scientific Name	Common Name	Schedule
Canis aureus	Golden Jackal	I
Vulpes bengalensis	Indian Fox	I
Hyaena hyaena	Striped Hyena	I
Herpestes edwardsii	Common Mongoose	IV
Boselaphus tragocamelus	Nilgai	II
Gazella bennettii	Indian Gazelle/Chinkara	I
Axis axis	Chital (local, patchy)	II
Sus scrofa	Wild Boar	II
Lepus nigricollis	Indian Hare	II

Funambulus tristriatus	Jungle Palm Squirrel	II

BIRDS		
Scientific Name	Common Name	Schedule
Pavo cristatus	Indian Peafowl	I
Francolinus pondicerianus	Grey Francolin	II
Francolinus francolinus	Black Francolin	II
Acridotheres tristis	Common Myna	II
Coracias benghalensis	Indian Roller	II
Merops orientalis	Green Bee-eater	II
Hirundo rustica	Barn Swallow	II
Pycnonotus cafer	Red-vented Bulbul	II
Alaudala raytal	Sand Lark	II
Vanellus indicus	Red-wattled Lapwing	II
Accipiter badius	Shikra	I

REPTILES		
Scientific Name	Common Name	Schedule
Varanus bengalensis	Bengal Monitor	I
Naja naja	Indian Cobra	I
Calotes versicolor	Oriental Garden Lizard	IV

Source: Site Visit, inputs from locals and Perusal from Secondary Literature #Habit & Forest Division Working Plan

3.5.6.3Cropping Pattern of the Study Area

The agricultural activity mostly depends on the monsoon hence the cropping pattern has remained more or less unchanged over the years. Agriculture activity is spread over both kharif and rabi cultivation. Kharif cultivation is rainfed and rabi cultivation is mostly based on ground water. The main kharif crops grown in the area are Bajra, Guar, Cow Pea (Chola), Moong, Moth whereas as principal rabi crops are Wheat, Gram, Mustard etc.

(Source: https://cgwb.gov.in/sites/default/files/2022-10/junjhunu.pdf

TABLE: 3.19
Cropping Pattern of the Study Area

Crop	Name	Season
Rabi	Wheat, Gram, Mustard	September-April
Kharif	Bajra, Guar, Cow Pea (Chola), Moong, Moth	April-October

Source: Field Survey

3.5.7 SOCIO-ECONOMIC ENVIRONMENT

3.5.7.1 INTRODUCTION

An integral component of environmental studies is the socio-economic environment, which encompasses various factors related to the socio-economic conditions of the area, contributing to a comprehensive understanding of the overall environment.

The socio-economic study includes an analysis of the demographic structure, access to basic amenities such as housing, education, healthcare and medical services, occupation, water supply, sanitation, communication, transportation, disease patterns, and culturally significant features like temples and historical monuments at the

baseline level. This assessment helps in visualizing and predicting potential impacts based on the nature and scale of the project.

A socio-economic study provides valuable insights into the socio-economic conditions of the area and can highlight the potential improvements in the living and social standards of the local community as a result of the project. In areas near existing mining projects, gross economic production has seen significant growth.

3.5.7.2 OBJECTIVES OF THE STUDY

The objectives of this socio-economic report consist of:

- To conduct socio-economic assessment study in Study Area.
- To know the current socio-economic situation in the region to cover the sub sectors of education, health, sanitation, and water and food security.
- To recommend practical strategic interventions in the sector.
- To help in providing better living standards.
- To provide employment opportunities.

3.5.7.3 SCOPE OF WORK

- To study the Socio-economic Environment of area from the secondary sources
- Developing a questionnaire for SIA Survey
- Data Collection and Analysis
- Identification of impacts due to the mining projects
- Mitigation Measures.

3.5.7.4 METHODOLOGY

- Collection of Data

  Data for this project were collected via a combination of secondary source (i.e. Government department, maps, literature research etc.) and relevant documents.

- Presentation of Data & Analysis

  The data collected were presented in a suitable, concise form for further analysis. The collected data were presented in the form of tabular or diagrammatic or graphic form. These tabulated data were interpreted and analyzed with the help of various qualitative techniques and ideographic approaches.

3.5.7.5 BACKGROUND INFORMATION OF THE AREA

Rajasthan is India's largest state by area. It is located on the northern side of the country, where it comprises most of the wide and inhospitable Thar Desert (also known as the "Rajasthan Desert" and "Great Indian Desert") and shares a border with Pakistan along the Sutlej-Indus river valley. Elsewhere it is bordered by other Indian states: Gujarat to the southwest; Madhya Pradesh to the southeast; Uttar Pradesh and Haryana to the northeast; and Punjab to the north. Its features include the ruins of the Indus Valley Civilization at Kalibanga; the Dilwara Temples, a Jain pilgrimage site at Rajasthan's only hill station, Mount Abu, in the ancient Aravalli mountain range; and, in eastern Rajasthan, the Keoladeo National Park near Bharatpur, a World Heritage Site known for its bird life. Rajasthan is also home to five National Tiger Reserves, the Ranthambore National Park in Sawai-Madhopur, Sariska Tiger Reserve in Alwar, Mukunndara Hills tiger Reserve in Kota, Ramgarh Vishdhari Tiger Reserve in Bundi and Dholpur-Karauli Tiger Reserve in Dholpur.

TABLE: 3.20
Social Profile of the Area

Particulars	Rajasthan	Jhunjhunu	Study Area
Area (sq. km.)	3,42,239	5928	323.6085
No. of households	12,711,146	384197	15605
Population	68,548,437	2137045	82280
ST	9,238,534	1.95%	423
SC	12,221,593	16.88%	13039
Literacy Rate	66.11 %	74.13%	65.48
Sex Ratio	921	950	927.76

Source: Census of India, 2011

Detailed profile of the study area is given in table below:

TABLE – 3.21
Socio-Economic Profile of Study Area

S. No.	Name	No. Household	Total Population	Total Male	Total Female	Sex Ratio	Total SC	Total ST	Literacy Rate (%)	Male Literacy	Female Literacy	Total Workers	Main Workers	Marginal Workers	Non-Workers
0 - 3 KM															
1	Sanwlod	457	2416	1266	1150	908.37	397	0	66.8	1002	613	1047	634	413	1369
2	Puhanian	415	2226	1166	1060	909.09	340	11	66.57	913	569	1029	437	592	1197
3	Santriya	353	1741	906	835	921.63	186	0	62.44	750	479	788	761	27	1180
4	Khanpur	293	1445	738	707	957.99	185	0	65.5	589	358	766	123	643	679
5	Saga	415	2100	1087	1013	931.92	474	0	64.28	834	516	950	798	152	1150
6	Maharana	329	1742	929	813	875.13	249	0	69.11	753	451	734	386	348	1008
SUB-TOTAL		**2262**	**11670**	**6092**	**5578**	**917.35**	**1831**	**11**	**65.78**	**4841**	**2986**	**5314**	**3139**	**2175**	**6583**
3-7 KM															
7	Sultana Ahiran	484	2540	1324	1216	918.42	294	0	65.51	990	674	1037	853	184	1503
8	Salam ka Bas	103	530	267	263	985.01	78	0	71.13	217	160	302	120	182	228
9	Saidpur	185	1006	509	497	976.42	281	0	63.71	385	256	471	302	169	535
10	Shahpur	231	1173	616	557	904.22	244	0	70.3	484	341	462	456	6	711

11	Bishanpura	104	519	261	258	988.50	119	0	75.14	203	187	258	252	6	261
12	Chitausa	347	1771	927	844	910.46	442	21	67.41	697	497	916	444	472	855
13	Shyampura	68	339	163	176	1079.7	41	0	68.73	138	95	150	131	19	189
14	Mainana	436	2220	1144	1076	940.55	378	0	68.51	911	610	1115	734	381	1105
15	Palota	233	1146	609	537	881.77	231	0	71.11	504	311	521	454	67	625
16	Manpura	189	1013	527	486	922.20	289	67	61.79	391	235	484	475	9	529
17	Khalakhari	414	2091	1087	1004	923.64	374	0	65.37	835	532	1036	1001	35	1055
18	Siwni	80	382	208	174	836.53	8	0	63.87	163	81	208	204	4	174
19	Lambi	107	593	314	279	888.53	151	0	64.58	241	142	211	93	118	382
20	Hamirabas	171	932	477	455	953.87	90	0	57.93	338	202	255	235	20	677
21	Thali	347	1968	1002	966	964.07	178	2	62.44	750	479	788	761	27	1180
22	Tikupura	47	270	143	127	888.11	0	0	55.92	103	48	128	85	43	142
23	Bhodan	321	1895	1020	875	857.84	133	0	55.09	684	360	1086	908	178	809
24	Gujarwas	374	2149	1156	993	858.99	229	4	62.21	888	449	730	518	212	1419

25	Pithola	349	1854	925	929	1004.32	180	18	69.63	738	553	569	477	92	1285
26	Devpura	606	3212	1685	1527	906.23	481	78	61.55	1181	796	863	773	90	2349
27	Moi sadda	265	1421	734	687	935.96	192	1	71.57	571	446	536	414	122	885
28	Moi Bharu	284	1451	729	722	990.39	430	0	66.99	585	387	299	285	14	1152
29	Bhainsawata kalan	350	1881	946	935	988.37	228	11	70.87	748	585	661	422	239	1220
30	Bhainsawata	305	1566	795	771	969.81	241	0	66.92	628	420	532	411	121	1034
31	Jaimal ka bas	59	285	142	143	1007.0	0	2	63.16	111	69	107	23	84	178
32	Ladi ka bas	99	554	277	277	1000	0	0	64.44	205	152	249	215	34	305
33	Thothawal	95	501	274	227	828.46	78	0	69.26	214	133	258	154	104	243
SUB-TOTAL		**6653**	**35262**	**18261**	**17001**	**937.39**	**5390**	**204**	**65.74**	**13903**	**9200**	**14232**	**11200**	**3032**	**21030**
7-10 KM															
34	Muradpur	465	2307	1187	1120	943.56	486	0	65.15	937	566	1174	992	182	1133
35	Sahar	143	825	417	408	978.42	61	0	73.82	330	279	482	206	276	343

36	Ahir ki lambi	107	593	314	279	888.54	151	0	64.59	241	142	211	93	118	382
37	Bhopalpura	606	3212	1685	1527	906.23	481	78	61.55	1181	796	863	773	90	2349
38	Buhana	284	1451	729	722	990.40	430	0	66.99	585	387	299	285	14	1152
39	Jaisinghpura	364	1700	857	843	983.66	416	0	62.71	649	417	773	428	345	927
40	Amarsar	711	4070	2085	1985	952.04	530	0	60.79	1524	950	1545	874	671	2525
41	Sirsala	135	615	322	293	909.94	63	0	76.91	285	188	330	161	169	285
42	Amarpura khurd	386	2029	1080	949	878.70	158	57	64.61	817	494	756	630	126	1273
43	Barsari ka bas	515	2841	1476	1365	924.80	706	0	66.00	1135	740	1222	725	497	1619
44	Garakhera	465	2307	1187	1120	943.56	486	0	65.15	937	566	1174	992	182	1133
45	DhadhotKhurd	47	270	143	127	888.11	0	0	55.93	103	48	128	85	43	142
46	Dhadhot kalan	321	1895	1020	875	857.84	133	0	55.09	684	360	1086	908	178	809
47	raipur jatan	189	1013	527	486	922.20	289	67	61.80	391	235	484	475	9	529

48	Goth	374	2149	1156	993	859.00	229	4	62.21	888	449	730	518	212	1419
49	Kuthaniya	305	1566	795	771	969.81	241	0	66.92	628	420	532	411	121	1034
50	Makro	243	1179	608	571	939.14	124	0	65.65	468	306	256	216	40	923
51	Kharkhari	59	285	142	143	1007.04	0	2	63.16	111	69	107	23	84	178
52	Gothara	353	1741	906	835	921.63	186	0	63.76	700	410	833	279	554	908
53	Manota khurd	104	519	261	258	988.51	119	0	75.14	203	187	258	252	6	261
54	Singhana	185	1039	547	492	899.45	280	0	61.12	404	231	238	230	8	801
55	Ishkpura	329	1742	929	813	875.13	249	0	69.12	753	451	734	386	348	1008
Sub- Total		**6690**	**35348**	**18373**	**16975**	**928.53**	**5818**	**208**	**64.92**	**13954**	**8691**	**14215**	**9942**	**4273**	**21133**
TOTAL		**15605**	**82280**	**42726**	**39554**	**927.76**	**13039**	**423**	**65.48**	**32698**	**20877**	**33761**	**24281**	**9480**	**48746**

Source: Census of India, 2011

3.5.7.6 BASELINE DATA & ANALYSIS

The socio-economic study was carried out using questionnaires that covered various aspects such as Demography, Education, Medical & Health, Occupation, Agriculture & Cropping Patterns, Basic Amenities, and Religious Rituals. The primary study was conducted within a 10 km radius around the mining lease area. The study area (buffer zone) was categorized on the basis of the distance of the villages from mine site. Primary zone was identified from 0 to 3 km radius area, Secondary zone in 3-5 km, Tertiary zone 5-7 km and Outer zone in 7-10 km radius area from the mining lease area.

3.5.7.7 POPULATION DISTRIBUTION

55 villages have been surveyed. On the basis of secondary data, the total population of study area is 82280 and comprises of 15605 households.

3.5.7.7.1 Vulnerable Group

On the basis of secondary data, the total SC/ST population of study area is 13039 and 423.

3.5.7.8 LITERACY RATE

The study area within a 10 km radius has a literacy rate of 65.48% according to the 2011 Census. The total male literate in the study area is higher than the the female literacy rate, a crucial indicator of social change. This suggests a need for greater focus on sociological factors to promote further development in the region.

In this study, the literacy rate in the area is moderate, with variations in male and female literacy rates across different villages. However, the low female literacy rate is a particularly concerning issue.

3.5.7.9 ECONOMIC ACTIVITIES

Marginal workers are those who engaged in work for less than 180 days during the reference year. Non-workers encompass individuals involved in unpaid household tasks, students, retirees, dependents, beggars, vagrants, institutional inmates, and all others who do not fit into the above categories.

Total working population within the 10 km study area is 33761, where 24281 are main workers and 9480 of the total working population are marginal worker.

3.5.7.10 EDUCATIONAL FACILITIES

According to census 2011, educational facilities are good in the villages. In the 55 villages, 117 Primary Schools, 45 Secondary School, 10 Sr. Secondary School and 40 Anganwadi.

3.5.7.11 HEALTH FACILITIES

In the study area. There are 8 Primary Health Centres, 20 Primary sub-Health Centres, 11 Maternity Child Health Care Centres, 5 Dispensary, and 4 Family Welfare Centre in the study area.

3.5.7.12 WATER RESOURCES AND FACILITIES

According to the survey, most villages are supplied with functioning tap water and also have hand pumps for drinking water. Additionally, tube wells are found in the villages. As a result, villagers primarily access drinking water from hand pumps, open wells, and tap water. The landscape of the study area is undulating, causing groundwater to experience rapid runoff, which not only leads to soil erosion but also contributes to water scarcity for both agricultural and drinking needs.

3.5.7.13 OTHER AMENITIES:

- Transport Facilities

The study area is accessible by road, with most villages connected by bus and other transport services. The area has a moderate road network, consisting of a National Highway, major district roads, and other local roads.

- Post and Telegraphs

  The study area has a moderate level of postal services, with several post offices located within the region. Additionally, the area is covered by a reliable telephone and mobile network.

- Electrification in the area

  The villages in the study area are electrified, with electricity available for domestic, non-domestic, industrial, agricultural, and public lighting needs.

3.5.7.14 POTENTIAL IMPACTS OF THE PROJECT

Project potential impacts are summarized below and categorized either as positive/beneficial or negative/adverse impacts.

Positive impacts

- *Employment:*

  Employment will be created due to the mining in the area. Employment opportunities provided by project proponents shall provide a sustainable and improved living standard to the locals.

- *Community welfare activities:*

  The nearby local's benefits from the CSR activities to be carried out by project proponents in the study on fronts of Education, water Supply, Social welfare activities.

Adverse impacts

- Mining activities increase vehicle traffic, which can negatively affect the environment and the local surroundings. However, to reduce this impact, trees will be planted around the mine site.
- Risks of accidents are expected during loading of minerals into truck/tractors-trolley and during transportation. This can be avoided by adopting good safety measures and practices.

CHAPTER- 4
ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1 INTRODUCTION

This chapter aims to identify and assess the potential environmental impacts that may arise from the proposed project or activity. It highlights the anticipated effects on various environmental components, such as air, water, land, biodiversity, and human health. Understanding these impacts is crucial for ensuring that the project aligns with sustainable development goals and adheres to environmental regulations. In addition to identifying negative consequences, the chapter will outline feasible mitigation measures that can reduce or eliminate adverse effects, as well as strategies for enhancing beneficial outcomes. By addressing these issues proactively, this chapter seeks to minimize harm to the environment, promote ecological balance, and ensure that the project contributes positively to both the local and global ecosystem.

4.2 METHODOLOGY OF IMPACT ASSESSMENT

Impact assessment methodology typically involves the following key steps:

Screening: Determine the need for an assessment based on the scope of the project and its potential to cause significant impacts.

Scoping: Identify key issues and define the boundaries of the assessment, focusing on areas likely to experience the most significant impacts.

Data Collection: Gather relevant data through surveys, interviews, research, and analysis to understand the baseline conditions and potential impacts.

Impact Analysis: Assess the nature, magnitude, and significance of the identified impacts (both positive and negative), considering factors like duration, scale, and likelihood.

Mitigation & Enhancement: Propose measures to avoid, reduce, or offset negative impacts and enhance positive ones.

Monitoring & Evaluation: Establish mechanisms to monitor the effectiveness of mitigation measures and the actual impacts over time.

4.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF ENVIRONMENT COMPONENTS

Determining the irreversible and irretrievable commitment of the resources is one of the major stages of impact evaluation, which gives an understanding about the potential impacts that are likely to affect future generations of the area and facilitates for adoption of proper mitigation measure regarding the same.

Irreversible commitments of components: refers to the permanent or long-term changes to environmental elements that cannot be undone or easily restored. Once an environmental component, such as a habitat, species, or ecosystem, is significantly altered, damaged, or destroyed, it may not recover to its original state within a reasonable time frame, if at all. These irreversible changes typically result from large-scale, destructive activities like deforestation, land degradation, loss of biodiversity, or pollution that has long-lasting effects.

Irretrievable commitment of environmental components refers to the use or alteration of natural resources or environmental features in a way that prevents their future use or regeneration, but unlike irreversible changes, these impacts may be recoverable over time with effort or intervention. While the

environmental components may not be permanently lost, they may be permanently or temporarily unavailable for their original or future uses.

Irreversible commitment of environmental components for the proposed mining project will include Land use, topography, geology, soil, human settlement, agriculture for mine lease area. There will be no irretrievable commitment of environmental components for the said project.

4.4 ENVIRONMENTAL IMPACT ASSESSMENT & MITIGATION MEASURES

Mining activities result in environmental challenges such as land degradation, deterioration of air, water, and soil quality, and negative impacts on the biological and socio-economic conditions of the area. The effects of mining on various environmental parameters have been evaluated and are presented below:

4.4.1 IMPACT ON AIR QUALITY & MITIGATION MEASURES

The mining project involves several operations, including the development of benches, construction of approach roads, excavation, and transportation of minerals. These activities typically generate dust, which can pose health risks. However, appropriate control measures, such as water sprinkling on haul roads, will be implemented at each stage of the operation to minimize fugitive dust emissions.

4.4.1.1 AIR POLLUTION DUE TO MINING

In opencast semi-mechanized mining, activities such as excavation, handling, storage and transportation of mineral in the mining activities are prone to generation of high levels of fugitive dust depending upon the size of mine, production capacity and nature of mineral that may increase the levels of PM10 and PM2.5. The probable sources of pollution due to mining activities are shown below:

TABLE 4-1
SOURCES OF AIR POLLUTION

Sr. No.	Source	Type of Pollutant
1.	Mining activity (Excavation)	PM 10 and PM2.5
2.	Operation of diesel driven equipment	Gaseous Emissions
3.	Transportation of product	PM 10 and PM2.5

4.4.1.2 AIR QUALITY MODELING

Impact Prediction is an important part of Environmental Impact Assessment Study. There are various techniques available to predict the impacts. Mathematical modelling is an established and accepted technique for the same. The ambient air quality impact prediction modelling has been carried out for total excavation of 8,00,120 TPA production capacity.

4.4.1.2.1 INTRODUCTION – AIR QUALITY MODELING FRAMEWORK

Source identified for Dispersion of pollutants and Ground Level Concentration of pollutants depends upon the following factors:

- Emission sources from loading and unloading of mineral
- Meteorological conditions.

Mining activity like excavation, drilling, blasting, loading and transportation are main pollution parameters being released in air will be PM10 and PM2.5.

AERMOD Cloud[TM] air dispersion model has been used to calculate the Ground Level Concentration (GLC) which can simultaneously simulate many sources with different shapes, at ground or elevated, buoyant or non-buoyant, emitting one or more pollutants and is capable to account for the non-homogeneous vertical structure of the boundary layer.

AERMOD Cloud uses World Geodetic System (WGS84) as its reference coordinate system and UTM (Universal Transverse Mercator) as projection. Vertical mixing is limited in case of stable conditions. The dispersion for unstable conditions is non-Gaussian, so as to correctly describe the high concentrations of pollutants that can be observed close to stacks under convective conditions.

Table 4.2
Details of model setup

Parameter	Details
Modular Name	AERMOD Envitrans
Model name	AERMOD Cloud 24
Version	Version 24.0.0.71
Integrated GUI	AERMOD, AERMET, AERMAP & BPIPPRM
Model type	Steady state plume model
Averaging time	24 Hour
Source type	Area source, line source and point source
Boundary limits	10 km
Surface meteorological data	Site specific data processed by AERMET

4.4.1.2.2 MODEL ASSUMPTIONS/DATA USED FOR COMPUTATIONS

- Steady State Condition - Ideal gas, continuous uniform emission rate, homogenous horizontal wind field, representative wind velocity, no directional wind shear in the vertical, infinite plume, no plume history and normal distribution of eddy turbulences.
- Pollutants Characteristics - The pollutant emitted are stable gases or aerosol which remains suspended in the air and particulates in the turbulent movement of the atmosphere and none of the material is removed as the plume advances and diffuses downwind and there is complete reflection at the ground.
- Gaussian distribution - The pollutant material within the plume takes on a Gaussian distribution in both the horizontal cross wind and vertical directions described by empirical dispersion parameters σy, and σz.
- It has been assumed that the pollutant does not undergo any physic chemical transformations.
- Gravitational settling of pollutants has not been considered.
- Reflection factor from any surface has not been considered.
- Control measures applied during calculation are described in Table.
- Emission during the mining activity and transportation.
- Reference point has been taken as project site.
- In NAAQS (2009) the PM10 concentration standard is given at 24-hour averaging time, so the model was used to predict 24-hour worst case incremental concentration.
- Reference of calculation of emission factors is AP-42 by USEPA and as per CPCB norms for mining and transportation.

- Only surface air data has been considered for the running the model for upper air, upper air estimator has been used.

Metrological Data

Meteorological inputs are Temperature, Relative Humidity, Wind Speed and Wind Direction etc. which was recorded at site during Post Monsoon Season, 2023. Windrose diagram is given in Chapter 3,

4.4.1.2.3 MODELING SCENARIO

The modeling for PM10 and PM2.5 due to mining and transportation was performed under two major scenarios:

A. Worst Case Scenario – No control measure is implemented. The modeling for loading/unloading, crushing, blasting, transportation was performed using worst case emission rates to predict maximum incremental GLC of pollutants.

B. Controlled Scenario – The dust generation due to drilling will be minimized by wet drilling and dust due to blasting will be minimized by water sprinkling. Planning transportation routes of Mineral to reach the nearest paved roads by shortest route (minimize transportation over unpaved road). Alternatively, graveled road may be constructed between mine lease area and nearest paved road connectivity. The speed of trucks plying on the haul roads will be limited to avoid generation of dust and covering of material during transportation on trucks to prevent dolomite leak from the trucks. The trucks will be covered by tarpaulin. Overloading will be avoided.

4.4.1.2.4 IDENTIFICATION OF SOURCES:

The emission rates for the different sources in the mining area were calculated primarily based on emission factor equation given in latest USEPA's AP-42 guidelines. Further the emission estimation equations given in "TSP Emission Factors for different mining activities for Air Quality Impact Prediction as collated from different Sources" by S P Banerjee (CMRI) were also considered since these are based on the study conducted in India for the estimation of emission rate of respirable suspended particulate matter from various open cast mining activities. In addition, as the proposed mine development will be undertaken in environmentally friendly manner as per the stipulated guidelines, activity specific control factors are considered in calculation of the emission rates.

EMISSION FROM THE MINING

Sr. No	Activity	Category of Source	Emission Rate		Emission Load
			Values	Unit	Kg/day
1	Drilling	Point	0.28471	g/s	14.35
2	Overburden loading	Point	0.37402	g/s	18.85
3	Mineral Loading	Point	1.56791	g/s	79.02
4	Haul Road @0.5 km (500 m)	Line	0.02379	g/s/m	599.51
			-	-	-
5	Overburden Unloading	Point	0.065428	g/s	3.3
6	Mineral Unloading	Point	0.2010664	g/s	10.13
7	Exposed overburden Dump	Area	-	$g/s/m^2$	-
8.	Stock yard area	Area	nil	$g/s/m^2$	-
9.	Exposed Pit face	Area	0.0000365	$g/s/m^2$	30.3139
			-	g/s	-
Total SPM Load (kg/day)					755.48
SPM Emission (g/s)					34.98
SPM Emission Rate ($g/s/m^2$)					0.001593259
Uncontrolled					
PM_{10} Emission Rate @50 % of SPM					0.000796629
$PM_{2.5}$ Emission Rate @ 40% of PM_{10}					0.000318652
Controlled					
PM_{10} Emission Rate @80 % efficient mitigations measures – 20% of PM10					0.000159326
$PM_{2.5}$ Emission Rate @80 % efficient mitigations measures – 20% of PM2.5					0.0000637

4.4.1.2.5 CONCLUSION

From the results of AERMOD Cloud™, it is concluded that the maximum cumulative concentrations of PM10 and PM2.5 both due to mining activities and transportation are within prescribed standards for PM10 and PM2.5. However, in case of mining activities the maximum incremental concentration was predicted inside the mining lease area only. Beyond mine lease boundary the concentration of PM10 and PM2.5 due to mining activities are expected to be lower due to settlement of PM10 and PM2.5 particles over short distances.

The concentrations of SOx and NOx generated from mining area are expected to be low due to absence of any major source.

It should be noted that the predicted concentrations are due to this particular mine only.

The overall impact on air quality due to proposed mining project is expected within controlled within the mining lease area and in proximity of haul roads.

4.4.1.2.6 MITIGATION MEASURES

- Whenever Drilling is required, Wet-drilling with de-dusting arrangement will be deployed to prevent generation of dust.
- Controlled Blasting will be adopted.
- Overloading of the vehicles will be avoided & covered transportation will be carried out.
- Water sprinkling will be done to suppress the dust emission.
- PPE kit will be provided to workers.
- Regular maintenance of HEMMs & transportation vehicles will be done.
- Development of Greenbelt in 7.5 m wide safety zone and unworked area.
- The haul roads shall be paved wherever feasible.
- Dust mask shall be provided to the workers engaged at dust generation points like excavations and loading points.
- Vehicular emissions are being controlled through regular and proper preventive maintenance schedules. Emissions tests are also being done with diesel smoke meter to ensure emission values.
- The speed of trucks plying on the haul road should be limited to avoid generation of dust.
- The exhaust emissions from internal combustion engines of mining machinery shall be kept within the prescribed limits by strict adherence to the regime of regular maintenance and overhaul of mining fleet machineries and vehicles.
- Transportation of material shall be carried out during day time only.

4.4.2 IMPACTS OF NOISE/VIBRATIONS AND MITIGATION MEASURES

4.4.2.1 NOISE GENERATION

The following sources of noise are expected to increase the noise levels in the mining zone as well as in the surrounding areas:

- Drilling;
- Blasting;
- Operation of HEMM
- Vehicular Movement

4.4.2.1.1 ANALYSIS OF IMPACT OF NOISE

High noise levels will be limited to the work zone areas. It is observed that noise dissipates quickly as distance increases. In the study area, noise levels range from 49.9 to 58.6 Leq dB(A) during the day and from 39.2 to 44.3 Leq dB(A) at night. it can be concluded that the noise levels in the study area are within the prescribed limits set by the Noise Pollution (Regulation and Control) Rules, 2000. However, it is anticipated that the proposed project could increase the noise concentration in the surrounding areas compared to the current baseline levels. To mitigate the expected impacts, appropriate measures will be implemented to reduce noise effects.

4.4.2.1.2 MITIGATION MEASURES

- Drilling shall be carried out with the help of sharp drill bits which will help in reducing noise;
- Proper maintenance, oiling and greasing of machines at regular intervals shall be done to reduce generation of noise;
- Proper designing of machinery by providing inbuilt mechanism like silencers, mufflers and enclosures for noise generating parts and shock absorbing pads at the foundation of vibrating equipment.
- Green Belt/Plantation shall be developed around the mining activity area and along haul roads. The plantation minimizes propagation of noise;
- Personal Protective Equipment (PPE) like ear muffs/ear plugs shall be provided to the operators of HEMM and persons working near HEMM and their use shall be ensured though training and awareness;
- Proper shift arrangements shall be practiced to reduce the exposure time of workers to the higher noise levels; and
- Periodical monitoring of noise shall be performed.

4.4.2.2 IMPACT DUE TO GROUND VIBRATION

Ground vibration, fly rock, noise, dust, and fumes are the harmful environmental impacts of blasting operations. The explosive energy generates a seismic wave in the ground, which can cause considerable damage to structures and disrupt human occupants.

When an explosive charge is fired inside the blast hole, it is converted into hot gases, which exert intense pressure on the blast hole walls. High intensity shock waves propagate radially in all directions and cause the rock particles to oscillate. This oscillation is felt as ground vibration.

The oscillation of rock particles is called Particle Velocity and its value is called Peak Particle velocity (PPV), which is measured in millimeters per second. The standards for safe limit of PPV are established

by Director General of Mines Safety for safe level criteria through Circular No. 7 dated 29/8/1997. The safe level criteria PPV as mentioned in Circular No. 7 of DGMS is presented below:

Table 4.3
Permissible Peak Particle Velocity (mm/s)

S. No.	Type of Structure	Dominate excitation Frequency		
		<8 Hz	8-25 Hz	>25 Hz
A	Buildings/structures not belonging to the owner			
1	Domestic houses/structures [Kuchcha brick and Cement]	5	10	15
2	Industrial Buildings [RCC and framed structures]	10	20	25
3	Objects of historical importance and sensitive structure	2	5	10
B	Building belonging to the owner with limited life span			
1	Domestic houses/structures [Kuchcha brick and Cement]	10	15	25
2	Industrial Buildings [RCC and framed structures]	15	25	50

4.4.2.2.1 MITIGATION MEASURES

- Small explosive charges will be used to limit the intensity of the blast.
- Blasting will be carried out in a controlled manner, where the explosive charges are placed in a way that minimizes the shock wave.
- Blasting will be done within the standards prescribed by DGMS for controlled blasting.
- Explosives charge per hole and per delay will be optimized and maintained as per DGMS guidelines.
- Proper sequencing of blast timing will be ensured so that the energy is distributed more effectively, reducing peak vibrations at sensitive locations.

4.4.3 IMPACT ON WATER ENVIRONMENT & MITIGATION MEASURES

4.4.3.1 IMPACT ON SURFACE WATER AND ITS MITIGATION MEASURES

There are following water bodies in the study area which are seasonal in nature.

- No waste water will be discharged outside the project Area.
- Construction of garland drain to channelized the surface runoff.
- Development of Rain water harvesting ponds.
- The rain water collected in mining pit will be used for plantation, dust suppression requirements.
- Domestic wastewater generated from the mine office will be treated using a septic tank, followed by upflow filtration, disinfected, and then repurposed for gardening and plantation.
- The working pit will not intersect ground water.

4.4.3.2 IMPACT ON GROUND WATER AND ITS MITIGATION MEASURES

The water table is at 60-70m, while working is proposed upto 20 m. Hence, mining activity will not intersect the ground water table.

Besides, there are no toxic elements in the mined-out material, which may contaminate ground/ surface water. There will not be any impact on groundwater resources of buffer zone due to proposed mining activity which will remain confined to a very small area and above water table.

Adequate control measures will be adopted to check not only the wash-offs from soil erosion. The following measures will be adopted:

- Domestic waste water generated from mine will be disposed off in septic tanks along with up flow filtration followed by disinfection.
- Periodical monitoring of Ground water level & quality will be carried out regularly.

4.4.4 IMPACT ON SOIL AND LAND USE PATTERN & MITIGATION MEASURES

MITIGATION MEASURES FOR SOIL EROSION

- Garland drains will be constructed around the mine and dumps to prevent surface flow.
- During mining top soil will be generate & which will be simultaneously used for plantation purpose
- Retaining walls having water holes shall be provided along the toe of the dumps to avoid the soil wash out.
- Greenbelt/Plantation will be developed.

LANDSCAPE AND LAND USE PATTERN

The land use of the lease area will alter from Government land to mining area including pits, temporary dumps, greenbelt, water reservoir etc.

At the end of mine, 3.60 hectare area will be converted into water reservoir and 1.35 ha. area will be covered by plantation.

Table 4.4
Land Use Pattern

S. No.	Land use Category	Pre - operational	Operational	Post-operational
1	Excavation (Voids Only)	0.45	3.30	3.60
2	Topsoil stack	--	--	--
3	Dump of overburden	--	0.01	--
4	Mineral/Sub-grade stack	--	--	--
5	Infrastructure, Site services	--	0.01	--
6	Road/approach road	0.02	0.02	0.01
7	Greenbelt	0.01*	0.20	1.35
8	Reclamation	--	--	--
9	Other Plant	--	0.10	--
10	Undisturbed Area	4.39	1.32	--
Total		4.96	4.96	4.96

4.4.5 SOCIO - ECONOMIC ENVIRONMENT

POSITIVE IMPACTS

- Employment

  Direct and indirect employment opportunities will be generated during mining operation and other allied activities. Employment generated by mines management will provide a safe working environment for workers. Preference for employment will be given to locals.

- No rehabilitation

  The villages and their inhabitants in the buffer zone will not be disturbed from their settlements due to the mining operations. There is no inhabitation within the lease area. Therefore, neither villages nor any part of village or any hamlet will be disturbed during the entire life of the mine.

- Improved Standard of Living

  Employment opportunities created by the project and skill development activities carried out under CER, will increase income of local community and therefore improve the overall standard of living in the area.

- Improved Aesthetics

  Re-creational activities such creation of water reservoir, plantation of medicinal plant, fruit bearing plan, re-grassing of area will enhance the aesthetics of the area.

ADVERSE IMPACT

- Productivity of crops will be deteriorated affecting the agriculture-based livelihood due to the pollution arising out of the mines, if proper mitigation measures are not implemented.
- Respiratory problems due to dust and fugitive emission.
- Risk of accidents are expected.
- The impact of noise and vibration could have effects on the population living around the area.

MITIGATION MEASURES

The PM_{10}, $PM_{2.5}$ and SO_2, NO_x has been observed to be below the prescribed limit. Noise levels have also been found to be below the permissible limits. Further the noise generated in the lease area will get attenuated due to plantation and green belt all around the lease area.

All employees will undergo a medical examination during their induction. Additionally, they will be re-examined at regular intervals. The project authority will organize periodic health checkup camps and blood donation drives for villagers, contract laborers, employees, and their families.

In addition to regular health checkups, special focus will be placed on preventing specific diseases caused by the emission of various pollutants, including respiratory issues, skin conditions, waterborne diseases, hearing impairments, and more.

The quality of ground water is potable per drinking water standards IS: 10500-2012. Such water analysis will be carried out at periodical intervals.

Plantation will be done to curb the air pollution in the area.

The villages and their inhabitants in the buffer zone will not be disturbed from their settlements due to the mining operations.

Moreover, Office Memorandum dated 29.10.2014 issued by MoEF&CC regarding the mitigation measures to avoid adverse impact of mining operations on Habitation and villages around the lease area, will be followed and complied with.

4.4.6 IMPACT ON LOCAL TRANSPORT INFRASTRUCTURE

Transportation of mineral from pit face to the destination will be done by trucks/tripper on hire basis.

Present Road network is enough to bear the load for this project therefore no adverse impact on local transport infrastructure.

However, the following measures are adopted:

- All transportation vehicles have PUC certificate.
- Mineral transportation through vehicles will not be overloaded.
- Dust suppression will be done properly by regular sprinkling of water on haul roads.
- Proper maintenance of transportation vehicles helps will reduce fugitive emissions.
- Same practice will continue in future.

DETAILS OF TRANSPORTATION [of Mined Out Materials as Per the Indian Road Congress for Both the Ways (Loaded as Well As Unloaded Trucks) And Its Impact on Environment.]

Traffic analysis is carried out by understanding the existing carrying capacity of the roads near to the project site and the connecting main roads in the area. The major road near mine site is NH11. Depending on the capacity of the mine, the number of dumpers/trucks that will be added to the present scenario will be compared to the carrying capacity. Traffic impact study can be used to help evaluate whether the development is appropriate for a site and what type of transportation improvements may be necessary. It will help: -

To establish the existing trips/ day without the project activity;

To understand the increment on the traffic load due to the project activity;

To know whether existing road will sustain or not after the commission of the project.

TABLE 4.5
LEVEL OF SERVICE (LOS)

V/C	LOS	Performance
0.0 - 0.2	A	Excellent
0.2 - 0.4	B	Very Good
0.4 - 0.6	C	Good / Average / Fair
0.6 - 0.8	D	Poor
0.8 – 0.9	E	Very Poor
1.0	F	Worst

Capacity standards are fixed normally in relation to the Level of Service (LOS) adopted for design. Five levels of service are recognized commonly designated from A to F. Considering the need for smooth traffic flow; it is recommended that normally LOS-C be adopted for design of urban roads. Capacity or Design Service volume is the maximum hourly volume at which vehicle can reasonably be expected to transfer a point or uniform section of a lane or road way during a given time period. As per IRC 64: 1990 guidelines, ratio of existing volume of PCU on roads (V) and its capacity (C) with corresponding level of services (LOS) and their performance is given.

Factors for conversion of different type of vehicle into equivalent passenger car unit (PCU) based on their relative interference value as per Indian Road Congress Guidelines i.e. IRC 64: 1990 & IRC 106: 1990 is given below in.

Table 4.6

Recommended PCU Factors for Various Types of Vehicles on Road

Vehicle Type	Rural Road
	Equivalency factor for PCU
Fast Vehicles	
Motor Scooter (Two wheelers)	0.50
Passenger Car, Pickup Van, Auto Rickshaw	1.00
Agricultural Tractor, Light Commercial Vehicle	1.50
Bus or Trucks	3.00
Truck Trailer, Agricultural Tractor – Trailer	4.50

(Source: - IRC 64-1990 & IRC 106-1990)

PRESENTATION OF RESULTS

The present level of traffic has been converted to Passenger Car Units (PCU) at all the locations as per the conversion factors stipulated by Indian Road Congress (IRC). The traffic volume at each location is summarized below in Table.

Table 4.7

TRAFFIC VOLUME COUNT ON NH-11

Traffic Vehicle category	PCU Factor	No. of vehicle/day	No. of PCU/day
2 Wheelers	0.5	750	375
Mini Bus	1.5	83	124.
Car	1.0	482	482
Tempo/LCV	1.5	150	225
Truck	3.0	480	1440
Bus	3.0	163	489
Total		2108	3135.5
PCU/hr=(PCU/day)/24			3136/24=130.66 PCU/hr

Table 4.8

IMPACT DURING MINE OPERATION

Estimated Production capacity of the Mine	8,00,120 TPA
Estimated Total Production per day	2667.06 ton
No. of working days	300
Truck Capacity	20 ton
No. of Trucks deployed per day	133.35 says 134*2=268
PCU/Day	804
PCU/hr	33.5 says 34
Working Hours per day	24
Design Service Volume for Two Lane Roads as per IRC:64:1990	15000 PCU/Day 625 PCU/hr

TABLE 4.9

INCREMENTAL RISES AT NH-11

Design Service Volume PCU/day	Existing Daily Traffic Data		Envisaged Traffic due to mining		Cumulative Movement at Post Project Scenario		Design service volume (C)	Incremental rise in PCU due to envisaged traffic movement owing to mining activity (V)	V/C RATIO	LOS in post project scenario
15000	PCU/day	PCU/**hr**	PCU/day	PCU/**hr**	PCU/day	PCU/**hr**				
	3136	130.66	804	34	3940	164.66	625	164.66	0.3	B

CONCLUSION

The LOS value for the NH-11 will be "Very Good" after post mining. So the additional load on the carrying capacity of the concerned roads is not likely to have any significant adverse effect.

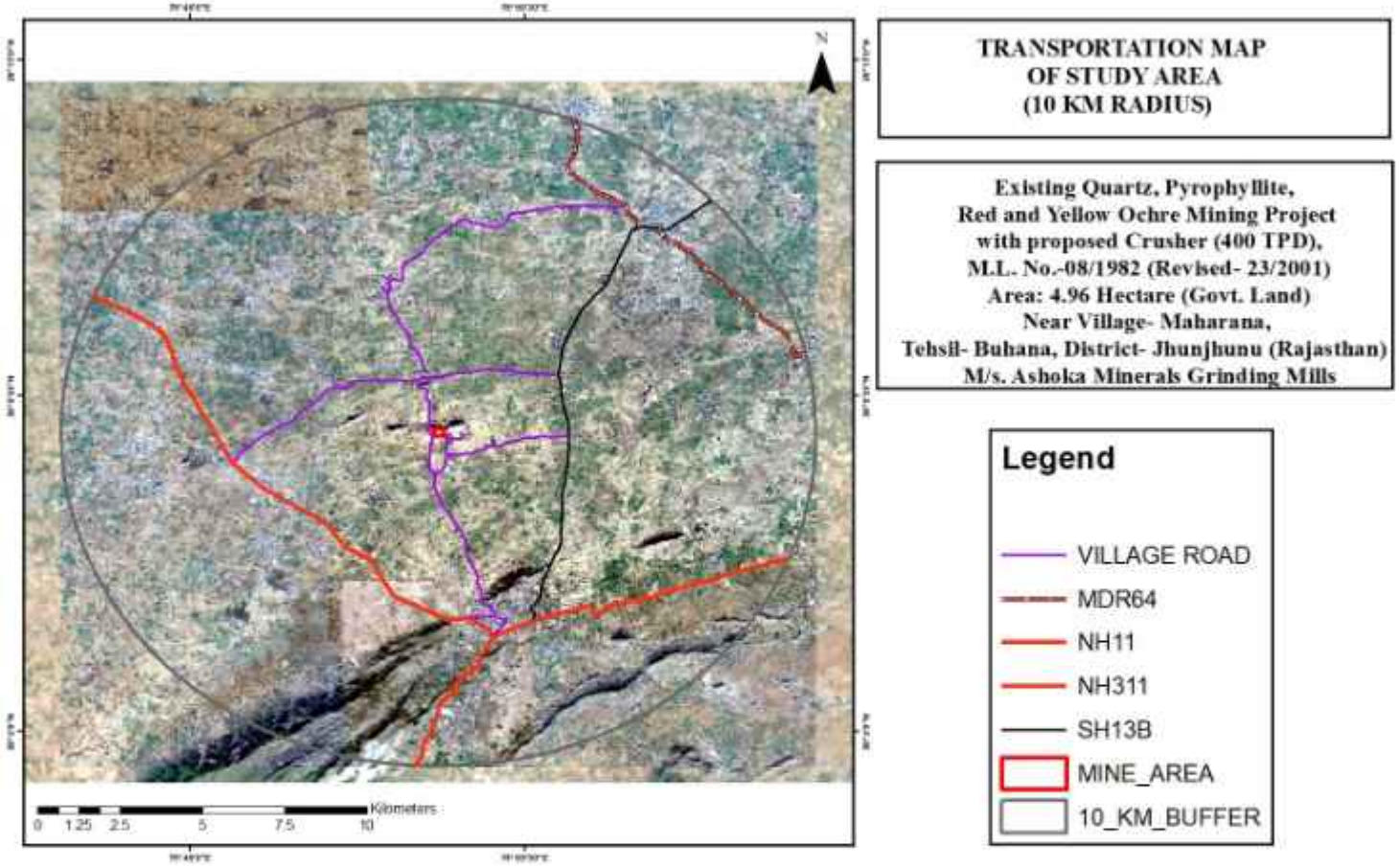


Figure 4.1: TRANSPORTATION MAP

4.4.7 IMPACT ON BIOLOGICAL ENVIRONMENT

Impact on Flora

No tree/plants will be cut down hence, no adverse impact on flora. However, Plantation will be developed in the proposed mining lease area as per plantation programme. These activities will help to improve the floral cover of the area. The greenery and plantation development will eventually attract micro fauna, birds etc. in the area.

Assistance will be taken from local forest department in selection of species of plants so that green coverage may improve fast. The varieties would include those plants, which are suitable to the area.

Impact on Fauna

DCF Certificate was issued by DCF, Jhunjhunu vide letter no. 8986 dated: 18.10.2003 and Application regarding distance from mine to NP/WLS has been forwarded from Mining Engineer, Jhunjhunu to DCF, Jhunjhunu vide letter no. ME/Jhunjhunu/Ma.Chi/ML 8/82/2024/2473 dated 03.12.2024. Proper Environment mitigation measures will be adopted; therefore, mining will not cause any adverse impact on existing wildlife.

MITIGATION MEASURES FOR IMPACT ON FLORA & FAUNA

- Measures will be taken to curb pollution due to air, water, land & noise environment. As mentioned above in this chapter.
- Green belt development will help in creating habitats for local faunal species and to create better environment for various fauna.

Table 4.10
Green Belt Development

Year	7.5 mtr. Safety barrier of the lease area & Unworked Area		Outside the lease area		Total	
	Area (Ha.)	No. of Trees	Area (Ha.)	No. of Trees	Area (Ha.)	No. of Trees
Existing	0.10	10	--	--	--	--
Plantation destroyed by local habitants during the long-closed period						
1st	0.20	200	0.287	287	0.487	487
2nd	--	--	--	--	--	--
3rd	--	--	--	--	--	--
Maintenance & Replacement of plants						
6th	1.15	1150	--	--	1.15	1150
End of life of mine	Maintenance & Replacement of plants					
Total	1.35	1350	0.287	287	1.637	1637

Note:-

- Total 1637 saplings will be planted over an area of 1.637-hectare area out of which 1.35 ha will be planted in 7.5 m safety barrier zone of the mine lease area and unworked area and remaining 0.287 ha will be planted outside the lease area, which will be 33% of total mining lease area. *Native species which are more suitable to the local environment are preferred to be planted. Details are given in Chapter 2.*

- *As per O.M. dated 16.01.2020 "The Mining Lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc."*

4.4.8 OCCUPATIONAL HEALTH AND SAFETY

Occupational health and safety (OHS) is a cross-disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment. The goal of all occupational health and safety programs is to foster a safe work environment.

Occupational Health Hazards at mine site:

Excessive dust, noise and vibration are the chief health hazards for the miners. Some examples of such hazards are:

- Exposure to dust and
- Noise exposure;
- Vehicular movements and accidents
- Physical Hazards.

A. Exposure to Dust

Exposure to fine particulates is associated with work in most of the dust-generating activities notably from excavation, mineral handling, and transportation.

Workers with long term exposure to fine particulate dust are at risk of pneumoconiosis, emphysema, bronchitis, and fibrosis.

Methods to prevent and control exposure to dust include the following:

- Control of dust through water spraying,
- Maintenance of machineries.
- Use of PPE, as appropriate (e.g. masks and respirators) to address residual exposures.

B. Noise and Vibration Exposure

Some noise will be generated due to hydraulic excavator which will be deployed for removal of overburden and movement of tippers/truck on hire basis. Control of noise emissions includes the use of silencers, noise barriers, and personal hearing protection (ear plugs/muffs).

C. Physical hazards

Injuries during mine operation are typically related to slips and falls; contact with falling / moving objects; and lifting / over-exertion. Other injuries may occur due to contact with, or capture in, moving machinery (e.g. dump trucks, front loaders).

Other Anticipated Occupational & Safety Hazards

- Heat Stress and Heat Stroke
- Dehydration
- Cardiac Disease
- Dust Exposure

- Deafness

All safety measures will be taken such as:

- The concentration of respirable dust in the workplace will be regularly monitored, as required by DGMS regulations.
- Health check-ups for workers are being/will be conducted at regular intervals.
- The mine management are/will provide necessary medical facilities for the workers.
- The management will also collaborate with regulatory authorities, the general public, and local administration to evaluate the mine's environmental performance.
- The mine management is committed to conducting operations that safeguard the environment while ensuring the health and safety of employees, customers, and the community. In line with this commitment, they will continuously work to improve and address any environmental or safety concerns.

A. Pre Placement and Periodical Health Status

Pre /post-employment checkup will be carried out and following tests will be conducted.

Periodical medical checkup of employed persons will be got done ones in a year.

B. Personal Protective Devices and Measures

- Face Mask for prevention of dust
- Ear Muff
- Safety Helmets
- Welder equipment for eye and face protection
- Leather Hand Gloves
- Asbestos Hand Gloves
- Safety Shoes

Implementation of Occupational Health and Safety Measures

Occupational Health & Safety measures result will be improving the conditions under which workers are employed and work. It improves not only their physical efficiency, but also provides protection to their life and limb. The proposed mining in the area will be done systematically as per provisions of Mines Act, 1952, Mines Rules, 1955, MMR, 1961 and MCDR, 1988 which will take care of all health & safety aspects of employees and also the neighboring community. Management will consider the following safety measures.

- To depute dedicated qualified supervisors,
- Inspection and maintenance of equipments and accessories,
- Pre placement and periodic health check up,
- Removal of unsafe conditions and prevention of unsafe acts,
- Detailed analysis of each and every incident, if any,
- To provide standard PPEs and ensure their use,
- Medical facilities & first aid boxes will be provided in the mine premises,

- Pits, Sumps etc. which may be a source of danger will be securely fenced in such a way that it ceases to be a source of danger.

Besides, following points will also be taken care of during mine operation for assuring safety of workers:

- Health Awareness Programmes and camps will be organized
- The mine workers will be provided all necessary PPEs, especially dust masks for their safe guard from dust, Ear Plugs/Ear Muffs for noise, helmets, safety belts, boots etc. and measures for other hazards. The employees when inducted will be thoroughly examined medically. After initial medical examination, the employees will continue to be examined periodically. The examination includes apart from the general observation, the Chest X-ray, Lung Function Test, Spirometry, Audiometry and the medical records of the employees will be maintained and submitted to the concerned authorities.

The Occupational Health Surveillance Programme:

A team of qualified doctors and nurses will visit periodically for health check up of all the workers, team and its records will be maintained properly.

CHAPTER – 5
ANALYSIS OF ALTERNATIVES (Technology & Site)

5.1 ANALYISIS OF TECHNOLOGY

M/s. Ashoka Minerals Grinding Mills will adopt the Technology as approved by Mining Department in Approved Mining Plan.

The opencast semi mechanized method of mining is proposed for excavation of mineral and waste. The bench height will be 6 m and width will not be less than the height of the working bench in a proposed pit.

The bench height would not be kept greater than the statutory provisions of the prevailing act i.e. the width of the benches would in no case be less than the height of the bench.

Removal of Topsoil → Drilling → Blasting → Excavation → Crushing → Transportation

- **DRILLING**

  The drilling will be done with the jack hammer and Deep Hole Drill.

- **BLASTING**

  Blasting is required for removing minerals & waste rock. The blasting shall be controlled, so that it does not damage Minerals. Blasting will be done by various types of explosives. Conventional types of explosives may be used such as Slurry explosive class 2 viz. Neoprime, power gel, Acquadyne etc.

  Secondary blasting will not be required Rock breaker and pneumatic breaker will be used for breaking the rocks

- **EXCAVATION/LOADING**

  Excavation of mineral and waste will be by hydraulic machineries.

  The overburden will be removed with the help of JCB on hire basis as and when required.

- **CRUSHING**

  The lessee will install the crushing plant of 400 TPD in the lease area. Which will be used for crushing the boulders.

- **TRANSPORTATION**

  The mineral will be transported to nearby and other places from mine in trucks. And the waste will be dumped at designated place.

5.2 ANALYSIS OF SITE

Mining area is usually selected on the basis of occurrence of mineral for suitable end use. Hence, no alternative site has been selected.

Mining Lease area was granted in favour of M/s. Ashoka Minerals Grinding Mills vide letter dated 31.12.1982 and same was registered on 25.02.1983.

CHAPTER–6

ENVIRONMENTAL MONITORING PROGRAM

6.1 INTRODUCTION

An Environmental Monitoring Program is a systematic approach designed to track and assess the condition of the environment over time. It involves the collection and analysis of data related to air, water, soil, and biodiversity to identify trends, detect pollution sources, and ensure compliance with environmental regulations. EMPs play a crucial role in protecting ecosystems, public health, and promoting sustainability by providing the necessary information to make informed decisions about environmental management and conservation.

Post-project monitoring refers to the ongoing process of tracking and evaluating the environmental, social, and economic impacts of mining operations after the completion of a project.

This phase ensures that mining companies adhere to regulatory requirements, mitigate negative effects, and implement sustainable practices. It involves monitoring key factors such as land rehabilitation, water quality, air pollution, and community well-being. Post-project monitoring is vital for minimizing long-term environmental damage, fostering accountability, and promoting responsible mining practices.

Monitoring will be carried out at the site as per the norms of CPCB/SPCB and as per the conditions as stipulated in the issued EC and Consent to Operate issued by concerned Authority.

6.2 RESPONSIBLITIES OF THE LESSEE

In order to maintain the environmental quality within the standards, regular monitoring of various environmental components is necessary. The lessee will be responsible for a post-monitoring program which is critical to ensure that environmental, social, and regulatory standards are maintained after a mining project has been completed. Key responsibilities include:

1. ***Compliance with Regulatory Requirements:***

   The lessee must adhere to all relevant local, national, and international environmental laws and regulations, including those related to post-mining land use, reclamation, and monitoring. They are responsible for ensuring that all monitoring activities are conducted in line with these requirements.

2. ***Implementation of Monitoring Plans:***

   The lessee must implement the post-project monitoring plan developed for the mining site. This includes carrying out scheduled environmental assessments and monitoring of air quality, water quality, soil conditions, noise levels, and other relevant environmental parameters as outlined in the plan.

3. ***Data Collection and Reporting:***

   The lessee is responsible for collecting data according to the specified measurement methodologies. They must accurately record all relevant information and prepare regular monitoring reports to submit to regulatory authorities, stakeholders, or the public. These reports should detail the results of the monitoring and any corrective actions taken.

4. **Rehabilitation and Restoration:**

A key responsibility is ensuring that the site is rehabilitated and restored to an environmentally sustainable state. The lessee should monitor and manage the reclamation processes, including reforestation, soil restoration, and the removal of mining infrastructure, where required.

5. ***Mitigation of Environmental Impacts:***

   If the post-project monitoring reveals negative environmental impacts, the lessee must take appropriate corrective measures to mitigate these effects. This could include pollution control, waste management, or additional rehabilitation measures to minimize long-term harm.

6. ***Stakeholder Engagement:***

   The lessee must engage with local communities, Indigenous groups, and other stakeholders throughout the post-project monitoring process. This involves informing them of the monitoring results, responding to concerns, and ensuring that their rights and interests are respected.

7. ***Risk Management:***

   The lessee is responsible for identifying and addressing potential risks or issues that arise after the project's completion. This includes managing potential long-term impacts such as groundwater contamination, soil erosion, or biodiversity loss.

8. ***Continuous Improvement and Adaptive Management:***

   The lessee should apply a proactive, adaptive management approach to improve environmental performance over time. Based on monitoring results, they should adjust methods or processes to address unforeseen issues and optimize environmental stewardship.

9. ***Financial Responsibility:***

   The lessee must allocate the necessary financial resources to support the post-monitoring program and ensure that adequate funds are available for long-term environmental management, site closure, and rehabilitation, if applicable.

10. ***Collaboration with Authorities:***

    The lessee must collaborate with environmental agencies and regulators, allowing them access to monitoring data and facilitating inspections or audits. They must also comply with any recommendations or additional actions required by these authorities.

By fulfilling these responsibilities, the lessee plays a crucial role in minimizing the long-term environmental impact of mining activities and ensuring the sustainability of the post-mining environment.

6.3 MEASUREMENT METHODOLOGIES

6.3.1 *Instruments to be used*

The following instruments will be used for data collection work in the monitoring schedule:

1. Respirable Dust Sampler with attachment for gaseous Pollutants, Lata Envirotech Services APM 860.
2. Fine Particulate Sample (FPS), APM 154
3. Hygrometer
4. Sound Level Meter Model SL-4023SD

5. Micro Meteorological Station Model Enviro WM 251
6. Global positioning system (GPS)
7. Water Level Indicator

In addition to the above instruments, the data on land use to be collected by the field team by meeting with a large number of local inhabitants in the study area and different government departments / agencies.

6.3.2 *Methodology Adopted*

TABLE: 6.1
Methodologies Adopted

Attributes	Sampling		Measurement Method	Test Procedure
A. Air Environment	**Network**	**Frequency**		
Meteorological • Dry bulb temperature • Wet bulb temperature • Relative humidity • Rainfall	Minimum 1 site in the project impact area	Regularly in one season by Weather Monitoring Station	Mechanical/automatic weather station	-
Pollutants • PM_{10}	4 to 6 locations in the project impact area (Minimum 2 locations in upwind side, more sites in downwind side / impact zone)	Revised National Ambient Air Quality Standards (NAAQS) vide MoEF Notification, dated 16.11.2009	Gravimetric method	-
• $PM_{2.5}$			Gravimetric method	-
• SO_2			EPA Modified West & Gaeke method	Absorption in Potassium Tetra Chloromercurate followed by Colorimetric estimation using P-Rosaniline hydrochloride and Formaldehyde (IS: 5182 Part - II).
• NO_2			Arsenite modified Jacob & Hochheiser	Absorption in dill NaOH and then estimated colorimetrically with sulphanilamide and N (I-Nepthyle) Ethylene diamine Dihydrochloride and Hydrogen Peroxide (CPCB Method).
• CO			Non-Dispersive Infra-Red (NDIR) Spectroscopy	-
B. Water Environment				

pH, Turbidity, Colour, Odour, Taste, TDS, Total Hardness, Calcium hardness, Magnesium hardness, Chloride, Fluoride, Sulphate, Nitrates, Alkalinity, Iron, Copper, Manganese, Mercury, Cadmium, Selenium, Arsenic, Cyanide, Lead, Zinc, Chromium, Aluminum, Boron, Phenolic compounds	Set of grab samples during pre- and post-monsoon for ground and surface water for 10 km distance	Diurnal and Season wise	As per IS 10500-	Samples for water quality should be collected and analyzed as per : IS : 2488 (Part 1-5) methods for sampling and testing of Industrial effluents Standard methods for examination of water and wastewater analysis published by American Public Health Association.
C. Noise				
Noise levels at Day & night time - Leq dB (A)	Project boundary, High noise generating areas within the core zone	Quarterly / Half yearly	As per CPCB norms	As per CPCB norms
D. Soil				
pH, Bulk Density, Soil texture, Nitrogen, Available Phosphorus, Potassium, Calcium, Magnesium, Sodium, Electrical Conductivity, Organic Matter, Chloride	4 to 6 locations in the project impact area	Yearly/half yearly	As per USDA Method	As per USDA Method
E. Socioeconomic Status	**Network**	**Frequency**	**Measurement Method**	**Test Procedure**
• Demographic structure • Infrastructure resource base • Economic resource base • Health status: Morbidity pattern • Cultural and aesthetic attributes • Education	Socio-economic survey is based on proportionate, stratified and random sampling method	Minimum for two phases of the project	Primary data collection through questionnaire	Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. agencies

6.4 FREQUENCY

Details of the Environmental Monitoring schedule, which will be undertaken for various environmental components as per conditions stipulated by EC conditions & Consents are detailed below:

TABLE: 6.2
Post Project Monitoring- Frequency

S. No.	DESCRIPTION	FREQUENCY OF MONITORING
1.	Ambient Air Quality at mine site	Quarterly/ Half Yearly
2.	Water Quality	Quarterly/ Half Yearly
3.	Noise Level Monitoring	Quarterly/ Half Yearly
4.	Soil Quality	Half Yearly/yearly

6.5 LOCATION

The location of the monitoring stations will be selected on the basis of prevailing micro – meteorological conditions of the area like wind direction & wind speed, Relative Humidity, Temperature. 4 to 6 AAQM stations will be selected (including minimum 2 locations in upwind side, more sites in downwind side / impact zone) to assess ambient air quality of the area. Noise level monitoring will be carried out on lease boundary & in high noise generating area within the lease. Water & soil monitoring locations will be decided on the basis of general slope of the area & drainage pattern. Location for the post project monitoring will be as under:

TABLE NO.: 6.3
LOCATION OF POST PROJECT MONITORING SAMPLING LOCATIONS

S. No.	Description	Location
1.	Ambient Air Quality	Mine site, Villages in down wind direction from the Mine site
2.	Noise Level Monitoring	Mine site, High noise generating areas within the Mine boundary, Nearest Habitation
3.	Water Level & Quality	Nearby Surface & Ground water sources

6.6 DATA ANALYSIS

Monitoring data analysis will be done as per CPCB guidelines by EPA approved laboratory & will be submitted to the concerned authority (specified in Environment Clearance Letter issued by SEIAA, Rajasthan & Consent issued by RSPCB) on regular basis.

6.7 REPORTING SCHEDULES

Six monthly compliance reports will be submitted on regular basis to RO, to MoEF&CC, Regional Office and SPCB. Copies of the reports shall be maintained in the office and shall be made available to the concerned inspecting authorities.

6.8 DETAILED BUDGET OF ENVIRONMENTAL MANAGEMENT PLAN

Existing Quartz, Pyrophyllite, Red and Yellow Ochre Mining Project with proposed Crusher (400 TPD), M.L. No.-08/1982 (Revised- 23/2001) Area: 4.96 Hectare (Govt. Land) located at Khasra No.- 1, 902, 148 & 149 Near Village- Maharana, Tehsil- Buhana, District- Jhunjhunu (Rajasthan).

Cost details for the project are given as under: -

TABLE NO.: 6.4

Funds Allocated for Environment Management (Rs.): - Rs. 11.998 lacs per annum

S No.	Description		Measures	EMP COST	
				Capital Cost (in Lacs)	Recurring Cost (in Lacs)
1.	Environment Monitoring	Water Quality Analysis	------	--	0.3
		Air	(I) Air Pollution Monitoring	--	1
			(ii) Green Belt/Plantation	32.74	6.548
		Noise Pollution Monitoring	---	--	0.2
2.	Water Requirement		Provision for water tankers for water sprinkling on kacha roads and dust suppression at mines, for domestic purpose.	--	2.7
3.	Waste management		Municipal Sewage (Treatment through septic tank, up flow filtration and then disinfection)	2.5	0.5
4.	Construction and maintenances of approach road into metalled road approx. 0.95 km which will be used for mineral transportation till main road.			9.5	0.5
5.	Water Conservation & Management		Construction of Rainwater harvesting structures, berms, siltation pond & its maintenance	1.2	0.2
6.	CSR			15.74	--
7.	Blasting related safeguard expenses (Caution boards, Silencer Blower)			0.2	0.05
Total				**61.88**	**11.998**

CHAPTER–7
ADDITIONAL STUDIES

7.1 PUBLIC CONSULTATION

Public Hearing is yet to be conducted. This Draft EIA/EMP Report is being submitted for the same.

7.2 RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

7.2.1 RISK ASSESSMENT

Risk assessment is a critical process to identify potential hazards in an opencast mining operation, assess their likelihood and severity, and establish control measures to mitigate or eliminate them. The following outlines the risk assessment process for an opencast mining project:

Hazard Identification:

The following key hazards are identified for opencast mining operations:

- **Geotechnical Hazards:**
  - Slope failure and landslides due to unstable soil or rock conditions.
  - Overburden collapse or excavation-related collapses.
- **Operational Hazards:**
  - Equipment malfunctions or failure (e.g., haul trucks, excavators, drills).
  - Accidents due to mishandling of explosives during blasting operations.
  - Fire outbreaks, especially from fuel storage areas or heavy machinery.
- **Health and Safety Hazards:**
  - Exposure to respirable dust (e.g., silica dust) leading to respiratory diseases.
  - Noise exposure causing hearing loss.
  - Fatigue or accidents caused by long working hours or lack of adequate rest.
  - Heat stress or dehydration, particularly in hot climates.
- **Environmental Hazards:**
  - Water contamination from runoff, sedimentation, and seepage from the mine.
  - Air pollution from particulate matter (dust) generated during excavation, transportation, and blasting.
  - Soil erosion and degradation from overburden handling and site disturbance.

Risk Evaluation:

Each hazard is evaluated based on its likelihood and potential severity:

- **Likelihood:** (Low, Medium, High)
- **Severity:** (Minor, Moderate, Major, Critical)

For example, slope failure in a large pit might be a **high likelihood, critical severity** risk, while the risk of minor equipment failure might be **low likelihood, minor severity**.

Risk Control and Mitigation Measures:

The following control measures are proposed to mitigate the identified risks:

- **Geotechnical Controls:**
  - Conduct regular geological surveys and stability assessments of pit slopes.
  - Implement slope reinforcement and backfilling techniques.
  - Limit the height and avoid mining in unstable areas.
- **Operational Controls:**
  - Ensure regular maintenance and inspection of mining equipment (haul trucks, excavators, drills).
  - Follow strict blasting protocols, including controlled blasting techniques, proper handling of explosives, and post-blast safety checks.
  - Install fire suppression systems and ensure proper storage of flammable materials (fuel, lubricants).
- **Health and Safety Controls:**
  - Provide personal protective equipment (PPE) such as respirators, hearing protection, safety shoes, and helmets.
  - Install dust suppression systems like water sprinklers.
  - Enforce exposure limits for noise and dust, monitor air quality, and provide regular health check-ups for workers.
  - Implement a fatigue management system to ensure workers get adequate rest.
- **Environmental Controls:**
  - Build sedimentation ponds and stormwater management systems such garland drains, berms, check dams to prevent contamination of surface water.
  - Use erosion control measures like, vegetation cover, and reclamation of mined-out areas.
  - Adopt dust control measures such as water spraying on haul roads and stockpiles.

Monitoring and Review:

- **Environmental Monitoring:** Regular air, water, and soil quality monitoring.
- **Safety Monitoring:** Conduct daily safety inspections, equipment checks, and emergency drills.
- **Review:** Annual review of the risk assessment to incorporate new risks and ensure the effectiveness of mitigation measures.

ON SITE FOLLOWING DETIALS SHOULD BE AVAILABLE

Telephone Nos. of District Collector, Police, Fire station and Hospital is given below:

Sr. No.	Name of Office	P&T Office
(i)	Collector, Kekri	0145-2627421
(ii)	Add. Collector, Kekri	0145-2627100
(iii)	S.P. , Kekri	0145 2629910
(iv)	Regional Director of Mines Safety, Ajmer	2783230
(v)	Fire Brigade	101
(vi)	Police Station, Kekri	01467-220007

7.2.2 DISASTER MANAGEMENT PLAN (DMP)

A Disaster Management Plan (DMP) outlines the response strategy in the event of a disaster, ensuring a systematic approach to managing emergencies and minimizing harm to workers, the environment, and the surrounding community.

Objective of the DMP:

- To minimize harm to people, property, and the environment during an emergency.
- To establish procedures for efficient response and recovery from disasters.
- To comply with statutory and regulatory safety standards.

Types of Potential Disasters and Preparedness:

The following types of disasters are relevant to an opencast mining project:

1. **Slope Failure and Landslides:**
   - **Preparedness:**
     - Conduct regular monitoring of slope stability.
     - Implement early warning systems for slope instability (e.g., slope inclinometer sensors).
   - **Response:**
     - Evacuate workers from high-risk areas.
     - Initiate rescue operations if workers are trapped, and stabilize the pit wall.
2. **Blasting Accidents (Explosion or Premature Detonation):**
   - **Preparedness:**
     - Strict adherence to safety protocols in blasting operations.
     - Regular safety drills for workers handling explosives.
   - **Response:**
     - Evacuate affected areas and treat any injured workers.
     - Investigate the cause of the blast incident and implement corrective measures.
3. **Fire Outbreaks (due to equipment malfunction or fuel storage):**
   - **Preparedness:**
     - Install fire detection and suppression systems (e.g., sprinklers, extinguishers).
     - Ensure workers are trained in fire safety protocols and evacuation routes.
   - **Response:**
     - Activate fire suppression systems and evacuate workers to safe zones.
     - Coordinate with local fire departments for large-scale fires.
4. **Water Inundation (Flooding due to heavy rainfall or mine pit flooding):**
   - **Preparedness:**
     - Design and maintain drainage systems to prevent water accumulation in pits.
     - Install Garland drains and sedimentation ponds to manage surface runoff.

- **Response:**
  - Evacuate workers from the flooded area.
  - Use pumps to manage water levels and stabilize the affected area.

Communication Systems:

- Establish clear communication protocols during an emergency.
- Use radios, alarms, and public address systems to alert workers of emergencies.
- Set up a centralized emergency control room to manage communication with local authorities, medical teams, and the community.

Post-Disaster Recovery and Environmental Restoration:

- **Recovery:** Assess the damage, prioritize recovery efforts, and provide support to affected workers and the community.
- **Environmental Restoration:** Take steps to restore environmental damage, such as cleaning up hazardous spills, stabilizing eroded areas, and rehabilitating mined-out land.

Collaboration with Local Authorities:

- Coordinate with local emergency services, including fire departments, police, and medical facilities, to ensure prompt response to disasters.
- Maintain open communication with surrounding communities to address concerns and inform them of potential risks.

7.2.3 OFF-SITE EMERGENCY PLANNING

Introduction

The off-site emergency plan is an integral part of any hazard control system. It would be based on those accidents identified by the works management, which could affect people and the environment outside the works. Thus, the off-site plan follows logically from the analysis that took place to provide the basis for the on-site plan and the two plans should, therefore, complement each other. The key feature of a good off-site emergency plan is flexibility in its application to emergencies other than those specifically included in the formation of the plan. The roles of the various parties that may be involved in the implementation of an off-site plan are described below. The responsibility for the off-site plan will be likely to rest either with the works management or with the local authority.

Aspects to be Included in an Off-Site Emergency Plan

Some of the aspects to be included in off-site emergency plan are as follows:

a. Organization

Details of command structure, warning systems, implementation procedures, emergency control centers, name and appointments of incident controller, site main controller, their deputies and other key personnel.

b. Communications

Identification of personnel involved, communication center, call signs, network, list of telephone numbers.

c. Special Emergency Equipment

Details of availability and location of heavy lifting gear, bulldozers, specified fire-fighting equipment, fireboats.

d. Voluntary Organizations

Details of organizers, telephone numbers, resources, etc.

e. Meteorological information

Arrangements for obtaining details of weather conditions prevailing at the time and weather forecasts will be made.

f. Humanitarian Arrangements

Transport, evacuation centers, emergency feeding, treatment of injured, first aid, ambulances, temporary mortuaries.

g. Public Information

Arrangements for: -

(i) Dealing with the media-press office

(ii) Informing relatives, etc.

h. Assessment

Arrangements for: -

(i) Collecting information on the causes of the emergency

(ii)Reviewing the efficiency and effectiveness of all aspects of the emergency plan.

7.2.3.1 Role of The Emergency Coordinating Officer

The various emergency services will be coordinated by an Emergency Coordinating Officer (ECO) who is likely to be a senior police officer but, depending on the circumstances, could be a senior fire officer. The ECO will liaise closely with the site main controller. Again, depending on local arrangements, for very severe incidents with major or prolonged off-site consequences, the external control may pass to a senior local authority administrator or even an administrator appointed by the Central or State Government.

7.2.3.2 Roles of Major Hazard Managements

Where the local authority has the organization to formulate the plan, the role of management in off-site emergency planning will be to establish liaison with those preparing the plans and to provide information appropriate to such plans. This will include a description of possible on-site accidents with potential for off-site harm, together with their consequences and an indication of the relative likelihood of the accidents.

Advice should be provided by works managements to all the outside organizations which may become involved in handling the emergency off-site and which will need previously to have familiarized themselves with some of the technical aspects of the works activities, e.g. emergency services, medical departments, etc.

7.2.3.3 Role of The Local Authority

In some places the duty to prepare the off-site plan lies with the local authorities. They may have appointed an emergency planning officer (EPO) to carry out all this duty as part of the EPO's roles in preparing for a whole range of different emergencies within the local authority area. The EPO will need to obtain the information to provide the basis for the plan.

Rehearsals for off-site plans are important for the same reasons as on-site plans and will need to be organized by the EPO.

7.2.3.4 Role of The Police

The police normally assume the overall control of an emergency, with a senior officer designated as emergency coordinating officer.

Formal duties of the police during an emergency include protecting life and property and controlling traffic movements. The functions include controlling bystanders, evacuating the public, identifying the dead and dealing with casualties and informing relatives of dead or injured.

7.2.3.5 Role of The Fire Authorities

The control of a fire is normally the responsibility of the senior fire brigade officer who would take over the handling of the fire from the site incident controller on arrival at the site. The senior fire brigade officer may also have a similar responsibility for other events. Fire authorities having major hazard works in their area should have familiarized themselves with the location on site of all stores of flammable materials, water and foam supply points and fire-fighting equipment's.

7.2.3.6 Role of The Health Authorities

Health authorities, including doctors, surgeons, hospitals, ambulances and so on, have a vital part to play following a major accident and they should form an integral part of any emergency plan.

For major fires, injuries will be the result of the effects of thermal radiation to a varying degree and the knowledge and experience to handle this in all, but extreme, cases may be generally available in most hospitals.

7.2.3.7 Roles of The Government Safety Authority

The Inspectors of Director General of Mines Safety may want to satisfy themselves that the organization responsible for including the off-site plan has made adequate arrangements for handling emergencies of all types including major emergencies.

In the event of an accident, local arrangements regarding the role of the factory inspector will apply. In the aftermath, factory inspectors may wish to ensure that the affected areas are rehabilitated safely.

7.3 HYDRO-GEOLOGICAL STUDY & RAINWATER HARVESTING PLAN

7.3.1 *TOPOGRAPHY*

The lease area comprises small- mound trending roughly E-W. Highest Contours 400m RL and Lowest Contour is 325m RL.

7.3.2 *DRAINAGE*

Drainage in the lease area is almost southerly along slope of the mound. General drainage outside the area is almost northeasterly by non-perennial seasonal nallah.

The general ground water level in the area varies from 40-60 m below ground level.

Source:

https://phedwater.rajasthan.gov.in/content/dam/doitassets/water/Ground%20Water/Pdf/PublicReports/Groundwater_Atlas/Districts/Districtwise%20Atlas%20-%20Jhunjhunun.pdf

7.3.3 LAND USE

Details regarding land use pattern of core as well as buffer zone have been given in Chapter 3.

7.3.4 CLIMATE AND RAIN FALL

The climate of the district can be classified as semi-arid. It is characterized by very hot summers and very cold winters with poor rainfall during south-west monsoon period. In May and June, the maximum temperature may sometimes go up to 48°C. The potential evapo-transpiration rates are quite high, especially during May and June. The total annual potential evapo-transpiration is 1502.6mm.

The mean annual rainfall of the district based on 36 years data (1971-2006), works out to be 485.6mm. However normal annual rainfall (1901-71) of the district is 459.5mm. It can be inferred that the rainfall in the district has significantly increased in the recent years. The coefficient of variation is on higher side at 36.6% indicating that the rainfall is slightly unreliable. A perusal of the figure reveals that the district experienced very poor rainfall between the periods 1979 to 1991 with the exception of few years in between. Thereafter, the district was 8 fortunate to have very good spell of rainfall continuously for a period of 7 years from 1992 to 1998. The year 1996 was the best with annual rainfall exceeding mean annual rainfall by 85.4%. The district again experienced drought conditions from 1999 to 2002. The year 2002 was the worst with rainfall being 62.3% less than mean annual rainfall

Source: *https://cgwb.gov.in/sites/default/files/2022-10/junjhunu.pdf*

7.3.5 SOIL

The distribution of soil is given below.

i) **Desert soil (Covers 2666 sq.km.area forming 44.97% of district):** Occurs extensively in the central part of the area covering parts of all the blocks except Surajgarh block. These are yellowish brown, sandy to sandy 9 10 loam, loose, structure less, well drained with high permeability. They are scanty of vegetation due to severe wind erosion and wind velocity high.

ii) **Sand dunes (Covers 2149 sq.km.area forming 36.25% of district):** Present mostly in northern part of the district covering parts of Alsisar, Buhana, and Chirawa blocks. These are non-calcareous soils, sandy to loamy sand, loose, structureless and well drained.In favourable localities they cultivated.

iii) **Red desertic soil (Covers 468 sq.km.area forming 7.90% of district):** Rests in parts of Jhunjhunu and Nawalgarh blocks. These are pale brown to reddish brown colour, structureless, loose and well drained having texture from sandy loam to sandy clay loam. Suitable for agriculture but suffers from adverse climatic conditions.

iv) **Lithosols and regisols of hills (Covers 329 sq.km.area forming 5.55% of district):** Found on Delhi hills and hill slopes between Khetri and Gudagaurji and south of Udaipurwati in parts of Khetri and Udaipurwati and Nawalgarh blocks. They are shallow with gravels very near the surface, light textured, fairly drained, reddish brown to grayish brown in colour. Cultivation is restricted because of limited root zone.

v) **Older alluvium (Covers 316 sq.km.area forming 5.33% of district):** Found in southern most parts of the area in parts of Khetri, Udaipurwati and Nawalgarh blocks. They are derived from alluvium and are non-calcareous, semi-consolidated to unconsolidated brown soils, loamy sand to sandy loam in texture. Well drained and occupy gently sloping terrains.

Source: https://www.cgwb.gov.in/sites/default/files/2022-11/jhunjhunu.pdf

SOIL OF STUDY AREA

The soil analysis reveals that the study area generally has neutral to slightly alkaline soil with moderate organic carbon content. sodium levels are within an acceptable range, the findings highlight areas where soil fertility management practices, such as the addition of phosphorus and potassium fertilizers, could improve soil quality and agricultural productivity.

7.3.6 GEOLOGY

Regional Geology

Geologically, the district is mostly covered by blown sand. Apart from these, small isolated outcrop of the rocks of Delhi Super Group and Malani igneous suite are found in Khetri, Udaipurwati, Buhana and Jhunjhunun blocks of the district. The Alwar Groups of rocks are exposed in the southeastern part (around Udaipurwati) and northeastern part (around Khetri), with Ajabgarh Group of rocks, but here they as thin and narrow outcrops only. The Alwar Groups are represented by quartzite, schist, grit, arkose etc. These have been intruded by Post Delhi intrusives such as amphibolites, granite, pegmatite, quartz veins etc. The Ajabgarhs are represented by phyllites, biotite schists, calc gneisses etc. intruded by Post Delhi intrusives viz. amphibolite, granite, albitites, pegmatites, epidiorite, quartz veins etc. The basic intrusives include epidiorite, diorite amphibolite etc.

Super Group	Group	Formation
	Recent to Sub-Recent	Alluvium, Aeolian sand
	Post –Delhi	Pegmatite- Erinpura Granite
	Intrusives	Epidiorite, dolerite, albitite, granite (Malani Igneous Suite) amphibolite.
Delhi	Ajabgarh	Phyllites, phyllites interbedded with quartzites, biotiteschiest, calcgneissesetc
	Alwar	Quartzite, schist, flaggy quartzite, grit, arkose, felspathic quartzite etc.
	Malani Plutonic	

Local Geology

Recent		Soil
Intrusive		Quartz
Delhi Super Group	Ajabgarh Group	Pyrophyllite, Ochers, Quartzite

7.3.7 AQUIFER TYPES

Aquifers in the district are formed in alluvium and quartzites. Alluvium constitutes principal aquifer material with Older Alluvium contributing to 76% of district's aquifer area and Younger Alluvium forming another 6% of aquifers. Fractured and weathered quartzite adjoining hills in the southeastern part of the district forms about 14% of aquifers. The quality of water in the western part of the alluvial aquifers is not as good as that of the eastern part.

Table: aquifer potential zones their area and their description

Aquifer in Potential Zone	Area (sq km)	% age of district	Description of the unit/Occurrence
Younger Alluvium	355.8	6.0	It is largely constituted of Aeolian and Fluvial sand, silt, clay, gravel and pebbles in varying proportions.
Older Alluvium	4,474.8	75.7	This litho unit comprises of mixture of heterogeneous fine to medium grained sand, silt and kankar.
Quartzite	802.7	13.6	Medium to coarse grained and varies from feldspathic grit to sericitic quartzite.
Hills	277.8	4.7	
Total	**5,911.1**	**100.0**	

Source:

https://phedwater.rajasthan.gov.in/content/dam/doitassets/water/Ground%20Water/Pdf/PublicReports/Groundwater_Atlas/Districts/Districtwise%20Atlas%20-%20Jhunjhunun.pdf

7.3.8 STAGE OF GROUND WATER DEVELOPMENT

The ground water resource assessment studies reveal that two of the blocks in the district fall within 'Over Exploited' category. This implies that the status of development is already around 100%. The remaining six districts are even more stressed as they are in 'Notified' category where no further development of ground water is permitted.

Source:

https://phedwater.rajasthan.gov.in/content/dam/doitassets/water/Ground%20Water/Pdf/PublicReports/Groundwater_Atlas/Districts/Districtwise%20Atlas%20-%20Jhunjhunun.pdf

Categorization on the basis of stage of development of ground water	Block Name
Over Exploited	Alsisar, Khetri
Notified	Nawalgarh, Udaipurwati, Jhunjhunun, Chirawa, Surajgarh, Buhana

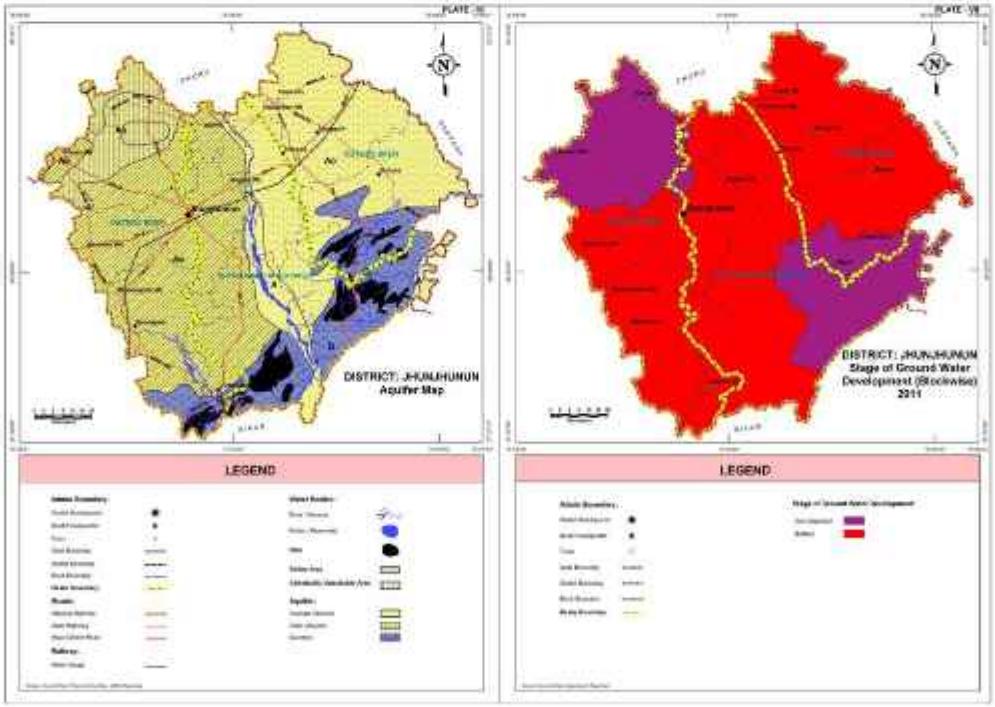


FIGURE No.-7.1: AQUIFER SYSTEM OF JHUNJHUNU DISTRICT

https://phedwater.rajasthan.gov.in/content/dam/doitassets/water/Ground%20Water/Pdf/PublicReports/Groundwater_Atlas/Districts/Districtwise%20Atlas%20-%20Jhunjhunun.pdf

7.3.8.1 Ground water resources

The dynamic groundwater resources as per groundwater estimation as on 31.03.2013 is furnished below Table. The entire area falls under non-command and over-exploited category due to excessive withdrawal of groundwater being the only available source of irrigation. The condition in Alsisar block is better which is attributed by negligible groundwater draft being area underlain by saline water.

Table 7.1
Block Wise ground water resources of Jhunjhunu district

Block	Ground Water Availability (MCM)	Irrigation Draft (MCM)	Domestic/ Industrial Draft (MCM)	Gross Draft (MCM)	Stage (%)
Alsisar	26.7296	17.7706	9.1498	26.9204	100.71
Buhana	26.6425	40.3020	9.9937	50.2957	188.78
Chirawa	5.6765	5.2762	3.1069	8.3831	147.68
Jhunjhunun	32.3191	45.5782	13.1006	58.6788	181.56
Khetri	5.0267	9.1164	1.0592	10.1756	202.43
Nawalgarh	17.8170	44.3556	10.4390	54.7946	307.54
Surajgarh	22.8437	53.4720	11.4982	64.9702	284.41
Udaipurwati	29.8514	56.5182	15.5900	72.1082	241.56
Total	250.7628	462.6845	104.0513	566.7358	226.00

Source: https://www.cgwb.gov.in/sites/default/files/2022-11/jhunjhunu.pdf

7.3.8.2 Depth to water level

Depth to water level varies significantly from less than 20m below ground level to more than 70mbgl. North and northeastern part of the district i.e., Chirawa-Surajgarh-Buhana region shows deeper water levels of 40 - 60m bgl in general, and reaching upto >70m bgl. Western side of the district, the water level is moderately deep (around 20-40m bgl) but in down south (Udaipurwati block), the water level is quite shallow occurring at less than 20m bgl.

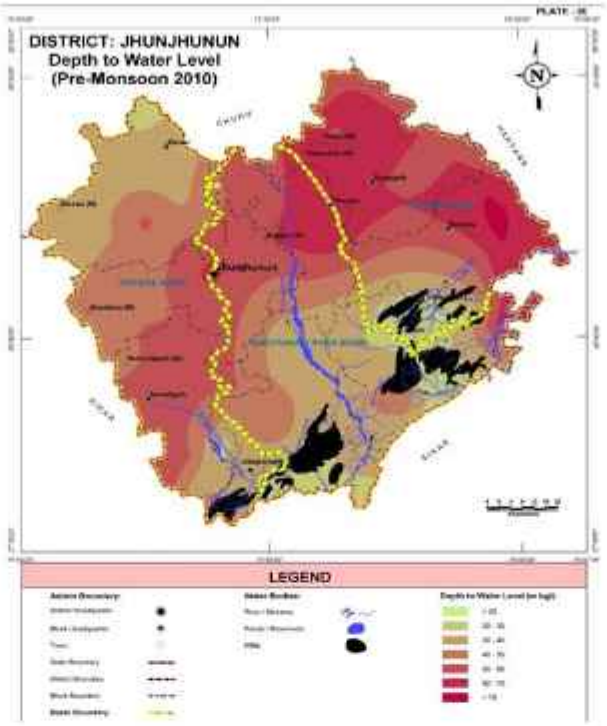


Figure: 7.2: Depth to water level Map, Pre-Monsoon 2010, District Jhunjhunu

Source:
https://phedwater.rajasthan.gov.in/content/dam/doitassets/water/Ground%20Water/Pdf/PublicReports/Groundwater_Atlas/Districts/Districtwise%20Atlas%20-%20Jhunjhunun.pdf

7.3.9 *Management plan for the recharging of the aquifer*

Rain water harvesting structure is being proposed as a ground water recharge structure in the excavated mine pit at the end of life of mine or after the exhaustion of mineral in mine pit which would show positive impact on ground water table of the area.

7.3.10 *Recharge Measures and Impact on Ground Water Regime*

Rain water harvesting

A wise and viable solution to enhance water availability is to collect the precious water drops falling from the sky and divert maximum possible water to the ground water regime in project premises by suitable rainwater harvesting structures. In designing any rainwater harvesting structure, capturing rainfall and runoff for local use is the key concept. Hard surface such as roof pavements and roads that decrease groundwater percolation constitute catchments and generate the high runoff which has to be diverted in to the storage tank and recharged in to ground water regime through simple filtration and injection well system for subsequent extraction by service wells. To improve water availability, rainwater harvesting is the most imminent and long-term solution. In view of above, rainwater-harvesting structures at this point can serve the purpose of arresting roof top rainwater and runoff generated through roads in the area. The design is based on average annual rainfall and its intensity and the intake capacity of the water by the aquifers.

Design of Rainwater Harvesting

For good design of rainwater harvesting, following points are to be kept under consideration:

- Ideal location with good ground slope
- The location has adequate subsurface permeability of the aquifer to accommodate maximum recharge of rainwater through injection well
- Rate of filtration should exceed average rainfall intensity
- Clogging of filtration media should be cleaned periodically
- Ground water pollution does not take place

Open and green belt area rain water harvesting

The open area (including mine pit) of the project is 36000 m2 and green belt area of project is 4000 m2. Mine pit will be developed as rainwater harvesting reservoir and percolation pits as per sites having rooms for recharge in resonance with average rainfall, catchment area and peak rainfall intensity and rainwater falling on the unused area is carried through the drains to rainwater harvesting structure and allow to infiltrate in groundwater regime. This will improve groundwater quality as well as quantity in and around the project premises. Average surface run-off coefficients considered for different surfaces as per CGWB norms are given below:

Run –off coefficient of roof top area: 85%

Run- off coefficient of paved area: 75%

Run- off coefficient of open alluvial land with flat to gentle slope topography: 20%

Run- off coefficient of green belt area: 15 %

Following dimensional parameters are considered for design of rainwater harvesting system in the project premises.

Open area rain water harvesting

Total Open area (including mine pit and infrastructure area) = 36000 m^2

Average rainfall = 482.042 mm = 0.482 m

Catchment factor for open area = 0.20 (As per CGWA norms)

Total volume of water to be captured = 36000 x 0.482 x 0.20 = 3470.4 m3 say 3470 m^3/annum

Green belt area rain water harvesting

Total Green belt Area = 13500 m^2

Average rainfall = 482.042 mm = 0.482 m

Catchment factor for open/green belt area = 0.15 (As per CGWA norms)

Total volume of water to be captured = 13500 x 0.482 x 0.15 = 976.05 m^3 say 976 m^3/annum

Recharge Measures and Artificial Recharge

Artificial recharge is the process by which rain water infiltrate into groundwater system and ground water resources are augmented by altering natural conditions of replenishment. There are several methods for artificial recharge depending upon the feasibility in different regions.

Recharge through open area (including mine pit and unused area)

As 36000 m^2 area is open area and average rainfall is 0.482 m, the GW recharge (20% of accumulated area) would be 3470 m^3/annum.

Recharge through green area

As 13500 m^2 area is green area/open area and average rainfall is 0.482 m, the GW recharge (20% of accumulated area) would be 1301 m^3/annum.

Recharge through plantation

As 9450 m^3/annum water is to be used for Plantation @ 1.5 m^3/day, 5% of this water would be recharged to ground water as per norms of applied irrigation. Total water recharged would be 9450 x 0.05 = 472.5 m^3/annum.

TABLE NO. 7.2
RECHARGE POTENTIAL

S. No.	Rainwater Harvesting in Project Premises	Quantity in m^3/Annum
1	Recharge through Paved Area	-
2	Recharge through open area	3470
3	Recharge through Green Belt area	1301
4	Roof Top Water Harvesting	--
5	Recharge due to Gardening Water	472.5
	TOTAL	**5243.5**

CHAPTER–8
PROJECT BENEFITS

8.1 INTRODUCTION

Project offers a wide range of benefits that extend beyond the immediate economic gains of extracting valuable minerals. This project plays a pivotal role in driving economic growth, improving infrastructure, and creating long-term development opportunities for local communities and regions. The benefits of mining are not only limited to job creation and government revenues but also include the enhancement of transport networks, and access to essential services such as healthcare and education. Additionally, mining can stimulate technological advancements, promote social welfare through corporate social responsibility (CSR) initiatives. However, it is crucial for mining projects to adopt sustainable practices to ensure that their benefits are long-lasting and environmentally responsible.

8.2 IMPROVEMENT IN THE PHYSICAL INFRASTRUCTURE

- **Road:** Construction and maintenances of approach road into metalled road which will be used for mineral transportation till main road.
- **Flood Control and Drainage:** Proposed project will construct check dams, berms, sediments basins which will manage water flow. These improvements can protect both the mine and local areas from flooding and water damage.
- **Infrastructure:** As part of corporate social responsibility, the creation of community assets (infrastructure) such as providing drinking water, developing village roads and connecting roads, upgrading dispensaries and health centres, schools etc.

8.3 IMPROVEMENT IN THE SOCIAL & ECONOMIC INFRASTRUCTURE

The project is expected to contribute to the State exchequer through mining revenues (including Royalty, DMF, etc.) once all Mining Leases (ML) are executed and operates at the proposed capacity. While the project will make a modest contribution, it will positively impact the Gross Domestic Product (GDP) by generating economic gains.

In addition, the project will generate employment opportunities for the local community and help bridge the gap between the demand and supply of granite, benefiting consumers. Overall, it will foster economic growth and development in the region. The proposed CSR initiatives will also contribute to the improvement of essential infrastructure and amenities.

8.4 EMPLOYMENT POTENTIAL

The project proponents will create both direct and indirect employment opportunities, with a preference for hiring local individuals based on their qualifications and experience. A total of 42 people will be employed. Additionally, ancillary industries such as transportation, food services, and other support activities will generate further job opportunities, thereby stimulating the local job market.

8.5 OTHER TANGIBLE BENEFITS

8.5.1 ENVIRONMENTAL:

Total 1637 saplings will be planted over an area of 1.637-hectare area out of which 1.35 ha will be planted in 7.5 m safety barrier zone of the mine lease area and unworked area and remaining 0.287 ha will be planted outside the lease area, which will be 33% of total mining lease area.

At the conceptual stage, the total excavated area will be 3.60 ha which will be converted into a water reservoir, aiding in groundwater recharge. The source of water for this reservoir will rely entirely on rainwater during the monsoon. Therefore, the conceptual land use plan will ensure better land utilization for the area.

8.5.2 HEALTH

- Supplementing Govt. efforts in health monitoring camps, social welfare and various awareness programmes among the rural population.
- Assisting social forestry programme.
- Improvement in livelihoods by rain water harvesting and land leveling.

8.5.3 LABOUR WELFARE

Table 8.1
LABOR WELFARE COST

Sr. No.	Facility provided for Labour	Capital Cost (in Rs. Lac)	Recurring cost (in Rs. Lac)
1	Shelter, Safe Drinking, Water , Sanitation Facility	1	0.3
2	Periodic Medical Examination twice in years @1500 workers	--	0.63
3	Group insurance @ Rs. 2500 per worker	1.05	--
4	Fuel for cooking	0.1	0.045
5	Provision for personal protective equipment (PPEs) like ear plugs, dust masks, helmet, shoes.	--	0.84
6	First Aid Box	--	0.1
7	Books and uniform for children of labour @ Rs. 2500 per labour	1.05	--

8	Training & awareness camps for workers for safe & sustainable mining	0.3	--
Total		3.5	1.915

8.6 CONCLUSION

The project proponents will collaborate with the local Panchayat and offer various forms of support to enhance public amenities in the region. The company will hire semi-skilled and unskilled workers from nearby villages, which will ultimately improve the purchasing power of employees, leading to a better standard of living. This includes improved access to education, healthcare, sanitation, housing, and consumer goods. In the future, housing, transportation, medical, educational, and other civic amenities will see significant improvements, which is expected to be a major positive benefit.

CHAPTER- 9

ENVIRONMENTAL COST BENEFIT ANALYSIS

9.0 ENVIRONMENTAL COST BENEFIT ANALYSIS

In accordance with the EIA Notification dated 14th September 2006, the requirement for an 'Environmental Cost Benefit Analysis' is applicable solely if it is recommended during the Scoping stage.

As per the Auto ToR letter has been issued by SEIAA, Rajasthan, vide Proposal no.: - SIA/RJ/MIN/536489/2025 Date-08.07.2025 for mining project activity, the 'Environmental Cost Benefit Analysis' is not required.

CHAPTER – 10
ENVIRONMENTAL MANAGEMENT PLAN

10.1 INTRODUCTION

An **Environmental Management Plan (EMP)** is a comprehensive framework designed to identify, assess, and mitigate the potential environmental impacts of a project throughout its lifecycle. The primary goal of an EMP is to ensure that project activities are carried out in an environmentally responsible manner, in compliance with relevant laws and regulations. It outlines specific actions, responsibilities, and measures to minimize negative effects on air, water, soil, and biodiversity, while promoting sustainable practices.

Additionally, an EMP includes monitoring, reporting, and continuous improvement strategies to ensure that environmental performance is consistently maintained and enhanced. By integrating environmental considerations into project planning and execution, the EMP aims to safeguard natural resources, protect ecosystems, and foster long-term sustainability.

10.2 OBJECTIVE OF EMP:

The objective of an Environmental Management Plan (EMP) is to establish a framework for managing the potential environmental impacts of a project throughout its lifecycle. It aims to ensure that operations are carried out in an environmentally responsible manner while complying with legal and regulatory requirements. The key objectives of an EMP typically include:

1. **Minimizing Environmental Impact:** To identify and mitigate any adverse effects on the environment, including air, water, soil, and biodiversity, arising from the project activities.
2. **Compliance with Regulations:** To ensure adherence to all environmental laws, regulations, and standards set by local, national, and international authorities.
3. **Sustainable Resource Use:** To promote the sustainable use of resources, such as water and energy, and minimize waste generation, promoting recycling and reusing wherever possible.
4. **Monitoring and Reporting:** To establish a system for regular monitoring and reporting of environmental parameters (e.g., air quality, water quality, noise levels) to assess the effectiveness of mitigation measures.
5. **Promoting Best Practices:** To incorporate industry best practices in environmental protection and management, ensuring that the project follows an eco-friendly approach.
6. **Risk Management:** To identify potential environmental risks and establish preventive and corrective measures to address them before they result in significant damage.
7. **Community Engagement:** To promote communication and collaboration with local communities, stakeholders, and regulatory bodies to address environmental concerns and ensure social responsibility.
8. **Continuous Improvement:** To ensure ongoing review and improvement of environmental practices through adaptive management, ensuring the project remains responsive to changing environmental conditions and regulations.

Ultimately, the goal of an EMP is to protect and preserve the environment while facilitating the successful completion of the project, balancing economic, social, and environmental sustainability.

The following programs have been developed to ensure proper implementation of EMP for the proposed mining project:

- Air Pollution Control
- Noise Mitigation
- Water Management
- Land Reclamation
- Greenbelt Development/plantation programme
- Occupational Health and Safety
- Monitoring program
- Budgeting of Environmental mitigation measures

10.3 AIR ENVIRONMENT

Various operations in the mining process, such as drilling, blasting, excavation, loading, unloading, and transportation, can generate particulate matter. Common air pollutants associated with mining activities include dust, smoke, sulfur dioxide, and nitrates. Additionally, gaseous emissions from blasting and exhaust fumes from diesel-powered machinery can contribute to atmospheric pollution, although to a lesser extent. These pollutants, depending on their concentration, particle size, and duration of exposure, can pose potential risks to human health. However, implementing appropriate precautions and control measures will significantly reduce the adverse effects of air pollution.

10.3.1 Prevention and Control of Air Pollution

- Whenever Drilling is required, wet drilling will be done.
- Controlled Blasting will be adopted.
- Water sprinkling will be done to suppress the dust emission.
- PPE kit will be provided to workers.
- Regular maintenance of HEMMs & transportation vehicles will be done.
- Development of Greenbelt in 7.5 m wide safety zone covering an area of 1.35 ha.

10.4 NOISE & GROUND VIBRATION MITIGATION

10.4.1 Noise Abatement and Control

- Proper maintenance, oiling and greasing of machines
- Limiting time exposure of workers to excessive noise.
- Providing Protection equipment like earmuffs and ear-plugs to workers.
- Controlled Blasting will be adopted.
- Development of Greenbelt in 7.5 m wide safety zone covering an area of 1.35 ha.
- Adequate silencers will be provided in all the diesel engines.
- Periodic noise level monitoring will be done.

10.5 WATER MANAGEMENT

10.5.1 Surface Water Management

- No waste water will be discharged outside the project Area.
- Construction of garland drain to channelized the surface runoff.
- Development of Rain water harvesting ponds.
- The rain water collected in mining pit will be used for plantation, dust suppression requirements.
- Domestic wastewater generated from the mine office will be treated using a septic tank, followed by upflow filtration, disinfected, and then repurposed for gardening and plantation.

10.5.2 Ground Water Management

- There is no toxic element in the mined-out material, which may contaminate ground/ surface water.
- There will be no significant impact on groundwater resources of buffer zone envisaged due to mining activity, as it is confined to a very small area and above water table.
- The working pit will not intersect ground water.

10.5.3 Waste Water Management

- No waste water will be generated during the mining activities.
- Domestic wastewater generated from the mine office will be treated using a septic tank, followed by upflow filtration, disinfected, and then repurposed for gardening and plantation.

10.5.4 Water Conservation Measures

Initially, water for drinking, mining operations, spraying, and plantation will be sourced from nearby villages. However, once the mine sump is developed, rainwater collected in the sump will be used for dust suppression, plantation, and other purposes.

10.6 Soil & Solid Waste Management

- The soil generated will be used for plantation.
- Waste will be dumped at designated site as per the Approved mining plan with height of 3 m and stabilized by retaining walls of rubble stone to arrest the rolling down. The drain towards lower side with a siltation tank will be provided.
- The lessee may sale the waste after crushing and grinding or as it as per requirement.
- The waste will be used for construction of approach roads, site services etc. Some waste may be used by local habitants.
- The waste may also use as M sand as per government policy.

10.7 LAND ENVIRONMENT

10.7.1 Reclamation Plan for Land

Total 1637 saplings will be planted over an area of 1.637-hectare area out of which 1.35 ha will be planted in 7.5 m safety barrier zone of the mine lease area and unworked area and remaining 0.287 ha will be planted outside the lease area, which will be 33% of total mining lease area.

At the conceptual stage, the total excavated area will be 3.60 ha, which will be converted into a water reservoir, aiding in groundwater recharge.

Land use Table for pre-operational, operational and post-operational phases are given in **Chapter 2 Table 2.5.**

10.8 OCCUPATION HEALTH AND SAFETY

Anticipated Occupational & Safety Hazards

- Heat Stress and Heat Stroke
- Dehydration
- Cardiac Disease
- Dust Exposure
- Deafness

- **All safety measures will be taken such as:**
  - The concentration of respirable dust in the workplace will be regularly monitored, as required by DGMS regulations.
  - Health checkups for workers will be conducted at regular intervals.
  - The mine management will provide necessary medical facilities for the workers.
  - The management will also collaborate with regulatory authorities, the general public, and local administration to evaluate the mine's environmental performance.
  - The mine management is committed to conducting operations that safeguard the environment while ensuring the health and safety of employees, customers, and the community. In line with this commitment, they will continuously work to improve and address any environmental or safety concerns.

A. Pre Placement and Periodical Health Status

Pre /post-employment checkup will be carried out and following tests will be conducted.

Periodical medical checkup of employed persons will be got done ones in a year.

B. Personal Protective Devices and Measures

- Face Mask for prevention of dust
- Ear Muff
- Safety Helmets
- Welder equipment for eye and face protection
- Leather Hand Gloves
- Asbestos Hand Gloves
- Safety Shoes

10.9 ENVIRONMENTAL MONITORING PROGRAMME

The details of the same are given in Chapter- 6.

10.10 GREENBELT DEVELOPMENT & PLANTATION PROGRAMME

A Greenbelt/Plantation Program will be developed to enhance environmental sustainability and improve the ecological balance around the mining area. This program will focus on planting trees and shrubs to reduce soil erosion, improve air quality, and create habitats for wildlife. It will also help in controlling dust, improving aesthetics, and mitigating the environmental impact of mining operations. Additionally, the Greenbelt will contribute to carbon sequestration, playing a role in addressing climate change. The program will be designed to engage local communities, promoting environmental awareness and contributing to long-term ecological restoration.

Total 1637 saplings will be planted over an area of 1.637-hectare area out of which 1.35 ha will be planted in 7.5 m safety barrier zone of the mine lease area and unworked area and remaining 0.287 ha will be planted outside the lease area, which will be 33% of total mining lease area.

Native species which are more suitable to the local environment are preferred to be planted such as like Neem (Azadiractaindica), Peepal (ficusreligiosa) etc. Moreover, Plant species will be selected in consultation with forest department.

As per O.M. dated 16.01.2020 "The Mining Lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc."

Table: 10.1

Green Belt Development

Year	7.5 mtr. Safety barrier of the lease area & Unworked Area		Outside the lease area		Total	
	Area (Ha.)	No. of Trees	Area (Ha.)	No. of Trees	Area (Ha.)	No. of Trees
Existing	0.10	10	--	--	--	--
Plantation destroyed by local habitants during the long-closed period						
1st	0.20	200	0.287	287	0.487	487
2nd	--	--	--	--	--	--
3rd	--	--	--	--	--	--
Maintenance & Replacement of plants						
6th	1.15	1150	--	--	1.15	1150
End of life of mine	Maintenance & Replacement of plants					
Total	1.35	1350	0.287	287	1.637	1637

10.10.1 General Guidelines for Green Belt Development

- Trees will be planted to arrest auto-exhaust and noise pollution, and in such a way that there is no direct line of sight to the mine when viewed from a point outside the foliage perimeter.

10.11 CORPORATE ENVIRONMENT RESPONSIBILITY

Basic social amenities such as quality education, adequate healthcare, road infrastructure, and access to drinking water are essential for a good standard of living. The project proponent will ensure the provision of these fundamental facilities in the area. The details of the proposed Corporate Environmental Responsibility (CER) plan will be included based on the concerns raised during the public hearing, in compliance of OM F.No. 22-65/2017-IA.III dated 30.09.2020 & 20.10.2020.

10.12 CONCLUSION

In Conclusion, thorough analysis indicates that the proposed project is unlikely to exert significant adverse impacts on the ecological balance of the area. the EMP aims to protect natural resources, safeguard ecosystems, and promote long-term sustainability.

the Environmental Management Plan (EMP) for the proposed mining project outlines a comprehensive approach to minimizing environmental impacts, ensuring compliance with regulations, and promoting sustainable practices throughout the project's lifecycle.

The initiatives outlined, including the development of a Greenbelt, water conservation measures, and proper waste management, demonstrate the project's commitment to environmental responsibility.

Continuous monitoring, risk management, and community engagement are integral to the plan, ensuring that the mining operations are conducted in a manner that benefits both the environment and local communities. Furthermore, the integration of a Corporate Environmental Responsibility (CER) plan will address social concerns, ensuring that the project contributes to the region's overall development.

Through these efforts, the EMP seeks to create a balance between economic growth and environmental stewardship, fostering a sustainable future for all stakeholders involved.

CHAPTER–11
SUMMARY & CONCLUSION

11.1 JUSTIFICATION OF THE PROJECT

11.1.1 NEED OF THE PROJECT

PP has proposed to obtain EC for his Existing Quartz, Pyrophyllite, Red and Yellow Ochre Mining Project with proposed Crusher (400 TPD), M.L. No.-08/1982 (Revised- 23/2001) Area: 4.96 Hectare (Pvt. Land) located at Khasra No.-1, 902, 148 & 149 Near Village- Maharana, Tehsil- Buhana, District- Jhunjhunu (Rajasthan) and to address the gap between the demand and supply of above said minerals, benefiting consumers. Overall, the project will contribute to the region's economic growth and development.

In India, the minerals Quartz, Yellow Ochre, Red Ochre, and Pyrophyllite play a significant role in both national development and regional livelihoods.

Quartz is widely used in the country's glass, ceramic, and electronics industries, and its demand is growing rapidly due to its applications in solar panels and semiconductors. Major quartz-producing states like Rajasthan, Andhra Pradesh, Tamil Nadu, and Karnataka benefit from mining-related employment and the growth of allied industries.

Yellow Ochre, predominantly found in Rajasthan (especially Jodhpur and Nagaur), is an important natural pigment used in paints, cement coloring, and traditional Indian art forms such as Madhubani and Warli painting. It also holds cultural value, particularly among tribal communities, and supports local craft-based economies.

Red Ochre, similar in composition but richer in hematite content, has both cultural and industrial significance. Historically used in prehistoric cave art like that of Bhimbetka in Madhya Pradesh, it continues to be employed in rural India for rituals, folk art, and natural paints. Rajasthan, Madhya Pradesh, and Andhra Pradesh are key contributors to India's red ochre supply. Its use in natural paint and coatings also creates opportunities for eco-friendly product industries.

Meanwhile, Pyrophyllite, mainly extracted in Madhya Pradesh (especially in Chhatarpur and Tikamgarh), Uttar Pradesh, and Andhra Pradesh, is a vital raw material in ceramics, refractories, paper, insecticides, and paints. It supports regional ceramic clusters and small industries while also contributing to India's export economy, especially to markets in East Asia.

Collectively, these minerals not only strengthen India's industrial base but also enhance rural employment, support traditional art and cultural heritage, and generate export revenues. Their presence in mineral-rich regions ensures a steady source of income for local communities and plays a key role in the socio-economic development of various parts of the country.

11.1.2 PROJECT DETAILS

Table 11.1

Location of the Project

S.No.	PARTICULARS	DETAILS
1.	Village	Maharana
2.	Tehsil	Buhana
3.	District	Jhunjhunu
4.	State	Rajasthan

5.	**Khasra No.**	902, 148, 149, 9
6.	**Latitude & Longitude**	

Pillar No.	Latitude(N)	Longitude(E)
A.	28°08'50.94"	75°49'09.23"
B.	28°08'50.57"	75°49'00.15"
C.	28°08'57.06"	75°48'59.82"
D.	28°08'57.43"	75°49'08.09"

Source: Aravalli certificate

7.	**SOI Toposheet No.**	44 P/12, 44P/16

Cluster Certificate – Not Applicable as the lease area was executed and registered before 09.09.2013 notification.

Aravalli Certificate was issued by Office of Mining Engineer, Mines and Geology Department, Jhunjhunu, vide Letter no. ME/Jhunjhunu/ML/08/82/2024/2461 dated 29.11.2024.

DCF Certificate was issued by DCF, Jhunjhunu vide letter no. 8986 dated: 18.10.2003 and Application regarding distance from mine to NP/WLS has been forwarded from Mining Engineer, Jhunjhunu to DCF, Jhunjhunu vide letter no. ME/Jhunjhunu/Ma.Chi/ML 8/82/2024/2473 dated 03.12.2024.

DSR- As Per Gazette Notification (Extraordinary) No. So, 2827 Wednesday, July-25 2018 Of Ministry of Environment, Forest and Climate Change, Govt. of India (MoEF&CC), DSR for Jhunjhunu district has been signed by Mining Engineer.

11.1.3 MINING DETAILS

Table 11.2
Mining Details

S. No.	PARTICULARS	DETAILS
1.	Method of Mining	Semi –mechanized Opencast Mining
2.	Mineable Reserves (Tonnes)	4603700
3.	Life of Mine	–8.65 years says 9 years
4.	Proposed Production	8,00,120 (ROM) (Mineral- 6,00,090 TPA + Waste- 2,00,030 TPA)
5.	Elevation Range	325-400 mRL
6.	General Ground level	300 mRL
7.	Ground Water Table	60-70 m bgl
8.	Ultimate Working Depth of Pit	20m i.e. 280 mRl
9.	Number of Working Days/Year	300
10.	Number of shifts per day	1
11.	Total Waste generation at the end of fifth year	8,03,430 T

Source: Approved Mining Plan

11.1.4 COST OF PROJECT AND EMP

Table 11.3
PROJECT AND EMP COST
Project COST: 787 Lakhs

S No.	Description		Measures	EMP COST	
				Capital Cost (in Lacs)	Recurring Cost (in Lacs)
1.	Environment Monitoring	Water Quality Analysis	------	--	0.3
		Air	(I) Air Pollution Monitoring	--	1
			(ii) Green Belt/Plantation	32.74	6.548
		Noise Pollution Monitoring	----	--	0.2
2.	Water Requirement		Provision for water tankers for water sprinkling on kacha roads and dust suppression at mines, for domestic purpose.	--	2.7
3.	Waste management		Municipal Sewage (Treatment through septic tank, up flow filtration and then disinfection)	2.5	0.5
4.	Construction and maintenances of approach road into metalled road approx. 0.95 km which will be used for mineral transportation till main road.			9.5	0.5
5.	Water Conservation & Management		Construction of Rainwater harvesting structures, berms, siltation pond & its maintenance	1.2	0.2
6.	CSR			15.74	--
7.	Blasting related safeguard expenses (Caution boards, Silencer Blower)			0.2	0.05
Total				**61.88**	**11.998**

11.1.5 BENEFITS OF PROJECT

The project will help meet the rising demand for Granite & Masonry Stone, which will, in turn, support the country's economic growth. It will also contribute to improving essential services in the local area, such as education, healthcare, family welfare, women's empowerment, natural resource management, water conservation. Additionally, the project will stimulate growth in nearby areas by creating more job opportunities, both directly and indirectly, while also boosting ancillary development and supporting infrastructure.

11.2 MITIGATIVE MEASURES

AIR QUALITY MANAGEMENT

- Whenever Drilling is required, wet drilling will be done.

- Controlled Blasting will be adopted.
- Covered transportation will be carried out.
- Water sprinkling will be done to suppress the dust emission.
- PPE kit will be provided to workers.
- Regular maintenance of HEMMs & transportation vehicles will be done.
- Development of Greenbelt in 7.5 m wide safety zone covering an area of 1.35 ha.

NOISE LEVEL MANAGEMENT

- Proper maintenance, oiling and greasing of machines
- Limiting time exposure of workers to excessive noise.
- Providing Protection equipment like earmuffs and ear-plugs to workers.
- Controlled Blasting will be adopted.
- Development of Greenbelt in 7.5 m wide safety zone covering an area of 1.35 ha
- Adequate silencers will be provided in all the diesel engines.
- Periodic noise level monitoring will be done.

WATER MANAGEMENT

- No waste water will be discharged outside the project Area.
- Construction of garland drain to channelized the surface runoff.
- Development of Rain water harvesting ponds.
- The rain water collected in mining pit will be used for plantation, dust suppression requirements.
- Domestic wastewater generated from the mine office will be treated using a septic tank, followed by upflow filtration, disinfected, and then repurposed for gardening and plantation.
- The working pit will not intersect ground water.

GREENBELT/PLANTATION

Schedule of Greenbelt/Plantation: -

Table 11.4
Green Belt Development

Year	7.5 mtr. Safety barrier of the lease area & Unworked Area		Outside the lease area		Total	
	Area (Ha.)	No. of Trees	Area (Ha.)	No. of Trees	Area (Ha.)	No. of Trees
Existing	0.10	10	--	--	--	--
Plantation destroyed by local habitants during the long-closed period						
1st	0.20	200	0.287	287	0.487	487
2nd	--	--	--	--	--	--
3rd	--	--	--	--	--	--
Maintenance & Replacement of plants						

6th	1.15	1150	--	--	1.15	1150
End of life of mine	Maintenance & Replacement of plants					
Total	1.35	1350	0.287	287	1.637	1637

Note: - *As per O.M. dated 16.01.2020 "The Mining Lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc."*

The plant species will be selected in consultation with forest department.

11.3 CONCULSION

The project will be proving beneficial in terms of socio-economic development as it will provide employment to locals. There will be increase in revenue generation to the government by way of royalty, excise and other taxes. Further, the average income level, which is the indicator of socio – economic status of house hold is expected to increase, which will ultimately result in the better standard of living of the people.

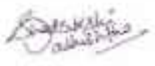
CHAPTER–12
DISCLOSURE OF THE CONSULTANT ENGAGED

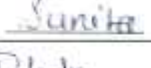
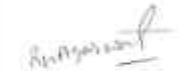
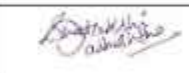
Declaration by Experts contributing to the ***Existing Quartz, Pyrophyllite, Red and Yellow Ochre Mining Project with proposed Crusher (400 TPD), M.L. No.-08/1982 (Revised- 23/2001) Area: 4.96 Hectare (Govt. Land) located at Khasra No.- 1, 902, 148 & 149 Near Village- Maharana, Tehsil- Buhana, District- Jhunjhunu (Rajasthan).***

I hereby, certify that I was a part of the EIA team in the following capacity that developed the above report.

EIA Coordinator	1(a)Mining
Name	Dr. Amit Kumar Yadav
Signature & Date	
Period of involvement	
Contact Information	Cosmos Enviro Consultancy Address: B-25-B, 10B Scheme, Riddhi Siddhi Chouraha, Gopal Pura Bypass, Jaipur – 302018 (Raj.).
Phone No.	+91 7728881212
E-mail	info.cecjaipur@gmail.com

FUNCTIONALAREAEXPERTS:

Functional areas	Name of the expert/s	Involvement (period and task**)	Signature and date
AP*	Mrs. Rashmi Shrimali (FAE)	• Site visit • Selecting parameters for monitoring. • Suggesting measures of reducing fugitive emission. • Identifying and assessing quantum of emissions. • Identification of probable impacts of the different air emissions from the proposed project. • Identification of suitable pollution control device.	
	Ms. Anchal Chauhan (FAA)		
WP*	Dr. Kumkum Mishra (FAE)	• Designing of water balance and developing schemes for cascading use (recycle, reuse) of water. • Evaluation of water pollution control management • Identification of probable impacts of effluent/waste water discharges into the receiving environment/water bodies	
	Dr. Preeti Shrimal (Team Member)		
	Mrs. Sanju Choudhary (FAA)		
SHW*	Ms. Shatakshi Vashishtha (FAE)	• Computation and evaluation of solid waste as per applicable Rules:	

	Dr. Kumkum Mishra (Team Member)	• Construction &Demolition waste Management Rules, 2016 • Solid Waste Management Rules, 2016 • Hazardous &Other Waste Management Rules, 2016 (earlier Hazardous Waste Management Rules, 2008)	
	Ms. Anchal Chauhan (FAA)		
SE*	Mrs. Sunita Devi (FAE)	• Conducting baseline socio-economic survey • Secondary data collection • Evaluation of socioeconomic status of study area • Assessment of the possible changes to socioeconomic issues arising out of the proposed expansion project. Conduct social needs	
	Dr. Amit Kumar Yadav (Team Member)		
	Dr. Joy Gardner (Team Member)		
EB*	Dr. Deepanjali Gardner (FAE)	• To survey flora–fauna. • To identify ecologically important areas around project location. • To identify threatened species in the project area. • To identify impact of proposed project on flora–fauna. • To recommend mitigations /greenbelt development.	
	Mrs. Simran Singhal (Team Member)		
	Dr. Jatin Kumar Srivastava (FAE)		
Geo*	Mr. Ritendra Kumar Agarwal (FAE)	• Field Survey for assessing the regional and local geology of the area.	
HG*	Mr. Ritendra Kumar Agarwal (FAE)	• Analysis of surface hydrological data • Computation of ground water recharge, flow rate and direction.	
SC*	Ms. Shatakshi Vashishtha (FAE)	• Analysis of surface soil data	
AQ*	Mrs. Rashmi Shrimali (FAE)	• Analyzing micrometeorological data for use in modeling • Collecting and using secondary data on meteorology like cloud cover, inversion related data, mixing heights etc., for modeling • Application of relevant air quality models in prediction of dispersion of pollutants, • Plotting of isopleths of GLCs representing incremental pollution levels, on suitable maps showing both, the sources of pollution as well as the environmentally sensitive receptors.	
	Mrs. Simran Singhal (Team Member)		
	Mr. Ripudaman Lal Srivastava (Team Member)		
NV*	Dr. Jatin Kumar Srivastava (FAE)	• Identification of the noise generation sources • Mitigation measures for the impact	
	Ms. Shatakshi Vashishtha (FAE)		
	Mrs. Sanju Choudhary (FAA)		

LU*	Dr. Amit Kumar Yadav (FAE)	• Generation and analysis of data related to land use pattern • Integration of land use related data/information for assessing environmental impacts of developmental projects.	
	Mr. Ripudaman Lal Srivastava (Team Member)		
	Dr. Joy Gardner (Team Member)		
RH*	Mr. Goutam Kumar Banerjee (FAE)	• Assessment and mitigation of probable impacts. • Suggesting PPE for workers. • Measures for risk assessment.	

Declaration by the Head of the accredited consultant organization/authorized person

I, **Amit Kumar Yadav,** hereby confirm that the abovementioned experts prepared the ***Existing Quartz, Pyrophyllite, Red and Yellow Ochre Mining Project with proposed Crusher (400 TPD), M.L. No.-08/1982 (Revised-23/2001) Area: 4.96 Hectare (Govt. Land) located at Khasra No.- 1, 902, 148 & 149 Near Village- Maharana, Tehsil- Buhana, District- Jhunjhunu (Rajasthan).*** I also confirm that the consultant organization shall be fully accountable for any misleading information mentioned in this statement.

Signature:

Name	: **Dr. Amit Kumar Yadav**
Designation	: **Director**
Name of the EIA Consultant Organization	: **Cosmos Enviro Consultancy**
NABET Certificate No. & Issue Date	: NABET/EIA/24-27/IA 0148 issued on 20/11/2024 (Valid: 19/11/27)

****

ANNEXURE I

LEASE DOCUMENTS

200 Rs.

INDIA NON JUDICIAL

Rs 200

TWO HUNDRED RUPEES

[illegible] /नीम/[illegible]/[illegible]-8/[illegible]

[illegible] पेपर [illegible] रु. 3281/- (रुपये तीन सौ अठ्ठ[illegible]

[illegible] रुपये [illegible], एक [illegible], एक पाँच

[illegible] खनन पट्टा वाले

[illegible] निकट ग्राम

[illegible] (राज०) में क्षेत्र 1.2[illegible]

[illegible] (संलग्न [illegible] के अनुसार) जो राज्य

[illegible] (3[illegible]) [illegible] /कुव-2/82 जयपुर दिनांक 31.

[illegible] मिनरल्स ग्राइंडिंग [illegible]

[illegible] के नाम अवधि

[illegible] के लिये स्वीकृत हुआ

उसके लिये है। अन्य शर्तें व [illegible] प्रधान खनिज रियायत

नियमावली 1960 व एम. एम. आर. डी. एक्ट 1957 तथा [illegible]

[illegible] पर जो संशोधन हों उसके अनुसार व संलग्न

[illegible] शर्तों के अनुसार होगी।

[illegible]

हस्ताक्षर पट्टाधारी/प्रार्थी

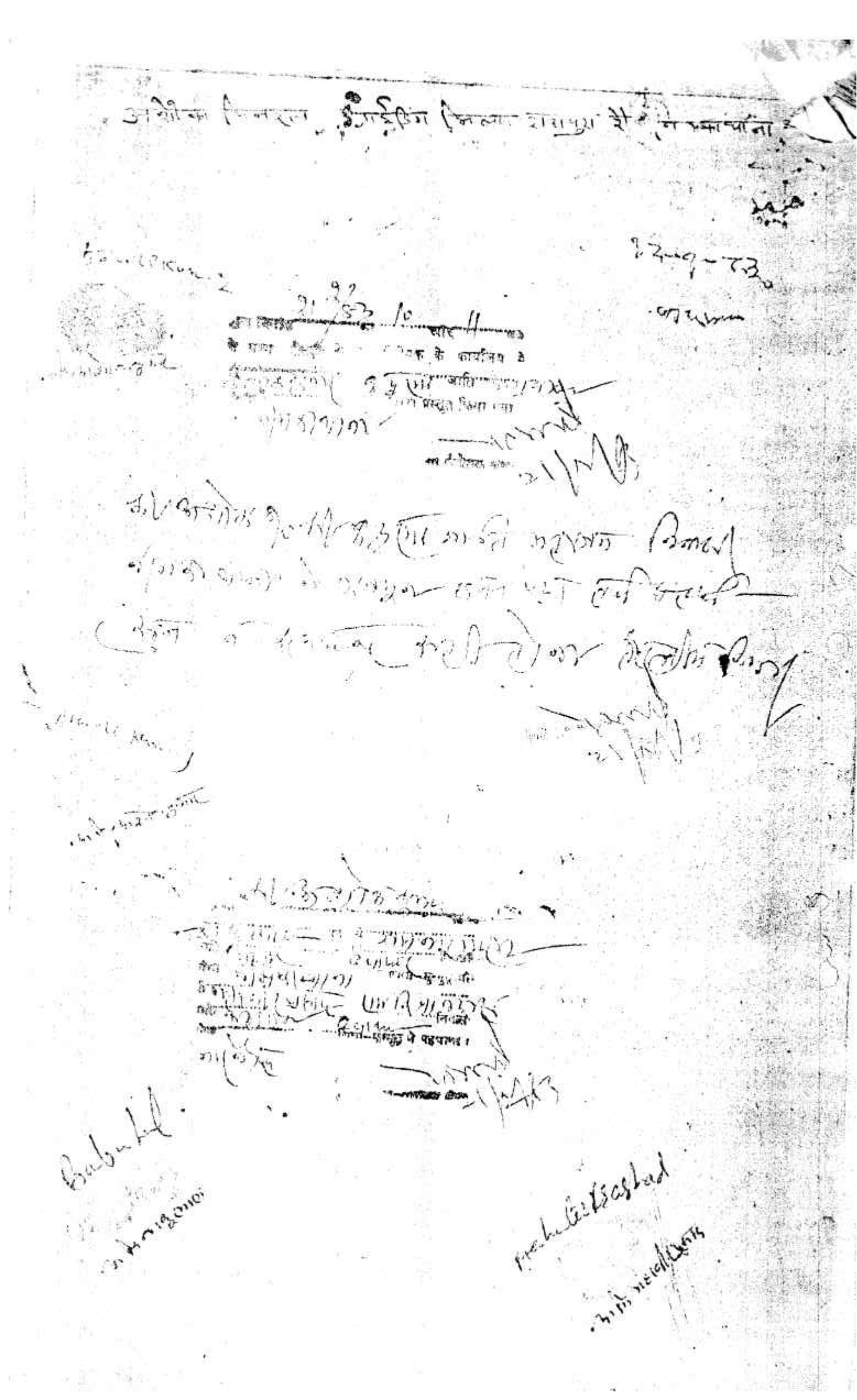
[illegible]

गवाह :—

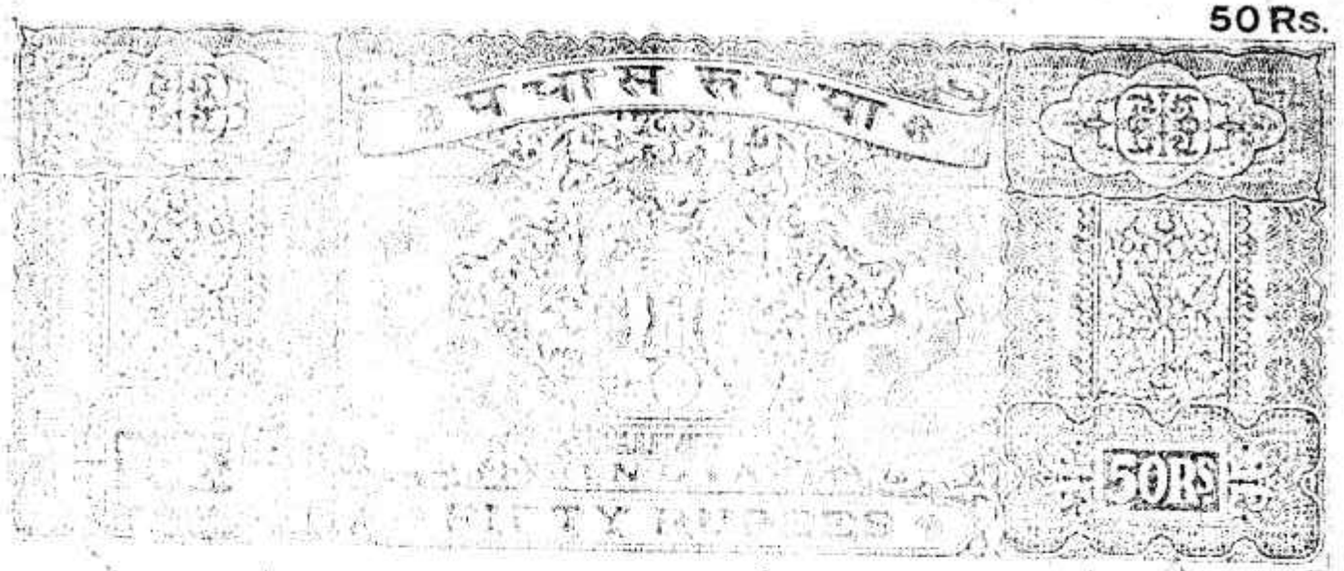
1- [illegible]

2- [illegible]

[illegible]



50 Rs.



50 Rs.

पचास रुपया

INDIA

FIFTY RUPEES

50 Rs.

सरकार,5/नीज/रि.प्र/क/स-4/82

यह नान ज्युडिशियल स्टाम्प पेपर खनन पट्टा खनिज [illegible] रेड व [illegible] डोमर एवं पायरोफायलाइट मिन्स ग्राम - महराना तहसील खेतड़ी जिला - झुंझुनूं में क्षेत्र [illegible] हेक्टेयर जो राज्य सरकार के आदेश संख्या प. 5(333) खान/ग्रुप-2/82 जयपुर दिनांक 31 दिसम्बर 1982 से श्री [illegible] जिलन, [illegible] रोड, [illegible] के पक्ष में स्वीकार हुआ है के संविदा के साथ है।

Ashok Kumar

हस्ताक्षर पट्टाधारी/प्रतिनिधि

ATTESTED

INDIA

पाँच रुपये

FIVE RUPEES

5 RS

सरकार/नोट/रि॥/३./१०.७.८/८२

यह स्टाम्प पेपर [illegible] स्टाम्प पेपर न. [illegible]
का [illegible] [illegible] [illegible] [illegible] [illegible] ओंकार एवं पाम[illegible]
[illegible] [illegible] - [illegible] तहसील - [illegible] - जिला - [illegible]
मे [illegible] जो राजस्थान सरकार के आदेश संख्या प.५(अ[illegible]
[illegible] - ४/८२ जयपुर दिनांक ३ दिसम्बर, १९८२ से प्रदत्त [illegible]
[illegible] के संबंध में जारी है।

[illegible]
[illegible] पटवारी/[illegible]

[illegible]
[illegible]
[illegible], [illegible]

[illegible]

INDIA

तीन रुपये

तीन रुपये

THREE RUPEES THREE RUPEES

3RS

[illegible]/[illegible]/[illegible]

यह स्टाम्प पेपर नान ज्यूडिशियल स्टाम्प पेपर रु.3/-
का [illegible] है। [illegible] [illegible]
[illegible] तहसील [illegible] जिला [illegible]
[illegible] राज्य सरकार के आदेश संख्या प. 4(333)[illegible]/
[illegible]-4/82 जयपुर दिनांक [illegible] 1982 [illegible]
[illegible] (प्रा.) [illegible] रोड, [illegible]
[illegible] के साथ है।

A. Shek Kumar

हस्ताक्षर पटवारी [illegible]

ATTESTED

सहायक कृषि अधिकारी

बीन का थाना

[illegible]

MODEL FORM OF MINING LEASE

THIS INDENTURE made this 10th day of Feb 1983 between the Gevernor of _____ (hereinafter referred to as the "State Government" which experession shall where the Context so admits be deemed to include the successors and assigns) of the one part and

When the lessee is an individual

_____ (Name of person with address and occupation) (hereinafter referred to as "the lessee" which expression shall where the context so admits be deemed to include his heirs, executors, administrators, representatives and permitted assigns).

When the lessees are more than one individual

_____ (Name of person with address and occupation) and _____ (Name of person with address and occupation) (hereinafter re ered to as the lessees which expression shall where the context so admits be deemed to include their respective heirs, executors, administrators, representatives and their permitted assigns).

When the lessee is a registered firm

(1) श्री _____ (Name and address of partner) son of _____ of _____

2. ~~son of~~ _____ of _____

~~son of~~ _____ of _____

all carrying on business in partnership under the firm name and style of _____ (name of the firm) registered under the Indian Partnership Act, 1932 (9 of 1932) and having their registered office at _____ in the town of _____ (hereinafter reffered to as the licensees, which expression where the context so admits be deemed to include all the said partners, their respective heirs, executors, legal representatives and permitted assigns).

When the lessee is a registered company.

_____ (Name of company) a company registered under _____ (Act under which incorporated) and having its registered office at _____ (Address) (hereinafter referred to as the lessee which expression shall where the context so admits be deemed to include its successors and permitted assigns) of the other part.

WHEREAS THE lesssee/lessees has/have applied to the State Government in accordance with the Mineral Concession Rules, 1960 (hereinafter referred to as the said Rules) for a mining lease for _____ in respect of the lands described in Part I of the Schedule hereunder writen and has/have deposited with the State Government the sum of Rs. 1000/- ~~(Rupees)~~ as secur ty and the sum of Rs. 500/- ~~(Rupees)~~ for meeting the preliminary expenses for amining lease (and ~~WHEREAS the Central Government has approved the grant of the lease~~).*

WITNESETH that the consideration of the rents and royalties covenants and agreements by and in these presents and the schedule hereunder written reserved and contained and on the part of the lessee/lessees to be paid observed and performed, the State Government (with the approval of the Central Government)* hereby grants and demise unto lessees,

All those the mines beds/veins/seams of [illegible] (here state the mineral or minerals)(hereinafter and in the Schedule referred to as the said minerals (situated lying and being in or under the lands which are referred to in Part I of the said schedule, together with the liberties, powers and privileges to be exercised or enjoyed in connection herewith which are mentioned in Part II of the said Schedule subject to the restrictions and conditions as to the exercise and enjoyment of such liberties, powers and privileges which are mentioned in Part III of the said Schedule EXCEPT and reserving out of this demise unto the State Government the liberties, powers and privileges mentioned in Part IV of the said Schedule To HOLD the premises hereby granted and demised unto the lessee/lessees from the [illegible] 19 for the term of [illegible] years hence next ensuing YIELDING AND PAYING therefore into the State Government the several rents and royalties mentioned in Part V of the Said Schedule at the respective times therein specified subject to the provisions contained in Part VI of the said Schedule and the lessee/lessees hereby covenants/covenant with the State Government as in Part VII of the said Schedule is expressed and the State Government hereby covenants with the lessee/lessees as in Part VIII of the said Schedule as expressed AND it is hereby mutually agreed between the parties hereto as Part IX of the said Schedule is expressed.

IN WITNESS WHEREOF these presents have been executed in manner hereunder appearing the day and year first above written,

The Schedule above referred to

---

* In case of minerals included in the first Schedule of the Mines and Minerals (Regulation & Development) Act, 1957.

PART I

The Area of this Lease

Location and area of the lease,

All the tract of land situated at ..... (Description of area or areas) ..... in (Pargana) in ..... the Registration District of ..... Sub-District ..... and Thana ..... bearing Cadastral Survey Nos. — ..... — containing an area of ..... or thereabouts delineated on the plan hereto annexed and thereon coloured — and bounded as follows :—

On the North by
On the South by
On the East by
and
On the West by

hereinafter referred to as "the said lands"

PART II

Liberties, Powers and Privileges to be exercised and enjoyed by the Lessee/Lessees subject to the Restrictions and Conditions in PART III

To enter upon land and search for, win, work etc

1. Liberty and power at all time during the term hereby demised to enter upon the said lands and to search of mine, bore, dig, drill or win, work, dress, process, convert, carry away and dispose of the said mineral/minerals.

To sink, drive and make pits, shafts and

2. Liberty and power for or in connection with any of the purposes mentioned in this part to sink, drive, make, maintain and use in the said lands any pits, shafts, inclines, drifts, levels, waterways, airways, and other works (and to use, maintain, deepen or extend any existing works of the like nature in the said lands.

To bring and use machinery, equipment etc.

3. Liberty and power for or in connection with any of the purpose mentioned in this part to erect, construct, maintain and use on or under the said lands any engine, machinery, plant, dressing floors, furnaces, cock ovens, brick clins, workshops, store-house, bungalows, godowns, sheds and other buildings and other works and conveniences of the like nature on or under the said lands.

To make roads and ways etc. and use existing roads and ways.

4. Liberty and power for or in connection with any of the purposes mentiond in this part to make any tramways, railways, roads aircraft, landing grounds and other ways in or over the said lands and to use, maintain and go and repass with or without horses, cattle, wagons, aircrafts, locomotives or other vehicles over the same (or any existing tramways, railways, roads and other ways in or over the said lands) on such conditions as may be agreed to.

To get building and road material etc.

5. Liberty and power for or in connection with any of the purposes mentioned in this part to quarry and get stone gravel

and other building and road materials and clay and to use and employ the same and to manufacture such clay into bricks or tiles and to use such bricks or tiles but not to sell any such material, bricks or tiles.

To use water from streams etc.

6. Liberty and power for or in connection with any of the purposes mentioned in the part but subject to the rights of any existing or future lessees and with the written permission of ~~Deputy Commissioner~~/Collector to appropriate and use water from any steams, water-courses, springs or other sources in or upon the said lands and to divert step up or dam any such steam or water-course and collect or impound any such water and to make, construct and maintain any water-course culverts, drains or reservoirs but not as so to deprive any cultivated lands, village, buildings or watering places for live-stock of a reasonable supply of water as before accustomed nor in any way to foul or pollute any streams or springs. Provided that the lessee/lessees shall not interfere with the navigation in any navigable stream nor shall divert such stream without the previous written permission of the State Government.

Ashok Kumar

To use land for stacking, heaping, depositing purposes.

7. Liberty and power to enter upon and use a sufficient part of the surface of the said lands for the purpose of stacking, heaping, storing or depositing therein any produce of the mines or works carried on and any tools, equipment earth and materials and substances, dug or raised under the liberties and power mentioned in this part.

Beneficiation and conveying away of production.

8. (a) Liberty and power to enter upon and use a sufficient part of the said lands to beneficiate any or produced from the said lands and to carry away such beneficiated ore.

To make coke. (to be used in case of coal only).

(b) Liberty and power upon the said lands to convert into coke any coal or coal dust produced from the said lands and to carry away such coke.

To clear bushwood and to fell and utilise trees. etc.

9. Liberty and power for or in connection with any of the purposes mentioned in this part and subject to the existing rights of others and save as provided in clause 3 of part III of this schedule to clear under growth and brushwood and to fell and utilise any trees or timber standing or found on the said lands provided that the State Government may be ask the lessee/lessees to pay for any trees or timber felled and utilised, by him/them at the rates specified by the Deputy Commissioner/Collector or the State Government.

Ashok Kumar

PART III

Restrictions and Conditions as the Exercise of the Liberties, Powers and Privileges in PART II

No building etc. upon certain places.

1. No building or thing shall be erected, set-up or placed and no surface operations shall be carried on in or upon any public pleasure ground, burning or burial ground or place held sacred by any class of persons or any house or village

PART I

The Area of this Lease

Location and area of the lease,

All the tract of land situated at ____ (Description of area or areas) ____ in (Pargana) in ____ the Registration District of ____ Sub-District ____ and Thana ____ bearing Cadastral Survey Nos. ____ containing an area of ____ or thereabouts delineated on the plan hereto annexed and thereon coloured ____ and bounded as follows :—

On the North by
On the South by
On the East by
and
On the West by

hereinafter referred to as "the said lands"

PART II

Liberties, Powers and Privileges to be exercised and enjoyed by the Lessee/Lessees subject to the Restrictions and Conditions in PART III

To enter upon land and search for, win, work etc

1. Liberty and power at all time during the term hereby demised to enter upon the said lands and to search of mine, bore, dig, drill or win, work, dress, process, convert, carry away and dispose of the said mineral/minerals.

To sink, drive and make pits, shafts and

2. Liberty and power for or in connection with any of the purposes mentioned in this part to sink, drive, make, maintain and use in the said lands any pits, shafts, inclines, drifts, levels, waterways, airways, and other works (and to use, maintain, deepen or extend any existing works of the like nature in the said lands.

To bring and use machinery, equipment etc.

3. Liberty and power for or in connection with any of the purpose mentioned in this part to erect, construct, maintain and use on or under the said lands any engine, machinery-plant, dressing floors, furnaces, cock ovens, brick clins, work-shops, store-house, bungalows, godowns, sheds and other buildings and other works and conveniences of the like nature on or under the said lands.

To make roads and ways etc. and use existing roads and ways.

4. Liberty and power for or in connection with any of the purposes mentiond in this part to make any tramways, railways, roads aircraft, landing grounds and other ways in or over the said lands and to use, maintain and go and repass with or without horses, cattle, wagons, aircrafts, locomotives or other vehicles over the same (or any existing tramways, railways, roads and other ways in or over the said lands) on such conditions as may be agreed to.

To get building and road material etc.

5. Liberty and power for or in connection with any of the purposes mentioned in this part to quarry and get stone gravel

site, public road or other place which the State Government may determine as public ground nor in such a manner as to injure or prejudicially effect any buildings, works, property or rights of other persons and no land shall be used for surface operations which is already occupied by persons other than the State Government for works or purposes not included in this lease. The lessee/lessees shall not also interfere with any right of way, well or tank.

Permission for surface operations in a land not already in use.

2. Before using for surface operations any land which has not already been used for such operations, the lessee/lessees shall give to ~~Deputy Commissioner~~/Collector of the District two calendar months previous notice in writing specifying the name or other description of the situation and the extent of the land proposed to be so used and the purpose for which the same is required and the said land shall not be so used if objection is issued by the ~~Deputy Commissioner~~/Collector within two months after the receipt by him of such notice, unless the objections so stated shall on reference to the State Government be annulled or waived.

To cut trees in unreserved lands

3. The lessee/lessees shall not without the express sanction of the Chief conservator of Forests or Distt. Forest Officer/Collector cut down or injure any timber or trees on the said lands but may without such sanction clear a way any brushwood or undergrowth which interferes with any operations authorised by these presents. The Chief conservator of Forest or Distt. Forest Officer/Collector or the State Government may require the lessee/lessees to pay for any trees or timber felled and utilised by him/them at the rates specified by the Chief conservator of Forest or Distt. Forest Officer/Collector of the District.

To enter upon reserved forests

5. Notwithstanding anything in this Schedule contained the lessee/lessees shall not enter upon any reserved forest included in the said lands without previous sanction in writing of the District Forest Officer nor fell, cut and use any timber or trees without obtaining the sanction in writing of that Officer nor otherwise than in accordance with such conditions as the State Government may prescribe.

No mining operations within 50 metres of public works etc.

5. The lessee/lessees shall not work or carry on or allow to be worked or carried on any mining operations at or to any point within a distance of 50 metres from any railway line except with the previous written permission of the Railway Administration concerned or under or beneath any ropeway or any ropeway trestle or station except under and in accordance with the written permission of the authority owning the ropeway or from any reservoir, canal or other public works such as public roads and buildings or inhabited site except with the previous written permission of the ~~Deputy Commissioner~~/Collector or any other Officer authorised by the State Government in this behalf and otherwise than in accordance with such instructions, restrictions and conditions either general or special which may be attached to such permission. The said distance of 50 metres shall be measured in the case of railway reservoir or canal horizontally from the outer toe of the

bank or the outer edge of the cutting as the case may be and in case of a building horizontally from the plinth thereof. In the case of village roads no working shall be carried on within a distance of 10 metres of the outer edge of the cutting except with the previous permission of the Deputy Commissioner/Collector or any other officer duly authorised by the State Government in this behalf and otherwise than in accordance with such directions, restrictions and additions, either general or special, which may be attached to such permission.

Explanation:—For purposes of this clause the expression 'Railway Administration' shall have the same meaning as it is defined to have in the Indian Railway Act, 1890, by clause (6) of Section 3 of that Act. 'Public Road' shall mean a road which has been constructed by artificially surfaced as distinct from a track resulting from repeated use. Village road will include any track shown in the Revenue record as village road.

Facilities for adjoining Government licenses and leases.

6. The lessee/lessees shall allow existing and future holders of Government licenses or leases over any land which is comprised in or adjoins or is reached by the land held by the lessee/lessees reasonable facilities of access thereto :

Provided that no substantial hindrance or interference shall be caused by such holders of licences or leases to the operations of the lessee/lessees under these presents and fair compensation (as may be mutually agreed upon or in the event of disagreement as may be decided by the State Government) shall be made to the lessee/lessees for all loss or damage sustained by the lessee/lessees by reason of the exercise of this liberty.

PART IV

Liberties, Powers and Privileges reserved to the State Government

To work other minerals

1. Liberty and power for the State Government or to any lessee or persons authorised by it in that behalf to enter into and upon the said lands to search for win, work, dig, get raise, dress process, convert and carry away minerals other than the said minerals and any other substances and for those purposes to sink drive, make erect, construct, maintain and use such pits shafts inclines; drifts, levels and other lines, waterways, airways, water courses, drains, reservoirs, engines, machinery, plant; buildings, canals, tramways, railways roadways and other works and conveniences as may be deemed necessary or convenient ;

PROVIDED THAT in the exercise of such liberty any power no substantial hindrance or interference shall be caused to or with the liberties, powers and privileges of the lessee/lessees under these presents and that fair compensation (as may be

mutually agreed upon or in the event of disagreement as may be decided by the State Government) shall be made to the lessee/lessees for all loss or damage sustained by the lessee/ lessees by reason or in consequence of the exercise of such liberty and power.

To make railways and roads.

2. Liberty and power for the State Government or any lessee or person authority by it in that behalf to enter into and upon the said lands and to make upon over or through the same any railways, tramways, roadways or pipelines for any purpose other than those mentioned in part II of these presents and to get from the said lands, stones, gravel, earth and other materials for making, maintaining and repairing such railways tramways and roads or any existing railways and roads and to go and repass at all times with or without horses, cattle or other animals; carts, wagons, carriages locomotives or other vehicles over or along any such railways, tramways, roads, lines and other ways for all purposes and as occasion may require, provided that in the exercise of such liberty and power by such other lessee or person no substantial hindrance or interference shall be caused to or with the liberties, powers and privileges of the lessee/lessees under these presents and that fair compensation as may be mutually agreed upon or in the event of disagreement as may be decided by the State

Ashok Kumar

Page (7)

Rent & Royaltyes received by this lease to pay dead rent or roy whichever is grater.

1- The lease shall pay for every year except the first year of th deadrent as specified is clause 2 of this part.

2- Provided that where the holder of such mining lease be come liab under section 9 of the Act, to pay royalty for any mineral remov this or by his agent manager employee contractor or sub-lessee lease area he shall be liable to pay either such royalty or the deadrent or rent respect of that the are whichever is higher ra & mate of payment of deadrent.

3. Subject to the provision of caluse of this part during the subsistence of the lease the lessee/lessees shall pay to State Annual deadrent for the land demised and desirable in part of t schedule for rate for the time being specified in the third schedule of the Act, in such manner as may specified theis be - behalf by the State Govt.

Ashok Kumar

6th to 10th	Rs. 25.00	Rs.
11th & above	Rs. 37.50	Rs. 37.50

*The lessee has to pay in advance to the State Govt. the annual dead-rent in two equal half-yearly instalments on the date first instalment falling due on the date one year after the date of registration and next on date six months thereafter every year.

Rate and mode of payment of royalty.

3. Subject to the provision of clause I of this Part, the lessee/lessees shall during the subsistance of this lease pay to the State Government at such Times and in such manner as the State Government may prescribe royalty in respect of any mineral/minerals removed by him/them from the leased area at the rate for the time being specified in the Second Schedule to the Mines and Minerals (Regulation and Development) Act, 1957.

Payment of surface rent and water rate.

5. The lessee/lessees shall pay rent and water rate to the State Government in respect of all parts of the surface of the said lands which shall from time to time be occupied or used by the lessee/lessees under the authority of these presents at the rate of Rs..... ....and Rs.....respectively per annum per hectare of the area so occupied or used and so in proportion for any area less than a hectare during the period from the commencement of such occupation or use until the area shall cease to be so occupied or used and shall as far as possible restore the surface land so used to its original condition. Surface rent and water rate shall be paid as hereinbefore detailed in clause 2 PROVIDED THAT NO such rent/water rate shall be payable in respect of the occupation and use of the area comprised in any roads or ways to which the public have full right of access.

PART VI

Provisions relating to the Rents and Royalties

Rent and Royalties to be free from deduction etc.

1. The rent, water rate and royalties mentioned in Part V of this Schedule shall be paid free from any deductions to the State Government at.....and in such manner as the State Government may prescribe PROVIDED ALWAYS and it is hereby agreed that Rs ..... the balance standing to the credit of the lessee/lessees on account of the deposit made by him/them as a licensee/licensees over an area which included the said lands shall be retained and accepted by the State Government in satisfaction of the rents and royalties mentioned in Part V until they reach that amount.

Mode of computation of royalties.

2. For the purposes of computing the said royalties the lessee/lessees shall keep a correct account of the mineral/ minerals produced and despatched. The accounts as well as the weight of the mineral/ minerals in stock or in the process

* (Here insert the manner in which and the time at which the dead-rent and water rate should be paid).

of export may be checked

To gether with simple interest due there on at the rate of 10% per Anum.

not paid in time.

royalty or other sums due to the State Government under the terms and conditions of these presents be not paid by the lessee/lessees within the prescribed time the same may be recovered on a certificate of such officer as may be specified by the State Government by general or special order, in the same manner as an arrear of land revenue.

PART VII

The Covenants of the Lessees

Lessee to pay rents and royalties, taxes, etc.

1. The lessee/lessees shall pay the rent, water rate and royalties reserved by this lessee at such times and in the manner provided in PARTS V & VI of these presents and shall also pay and discharge all taxes, rates assessments and impositions whatsoever being in the nature of public demands which shall from time to time be charged, assessed or imposed by the authority of the Central and State Governments upon or in respect of the premises and works of the lessee/lessees in common with other premises and works of a like nature except demands for land revenues.

To maintain and keep boundary marks in good order.

2. The lessee/lessees shall at his/their own expense erect and at all times maintain and keep in repair boundary marks and pillers according to the demarcation to be shown in the plan annexed to this lease. Such marks and pillers shall be sufficiently clear of the shrubs and other obstructions as to allow easy indentificatian.

To commence operation within a year and work in a workmanlike manner.

3. Unless the State Government for good cause permits otherwise, the lessee/lessees shall commence operation within one year from the date of execution of the lease and shall thereafter at all times during the continuance of this lease search for, win, work and develop the said minerals without voluntary intermission in a skilful and workman-like manner and as prescribed under clause 12 hereinafter without doing or permitting to be done any unnecessuary or avoidable damage to the surface of the said lands or the crops, buildings, structures or other proprety thereon. For the purposes of this clause operations shall include the erection of machinery laying of a tramway or construction of a road in connection with the mine.

To indemnify Government against all claims.

4. The lessee/lessees shall make and pay such reasonable satisfaction and compensation as may be assessed by lawful authority in accordance with the law in force on the subject for all damage, injury or disturbance which may be done by him/them in exercise of the powers granted by this lease and shall indemnify and keep indemnified fully and completely the State Government against all claims which may be

made by any person or persons in respect of any such damage, injury or disturbance and all costs and expenses in connection therewith.

To secure and keep good condition pits, shafts etc.

5. The lessee/lessees shall during the subsistance of this lease well and sufficiently secure and keep open with timber or other durable means all pits, shafts and workings that may be mode or used in the said lands and made and maintain sufficient fences to the satisfaction of the State Government round very such pit, shaft or working whether the same is abondoned or not and shall during the same period keep all workings in the said lands except such as may be abandoned accessible free from water and foul air as far as possible.

To strengthen and support the mine to necessary extent.

6. The lessee/lessees shall strength and support to the satisfaction of the Railway Administration concerned or the State Government, as the case may be any part of the mine which in its opinion requires such strengthening or support for the safety of any railway, reservoir, canal, road and any other public works or structures.

To allow inspection of workings.

7. The lessee/lessees shall allow any officer authorised by the Central Government or the State Government in that behalf to enter upon the permises including any building, excavation or land comprised in the lease for purpose of inspecting, examining, surveying and making plans thereof sampling and collecting any data and the lessee/lessees shall with proper person employed by the lessee/lessees and acquainted with the mines and work effectually assist such officer, agents, servants and workmen in conducting every such inspection and shall afford them all facilities, information connected with the working of the mines which they may reasonably require and also shall and will conform to and observe all orders and regulations which the Central and State Governments as the result of such inspection or otherwise may from time to time see fit to impose.

To report accident.

8. The lessee/lessees shall without delay send to the Director of Mines & Geology/Mining Engineer/Jt.Director Mines Safety, Ajmer/Collector a report of any accident causing death or serious bodily injury or serious injury to property or seriously affecting or endangering life or property which may occur in the course of the operations under this lease.

To report discovery of other minerals.

9. The lessee/lessees shall report to the State Government the discovery in the leased area of any mineral not specified in the lease within sixty days of such discovery alongwith full particulars of the nature and position of each such find. If any mineral not specified in the lease is discovered in the leased area, the lessee/lessees shall not win and dispose of such mineral unless such mineral is included in the lease or a separate lease is obtained therefor.

Ashok Kumar

To keep records and accounts regarding production and employee etc.

10 The lessee/lessees shall at all time during the said term keep or cause to be kept at an office to be situated upon or near the said lands correct and intelligible books of

accounts which shall contain accurate entries showing from time to time:—

(1) Quantity and quality of the said mineral/minerals realised from the said lands.

(2) Quantity of the various qualities of ores beneficiated or converted (for example coal converted into coke).

(3) Quantities of the various qualities of the said mineral/minerals sold and exported separately.

(4) Quantities of the various qualities of the said mineral/minerals otherwise disposed of and the manner and purpose of such disposal.

(5) The prices and all other particulars of all sales of said mineral/minerals.

(6) The number of persons employed in the mines or works or upon the said lands specifying nationality, qualifications and pay of the technical personnel.

(7) Such other facts, particulars and circumstances as the Central or the State Government may from time to time require and shall also furnish freeof charge to such officers and at such times as the Central and State Governments may appoint true and correct abstract of all or any such books of accounts and such information and returns to all or any of the matters aforesaid as the State Government may prescribe and shall at all reasonable times allow such officers as the Central Government or State Government shall in that behalf appoint to enter into and have free access to the said officers for the purpose of examining and inspecting the said books of accounts, plans and records and to make copies thereof and make extracts therefrom.

To maintain plans, sect.

11. The lessee/lessees shall at all times during the said term maintain at the mine office correct intelligible up-to-date and complete plans and sections of the mines in the said lands. They shall show all the operations and workings and all the trenches, pits and drillings made by him/them in the course of operations carried on by him/them under the lease, faults and other disturbances encountered and geological data and all such plans and sections shall be amended and filled-up by and from actual surveys to be made for that purpose at the end of twelve months or any period specified from time to time and the lessee/lessees shall furnish free of charge to the Central and State Governments true and correct copies of such plans and sections whenever required. Accurate records of all trenches, pits and drillings shall show:—

(a) The subsoil and strata through which they pass.

(b) Any mineral encountered.

(o) Any other matter of interest and all data required by the Central and State Governments from time to time.

The lessee/lessees shall allow any officer of the Central or the State Government authorised in this behalf by the Central Government, to inspect the same at all reasonable times. He/they shall also supply when asked for by the State Government/the Coal Controller/the Director General, Geological Survey of India/the Director, Indian Bureau of Mines, a composite plan of the area showing thickness, dip, inclination etc., of all the seams as also the quantity of reserves qualitywise.

Act 67 of 1957

12. The lessee/lessees shall be bound by such rules as may be issued from time to time by the Government of India under Section 18 of the Mines and Minerals (Regulation and Development) Act, 1957 (Act 67 of 1957) and shall not carry on mining or other operations under the said lease in any way other than as prescribed under these rules.

To provide weighing machine

13. Unless specifically exempted by the State Government the lessee/lessees shall provide and at all times keep at or near the pit-head or each of the pit-heads at which the said minerals shall be brought to bank a properly constructed and efficient weighing machine and shall weigh or cause to be weighed thereon all the said minerals from time to time brought to bank sold, exported and converted and also the converted products and shall at the close of each day cause the total weights, ascertained by such means of the said minerals, ores products raised, sold, exported and converted during the previous twenty-four hours to be entered in the aforesaid books of account. The lessee/lessees shall permit the State Government at all times during the said term to employ any person or persons to be present at the weighing of the said minerals as aforesaid and to keep accounts thereof and to check the accounts kept by the lessee/lessees. The lessee/lessees shall give [illegible] days pervious notice in writing to the ~~Deputy Commissioner~~/Collector of every such measuring or weighing in order that he or some officer on his behalf may be present thereat.

To allow test of weighing machine.

14. The lessee/lessees shall allow any person or persons appointed in that behalf by the State Covernment at any time or times during the said term to examine and test every weighing machine to be provided and kept as aforesaid and the weights used therewith in order to ascertain whether the same respectively are correct and in good repair and order and if upon any such examination or testing any such weighing machine or weights shall be found incorrect or out of repair or order the State Government may require that the same be adjusted, repaired and put in order by and at the expense of the lessee/lessees and if such requisition be not complied with within fourteen days after the same shall have been made the State Government may cause such weighing machine or weights

to be adjusted, repaired and put in order and the expense or so doing shall be paid by the lessee/lessees to the State Government on demand and if upon any such examination or testing as aforesaid any error shall be discovered in any weighing machine or weights to the prejudice of the State Government such error shall be regarded as having existed for three calendar months previous to the discovery thereof or from the last occasion of so examining and testing the same weighing machine and weights in case such occasion shall be within such period of three months and the said rent and royalty shall be paid and accounted for accordingly.

To pay compensation for injury of third parties

15. The lessee/lessees shall make and pay reasonable satisfaction and compensation for all damage, injury or disturbance of person or property which may be done by or on the part of lessee/lessees in exercise of the liberties and powers granted by these presents and shall at all times save harmless and keep indemnified the State Government from and against all suits, claims and demands which may be brought or made by any person or persons in respect of any such damage, injury or disturbance.

Not to obstruct working of other minerals.

16. The lessee/lessees will exercise the liberties and powers hereby granted in such a manner as to offer no unnecessary or reasonably avoidable obstruction or interruption to the development and working within the said lands of any minerals not included in this case and shall at all times afford to the Central and State Government and to the holders of prospecting licenses or mining leasses in respect of any such minerals or any minerals within any land adjacent to the said lands as the case may be reasonable means of access and safe and convenient passage upon and across the said lands to such minerals for the purpose of getting working developing and carrying away the same provided that the lessee/lessees sha receive reasonable compensation for any damage or injury which he/they may sustain by reason or in consequence of the use of such passage by such lessees or holders of prospecting licences.

Transfer of lease

17. (1) The lessee/lessees shall not, without the previous consent in writing of the State Government—

(a) assign, sublet, mortgage or in any other manner transfer the mining lease, or any right, title or interest therein, or

(b) enter into or make any arrangement, contract or understanding whereby the lessee/lessees will or may be directly or indirectly financed to a substantial extent by, or under which the lessees operations or undertakings will or may be substantially controlled by any person or body of persons other then lessee/lessees:

"Provided that the State Government shall not give its written consent unless—

(a) The lessee has furnished an affidavit along with his application for transfer of the mining lease specifying therein the amount that he has already taken or proposes to take as consideration from the transferee.

(b) The transfer of the Mining Lease is to be made to a person or body directly undertaking mining operation".

(2) Without prejudice to the above provisions, the lessee/lessees may, subject to the conditions specified in the proviso to rule 35, of said Rules transfer this lease or any right title or interest therein, to a person holding a certificate of approval and on :-

provided further that whei the mortagargee institution of a corporation specified in schedules. Ishall not been necessary and such institution or bank or corporaon to hold the said certificate of approval. the said income tax clrance certificate and the vailed clerance certificate.

(3) The State Government, may by order in writing, determine the lease at any time if the lessee/lessees has/have in the opinion of the State Government, committed a breach of any of the above provisions or has/have transferred the lease or any right title or interest therein otherwise than in accordance with clause (2).

Provided that no such order shall be made without giving the lessee/lessees a reasonable opportunity of stating his/their case.

Not to be financed or controlled by a trust Corporation, Firm or Person

18. The lease shall not be controlled and the lessee/lessees shall not allow themselves to be controlled by any Trust, Syndicate, Corporation, Firm or Person except with the written consent of the Central Government, The lessee/lessees shall not enter into or make any arrangement, compact or understanding whereby the lessee/lessees will or may be directly or indirectly financed by or under which the lessee/lessees operations or undertakings will or may be carried on directly or indirectly by or for the benefit of or subject to the control of any Trust, Syndicate, Corporation, Firm or Person unless with the written sanction given prior to such arrangement compact or understanding being entered into or made of the Central Government and any or every such arrangement, compact or understanding as aforesaid (entered into or made with such sanction as aforesaid) shall only be entered into or made and shall always be subject to an express condition binding upon the other party or parties thereto that on the occasion of a state of emergency of which the President of India in his discretion shall be the sole judge it shall be terminable if so required in writing by the State Government and shall in the event of any such requisition being made be forthwith thereafter determined by the lessee/lessees accordingly.

Lessee shall deposit any additional amount necessary.

19. Whenever the security deposit of Rs.1,000/~~500~~ or any part thereof or any further sum hereafter deposited with the State Government in replenishment thereof shall be forfeited or applied by the Central or State Government pursuant to the power in hereinafter declared in that behalf the lessee/lessees shall deposit with the State Government such further sum as may be sufficient with the unappropriated part thereof to bring the amount in deposit with the State Government upto the sum of Rs. 1,000/~~500~~.

Delivery of workings in good order to State Governments after determination of lease

20. The lessee/lessees shall at the expiration or sooner determination of the said term or any renewal thereof deliver up to the State Government all mines, pits, shaftt, inclines; drifts, levels, water-ways, airways and other works now existing or hereafter to be sunk or made on or under the said lands except such as have been abandoned with the sanction of the State Government and in any ordinary and fair course of working all engines, machinery, plant, buildings, structures, other works and conveniences which at the commencement of the said term were upon or under the said lands and all such machinery set-up by the lessee/lessees below ground which cannot be removed without causing injury to the mines or works under the said lands (except such of the same as may with the sanction of the State Government have become disused) and all buildings and structures of bricks or stone erected by the lessee/lessees above ground level in good repair order and condition and fit in all respects for further working of the said mines and the said minerals.

Right of pre-emption.

21. (a) The State Government shall from time to time and all times during the said term have the right (to be exercised by notice in working to the lessee/lessees) of pre-emption of the said minerals (and all products thereof) lying in or upon the said lands hereby demised or elsewhere under the control of the lessee/lessees and the lessee/lessees shall with all possible expedition deliver all minerals or products or minerals purchased by the State Government under the power conferred by this provision in the quantities at the times in the manner and at the place specified in the notice exercising the said right.

(b) Should the right of pre-emption conferred by this present provisions be exercised and a vessel chartered to carry the minerals or products thereof procured on behalf of the State Government or the Central Government be detained on demurrage at the port of loading the lessee/lessees shall pay the amount due for demurrage according to the terms of the charter party of such vessel unless the State Government shall be satisfied that the delay is due to causes beyond the control of the lessee/lessees.

(c) The price to be paid for all menerals or products of minerals taken in pre-emption by the State Government in exercise of the right hereby conferred shall be the fair market price prevailing at the time of pre-emption PROVIDED THAT in order to assist in arriving at the said fair market price the lessee/lessees shall if so required furnish to the State

Government for the confidential information of the Government particulars of the quantities, descriptions and prices of the said minerals or products thereof sold to other customers and of charters entered into for freight for carriage of the same and shall produce to such officers or officers as may be directed by the State Government original or authenticated copies of contracts and charter parties entered into for the sale or freightage of such minerals or products.

(d) In the event of the existence of a state of war or emergency (of which existence the President of India shall be the sole judge and a Notification to this effect in the Gazette of India shall be conclusive proof), the State Government with the consent of the Central Government shall from time to time and all times during the said term have the right (to be exercised by a notice in writing to the lessee/lessees) forth with take possession and control of the works, plant, machinery and premises of the lessee/lessees on or in connection with the said lands or operations under this lease and during such possession or control the lessee/lessees shall confirm to and obey all directions given by or on behalf of the Central Government or State Government regarding the use or employment of such works, plants, premises and minerals PROVIDED THAT fair compensation which shall be determined in default of agreement by the State Government shall be paid to the lessee/lessees for loss or damage sustained by him/them by reasons or in consequence of the exercise of the powers conferred by this clause and PROVIDED ALSO that the exercise of such powers shall not determine the said term hereby granted or effect the terms and provisions of these presents further than may be necessary to give effect to the provisions of this clause.

Employment of foreign national.

22. The lessee/lessees shall not employ in connection with the mining operations any person who is not an Indian national except with the previous approval of the Central Government.

Recovery of expenses incurred by the State Government.

23. If any of the works or matters which in accordance with the covenants in that behalf hereinbefore contained are to be carried or performed by the lessee/lessees be not so carried out or performed within the time specified in that behalf, the State Government may cause the same to be carried out or performed and the lessee/lessees shall pay the State Government on demand all expenses which shall be incurred in such carrying out or performance of the same and the decision of the State Government as to such expenses shall be final,

Furnishing of Geophysical data.

24. The lessee/lessees shall furnish—

Ashok Kumar

(a) all geophysical data relating to mining fields or engineering and ground water surveys, such as anomaly maps, sections, plans, structures, contour maps, logging, collected by him/them during the course of mining operations to the Director General, Geological Survey of India, Calcutta.

The lessee will maintain Ravanna books for despatch of minerals and will issue Ravanna at the time of despatch of minerals.

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every year reckoned from the date of commencement of the period of the mining lease.

PART VIII

The Covenants of the State Government

Lessee/Lessees may hold and enjoy rights quietly.

1. The lessee/lessees paying the rents, water rate and royalties hereby reserved and observing and performing all the covenants and agreements herein contained and on the part of the lessee/lessees to be observed and performed shall and may quietly hold and enjoy the rights and premises hereby demised for and during the term hereby granted without any unlawful interruption from or by the State Government, or any person rightfully claiming under it.

Acquisition of land of third parties and compensation thereof.

2. If in accordance with the provisions of Clause 4 of Part VII of this Schedule the lessee/lessees shall offer to pay to an occupier of the surface of any part of the said land's compensation for any damage or injury which may arise from the proposed operations of the lessee/lessees and the said occupier shall refuse his consent to the exercise of the right and powers reserved to the State Government and demised to the lessee/lessees by these presents and the lessee/lessees shall report the matter to the State Government and shall deposit with it the amount offered as compensation and if the Central/State Gavernments are satisfied that the amount of compensation offered is fair and reasonable or if it is not so satisfied and the lessee/lessees shall have deposited with it such further amount as the State and Central Governments shall consider fair and reasonable, the State Government shall order the occupier to allow the lessee/lessees to enter the land and to carry out such operations as may be necessary for the purpose of this lease. In assessing the amount of such compensation the State Government shall be guided by the principles of the Land Acquisition Act.

To renew.

3. Where the mining lease relates to any mineral not specified in the First Schedule to the Act, it shall be renewable for one period not exceeding the period specified in sub-section (2) of section 8 at the option of the lessee/lessees:

Provided that the State Government may for reasons to be recorded in writing reduce the area applied for.

If the lease is in respect of minerals specified in the First Schedule to the Act, renewal will be subject to the prior approval of the Central Government.

If the lessee/lessees be desirous of taking a renewed lease of the premises hereby demised or of any part or parts of

them for a further term from the expiration of the term hereby granted and is otherwise eligible, he/they shall prior to the expiration of the last mentioned term give to the State Government twelve calendar months previous notice in writing and shall pay the rents, rates and royalties hereby reserved and shall observe and perform the several covenants and agreements herein contained and on the part of the lessee/ lessees to be observed and performed up to the expiration of the term hereby granted. The State Government on receipt of application for renewal, shall consider it in accordance with rule 28 of the said rules and shall pass orders as it deems fit. If renewal is granted, the State Government will at the expense of the lessee/lessees and upon his executing and delivering to the State Government if required a counterpart thereof execute and deliver to the lessee/lessees a renewed lease of the said premises or part thereof for the further term of [illegible] years at such rents, rates and royalties and on such terms and subject to such rents, rates and royalties and on such terms and subject to such covenants and agreements, including this present covenant to renew as shall be in accordance with the Mineral Concession Rules, 1960 applicable to [illegible] (name of minerals) on the day next following the expiration of the term hereby granted.

Ashok Kumar

Liberty to determine the lease.

4. The lessee/lessees may at any time determine this lease by giving not less than 12 calendar months notice in writing to the State Government : or to such officer, or authority as the State Government may specify in this behalf and upon the expiration of such notice provided that the lessee/lessees shall upon such expiration render and pay all rents, water rates royalties, compensation for damages and other moneys which may then be due and payable under these presents to the lessor or any other person or persons and shall deliver these presents to the State Government then his lease and the said term and the liberties, powers and privileges hereby granted shall absolutely cease and determine but without prejudice to any right or remedy of the lessor in respect of any breach of any of the covenants or agreements contained in these presents.

4. A. The State Government may on an application made by the lessee permit him to surrender one or more minerals from his lease which is for a group of Minerals on the ground that deposits of that mineral have since exhausted or depleted to such an extent that it is on longer possible to work the mineral economically, subject to the condition that the lessee: —

(a) makes an application for such surender of mineral at least six months before the intended date of surrender; and

Ashok Kumar

(b) gives an undertaking that he will not cause any hinderance in the working of the mineral so surrendered by any otner person who is subsequently rented a Mining Lease for that mineral.

Refund of security deposits.

5. On such date as the State Government may elect within 12 calendar months after the determination of this lease or of any renewal thereof, the amount of the security deposit paid in respect of this lease and then remaining in deposit with the State Government and not required to be applied to any of the purposes mentioned in this lease shall be refunded to the lessee/lessees. No interest shall run on the security deposit.

PART IX

General Provision

Obstruction to inspection.

1. In case the lessee/lessees or his/their transferee/assignee does/do not allow entry or inspection by the officer authorised by the Central or State Government under Clauses (i), (j) or (l) of Sub-rule (1) af Rule 27 of said Rules, the State Government shall give notice in writing to the lessee/lessees requiring him/them to show cause with in such time as may be specified in the notice why the lease should not be determined and his/their security deposit forfeited; and if the lessee/lessees fails fail to show cause within the aforesaid time to the satisfaction of the State Government, the State Government may determine the lease and forfeit the whole or part of the security deposit.

Penalty in case of default in payment of royalty and breach of covenants.

2. If the lessee/lessees or his/their transferee or assignee makes/make any default in payment of rent or water rate or royalty as required by section 9 of the Act or commits a breach of any of the conditions and covenants other then those referred to in covenant (1) above the State Government shall give notice to the lessee/lessees requiring him/them to pay the rent, water rent, royalty or remedy the breach, as the case may be, within sixty days from the date of receipt of the notice and if the rent, water rate and royalty are not paid or the breach is not remedied within such period, the State Government may without prejudice to any proceedings that may be taken against him/them, determine the lease and forfeit the whole or part of the security deposit.

Penalty for repeated breaches of covenants.

3. In cases of repeated breaches of covenants and agreements by the lessee/lessees for which notice has been given by the State Government in accordance with clauses (1) and (2) aforementioned on earlier occasion, the State Government without giving any further notice, may impose such penalty notexceeding twice the amount of annual dead-rent specified in cluse 2, Part V.

Failure to fulfil the terms of leases due to "*force Majeure*".

4. Failure on the part of the lessee/lessees to fulfil any of the terms and conditions of this lease shall not give the Central or State Government any claim against the lessee/lessees or be deemed a breach of this lease, in so far as such failure is considered by the said Government to arise from *force majeure*, and if through *force majeure* the fulfilment by the lessee/lessees of any of the terms and conditions of this lease be delayed, the period of such delay shall be added to the period

fixed by this lease, In this clause the expression *'Force majeure'* means Act of God, war, insurrection, riot, civil commotion, strike, earthquake, tide, storm tidal wave, flood, lighting explosion, fire earthquake and any other happening which the lessee/lessees could not reasonable prevent or control.

Lessee/lessees to remove his/their properties on the expiry of lease

5. The lessee/lessees having first paid and discharged the rents, rates and royalties payable by virtue of these presents may at the expiration or sooner determination of the said term or within six calendar months thereafter (unless the lease shall be determined under Clauses 1 and 2 of this Part and in that case at any time not less than three calendar months not more than six calendar months after such determination) take down and remove for his/their own benefit all or any engines, machinery, plant, buildings, structures, tramways railways and other works, erections and conveniences which may have been erected, set-up or placed by the lessee/lessees in or upon the said lands and which the lessee/lessees is/are not bound to deliver to the State Government under clause 20 of Part VII of this Schedule and which the State Government shall not desire to purchase.

Forfeiture of property left more then six months after determination of lease.

6. If at the end of six calendar months after the expiration or sooner determination of the said term under the provision contained in Clause 4 of Part VIII of this Schedule become effective there shall remain in or upon the said land any engines, machinery, plant, buildings, structures, tramways railways and other works, erections and conveniences or other property which are not required by the lessee/lessees in connection with operations in any other lands held by him/them under prospecting licence or mining lease the same shall if not removed by the lessee/lessees within one calendar month after notice in writing requiring their removal has been given to the lessee/lessees by the State Government be deemed to become the property of the State Government and may be sold or disposed of in such manner as the State Government shall deem fit without liability to pay any compensation or to account to the lessee/lessees in respect thereof.

Notices.

7. Every notice by these presents required to be given to the lessee/lessees shall be given in writing to such person resident on the said lands as the lessee/lessees may appoint for the purpose of receiving such notices and if there shall have been no such appointment then every such notice shall be sent to the lessee/lessees by registered post addressed to the lessee/lessees at the address recorded in this lease or at such other address in India as the lessee/lessees may from time to time in writing to the State Government designate for the receipt of notices and every such service shall be deemed to be proper and valid service upon the lessee/lessees and shall not be questioned or challenged by him.

Immunity of State Government from liability to pay compensation.

8. If in any event the orders of the State Government are revised, reviewed or cancelled by the Central Government in pursuance of proceedings under Chapter VII of the Mineral

Concession Rules, 1960, the lessee/lessees shall not be entitled to compensation for any loss sustained by the lessee/lessees in exercise of the powers and privileges conferred upon him/ hem by these presents.

9. For the purpose of stamp duty the ~~anticipation royalty~~ from the demised land is Rs. 450.65 per year.

IN WITNESS WHEREOF these presents have been executed in the manner hereunder appearing the day and year first above written.

Ashok Kumar

Signed by
for and on behalf of the
Governor/
in the presence of

Signed by
for and on behalf of the lessee
in the presence of

Ashok Kumar Partner
Ashoka Mineral Grinding Mills

1. *Witness*

2. *Witness*

ATTESTED

नीम का थाना

GOVT. PRESS, UDAIPUR

इस दस्तावेज को पु० सं० १ वो० नं० ९८ के क्रम सं० ४५ वा पृष्ठ संख्या २०५ व २०६ पर आज दिनांक २५-२-८३ को दर्ज किया गया। तथा इसकी एक प्रतिलिपि अतिरिक्त पुस्तक संख्या १ वोलुम नम्बर १२ के पृ० सं० ३ लगायत ३६ पर चस्पा की गयी।

10Rs.

दस रुपये

INDIA

TEN RUPEES

10RS

17 ...

...(राजस्थान)

RIDER AGREEMENT

THIS RIDER AGREEMENT to supplement to the Miuning lease deed dated 10/2/83 Registred on 25/2/83 between Shri [illegible] Governor of Rajasthan for [illegible] for an area of 121 [illegible] for a period of [illegible] w.e.f. 25/2/83

THIS INDENTURE made on this 21/3/96 day of ______ on non Judicial stamp paper wort Rs. 20/- between the Governor of Rajasthan(hereinafter referred to as the "STATE GOVERNMENT") which expression shall where the content of the on part and Shri [illegible] (hereinafter referred to as the "LESSEE") which expression shall where the contents so admits to deemed to include his heirs successors) administrators, representatives and permitted assign of the other part.

WHEREAS the leasee SHRI [illegible] ______ applied for the partial surrender of an area of 78.50 [illegible] w.e.f. 23/2/88 and the same has been accepted vide Government order No 4-2(26)[illegible] dated 21/2/92 on the terms and conditions already mentioned in the said Mining Lease and after accepting partical surrender, and area of ______ 42.50 [illegible] w.e.f. 23/2/88 is remained in possession of the leases.

Attested

(Comtd.......2)

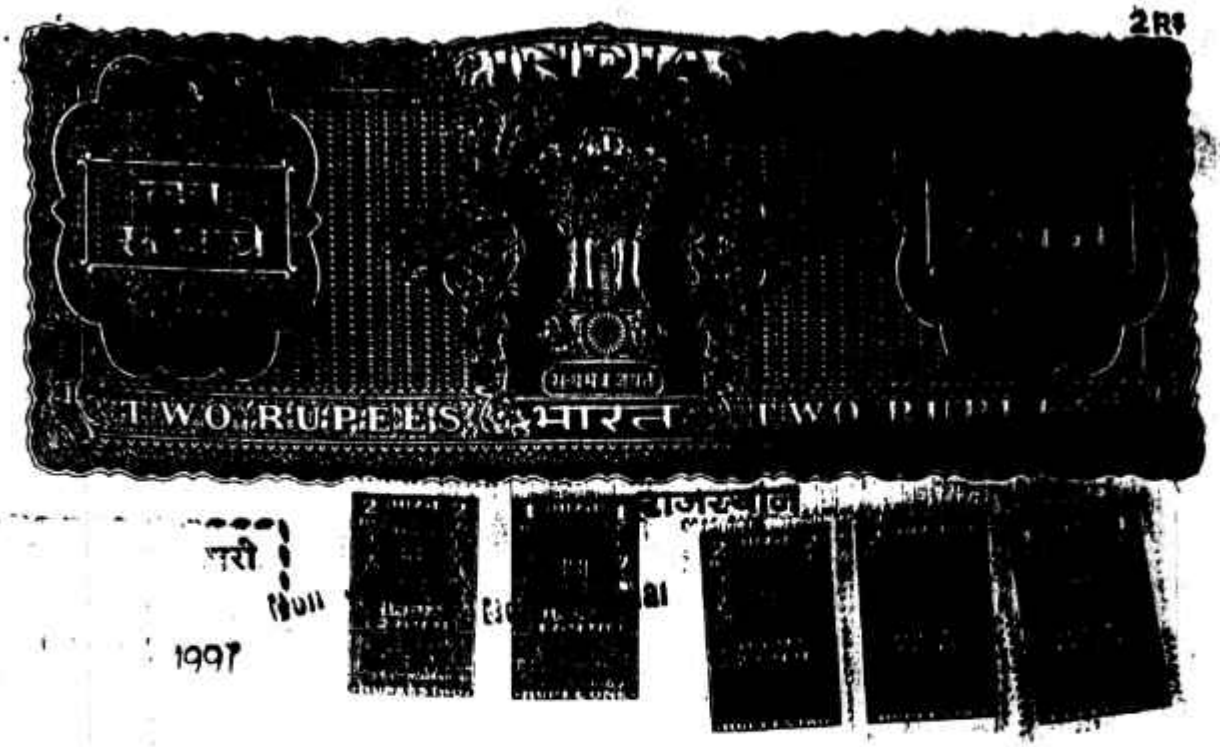
14.5.96 10.30 11.00 Am

उप पंजीयक
मुहाना

उप पंजीयक
मुहाना

उप पंजीयक
मुहाना

2R



Rider Agreement in connection with minning lease for Pyrophilite, Red & Yellow occur Near village Meharana Tehsil Khetri Distt. Jhunjunu Raj. between the Governor of Rajasthan & Ashoka Minerals & Grinding Mills Pvt. Ltd. Shahpura Road Neem ka Thana .

This Indenture made this ..03.. day of ..F..... 1997 between the Governer of Rajasthan (here in after reffered to as the State Goverment which expression shall where the context so admits be deemed to include the successors and assignees) of the one part and Ashoka Minerals & Grinding Mills (here in after reffered to as the Lessee which expression shall where the context so admits be deemed to include his heirs Executors, Administrators, Representatives and Permited Assigness)of the other parts .

Whereas by and aggreement dated 10/02/83 Registered on dated 25/02/83 The Governor of Rajasthan had granted to Ashoka Mineral and Grinding Mills a mining lease for extraction of Pyrophilite Red & Yellow occur area 121.00 Hect. near village Meharana Tehsil Khetri Distt. Jhunjhnu for a period of 20 years w.e.f from 25/02/83 (and the area partial surrendered 78.50 Hect. sanctioned vide Govt. order No. F2 (26) Khan/Gr.2/90 dated 21/02/92 Retained area 42.50 Hect. in favour of the lessee w.e.f. 23/02/88)

खनि अभियन्ता
खान एवं भू-विज्ञान विभाग
नीमकाथाना

And Whereas the Lessee Oshoka Minerals and Grinding Mills applied for the inclusion of mineral Silica sand and Quartz in the said Mining lease and the State Govt. have conveyed their approval for the inclusion of mineral Silica Sand and Quartz vide Govt. No. F-2 (25)Khan/Gr.2/96 Dated 20/05/97. Royalty as per M.M.R.D. act 1957 and ammended from time to time and on the terms and conditions already mentioned in the said mining lease agreement 10/02/83.

Now the Directorate has conveyed their letter No. DMG/Neem/CC-2/F-1(1)8/82/1954 Dated 28/05/97 to again execution of Rider agreement.

1- Mineral of Included in the existing Lease - Silica Sand and Quartz .

2- Period - For the date of execution in of original agreement to expiry of original lease period .

3- Royalty - As per M.M.R.D. act 1957 and ammended from time to time .

The Mineral Silica sand and Quartz therefore treated to have been included in the said mining lease w.e.f. the date of execution of this Rider agreement and the Rider agreement shall be valued and for the same period for which the said mining lease is valued and operative.

खनि अभियन्ता
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नीमकाथाना

In witness whereof these present here into name set their hands thereto on the day of ....1997.

Signed by
For and on behalf of the
Government of Rajasthan

Signed by
for and on behalf of the Lessee

Attested

Mining Engineer Neem ka Thana

Witness No.-1
(B.S. Poonia)
Ward No. 22, Neemkathana.

Witness No.-2

खनि अभियन्ता
नीमकाथाना

मुद्रांक
मुद्रांक

Phone: 2233204

Regional Office (Jaipur-North),
Rajasthan State Pollution Control Board,
6/244, Vidyadhar Nagar, Jaipur- 302023

No. RPCB / RO-JP (N) / Jhu/Min/4/ 427 Date: 12/5/2004

M/s Ashoka Mineral Grinding Mills,
Village-Maherana,
Tehsil-Buhana,
Distt.-Jhunjhunu.

Sub: Grant of consent to operate under Air (prevention & control of pollution) Act-1981 for mining activities at ML No. .8/82 owned by M/s Ashoka Mineral Grinding Mills at Village- Maherana , Tehsil- Buhana, Distt-Jhunjhunu.

Ref: Your consent application dated 19/9/2003 & related correspondence.

"Consent to Operate" under section 21 (4) of the Air (prevention & control of pollution) Act-1981 (hereafter referred as Air Act) is granted for carrying mining activition at a place reffered to under subject. This consent is granted subject to the provisions of the Air Act-1981 and the rules and orders made there under and based on the information provided in the above reffered application along with the documents and due inquiry made there of alongwith the following stipulation:-

1. That the consent to operate is being granted in favor of **M/s Ashoka Mineral Grinding Mills** for their mine/quarry for **M.L. No .8/82** in area measuring 4.96 Hactare, at **Village-Maherana, Tehsil-Buhana, Distt- Jhunjhunu** having a valid mining /quarry license from Mining Department for mining activities.
2. That this consent is valid for following mining activities:-

S.No.	Mineral/Mines	Capacity
1.	Mining of Red Ochre,Yellow Ochre,Pyrophlite,Quartz	5 MT/day

It may be noted that no processing equipments like crusher shall be installed with out prior approval of this office.
3. This consent to operate is valid from **19/9/2003 to 19/9/2004**. It may be clarified that mining activities were carried on without consent of the Board, it would be treated as violation of the provisions of Air Act.
4. That you shall achieve standards of SPM 500 ug/M3 in ambient air Quality of mining area. The standards of 600 ug/M3 of SPM shall be applicable between 3 to 10 meters from any equipment used for mining activity.
5. That you shall provide the necessary infrastructual facilities including equipment for the monitoring of ambient air in accordance with the suggestion given to you by the State Pollution Control Boards officials from time to time.
6. That industry shall undertake the phased restoration, reclamation and rehablititation of lands effected by prospecting or mining operations and shall compete this work before the conclusion of such operations and the abandonment of prospects or mines.
7. That over burden shall be stored in manner that it does not obstuct the natural drainage pattern of the area.It may be used for back filling. The land shall be indentfied for disposal of over burden at environmentally compatible site.
8. That this consent is issued subject to the oreder passed by the court in the D.B.(Civil) W.P. No.3879/02, Adivasi Ekta Parisad V/s State & others.

9. That the water spraying and sprinkling so installed should always be maintained in order to utilize the same for dust suppression.
10. That the industry shall maintain zero discharge status from the premisis. No trade effluent shall be discharged in side/outside industry premises.
11. That the domesic effluent shall be treated and disposed off with properly designed septic tank followed by soak as per prescribd so standard.
12. That noise level shall be kept as detailed below and under no circumstances, it shall exceed the prescribed limit:-
    A- Day time (6.0 AM to 9.0 PM) - 75 db A (leg)
    B- Night time (9.0 PM to 6.0 AM) - 65 db A (leg)
13. That you shall also conduct ambient air quality monitoring for SPM and noise level in the mining area once in six months and monitoring results shall be submitted to the State Board regularl
14. That this consent to operate is for existing mine, plant and process and separate consent to establish / operate is required to be taken for any addition/modification/alteration or change in process.
15. The you shall submit Environmental statement for the period March April to latest by Septembr every year.
16. That the you shall submit an application for consent to operarte in the prescribed form with the requisite fee at least 90 days in advance from expiry of consent periodfor its renewal.
17. That the you shall comply with the provisions of Manufacture, Storage and Import of Hazardous Chemicals Rules,1989 & Hazardouds Waste (Management & Handling) Rules, 1989 and related amendments, as applicable to it.
18. That this consent is valid subject to fulfillment of all the other statutory requirements in other Laws/Acts/Rules as applicable.
19. That the industry shall develop plantation at least in 33 :/: of total area to maintain ambient air quality around the industry.
20. That the industry shall submit yearly compliance of all the above stated conditions to this office.
21. That the unit shall submit Water Cess returns in case the water consumption is more then 10 KLD under the Provisions of Water (Prevention & Control of Pollution) Cess Act-1977 and as amended from time to time.
22. Not with standing anything contained in this letter of consent the State Board hereby reserves to it the right and power under section 21 (6) of the Air (prevention and control of pollution) Act-1981 to review anyone/or all the conditions imposed herein above and to make such variation as deemed fit for the purpose of A Act.
23. This consent, under no cirumstance, be construed as conferment of any property or any interest in the lease area. It is only confined for the purpose of regulation of the provisions of Air Act.
24. In case of failure to comply with any of the consent cnditions stated as above, the consent issued to you shall automatically stand revoke without any notice.

Please note that, if the information submitted by the you, is found to be wrong on inpection/verification or the unit is found violating any of the conditions of consent then the consent shall be revoked without any further notice and the you shall be liable for action in accordance with the prosecution of law.

(B .S .Sharma)

Regional Officer
क्षेत्रीय अधिकारी
क्षेत्रीय कार्यालय
राज० राज्य प्रदूषण नियन्त्रण मण्डल
जयपुर (उत्तर)

Copy to:

1. Member Secretary, RSPCB, Jaipur.
2. Secretary, Department of Mines, G O Raj. Jaipur.
3. Consent Register.

Regional Officer

रजिस्टर्ड ऐ.डी.

राजस्थान सरकार
कार्यालय खनि अभियन्ता, सीकर

क्रमांकः खअ/सीकर/प्र/खप.–23/01(आर)/ 7700 दिनांकः 8/11/08

प्रेषितिः–

मैसर्स अशोका मिनरल्स,
प्रोपराईटर श्री अशोक कुमार अग्रवाल पुत्र श्री बुद्धराम अग्रवाल
निवासी शाहपुरा रोड़, नीमकाथाना जिला सीकर

विषयः– नवीनीकरण खनन पट्टा वास्ते खनिज क्वार्टज रेडऑकर पायरोक्लाईट यलोऑकर निकट ग्राम महराणा तहसील बुहाना जिला झुन्झुनूं।

महोदय,

आप द्वारा आवेदित नवीनीकरण आवेदन पत्र क्षेत्र अरावली पर्वत श्रंखला में गिरने के कारण न्यायालय के निर्णय तक स्वीकृति योग्य नहीं है। खनन पट्टा के लिए प्रदुषण सहमती अवधि दिनांक 18.09.08 को समाप्त हो जाने के कारण क्षेत्र में तुरन्त प्रभाव से खनन कार्य बन्द किया जावें। अगर खनन कार्य करते हुये पाये गये तो पर्यावरण संरक्षण अधिनियम 1981 का उल्लघंन माना जाकर आपके विरूद्ध कार्यवाही की जावेंगी तथा नवीनीकरण आवेदन पत्र अस्वीकृती योग्य होगा। सो सूचित रहें।

भवदीय

खनि अभियन्ता, सीकर

क्रमांकः सम/ 7701 to 7702 दिनांकः 31/11/08

प्रतिलिपि निम्न को वास्ते सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है।

1. श्री राजेन्द्र सिंह चौधरी खनि कार्यदेशक को दी जाकर लेख है कि क्षेत्र की जांच कर अविलम्ब रिपोर्ट प्रस्तुत करें।
2. मांग लिपिक/रवन्ना लिपिक कार्यालय हाजा को दी जाकर लेख है कि पट्टाधारी को कोई रवन्ना अग्रिम आदेश तक जारी नहीं की जावें।

खनि अभियन्ता, सीकर

रजिस्टर्ड ऐडी
"प्रारुप–ए"

राजस्थान सरकार

कार्यालय खनि अभियन्ता, खान एवं भू–विज्ञान विभाग, झुन्झुनू

क्रमांक : खअ/झुन्झुनू/प्र/खप– 8/82/1703 दिनांक 20.02.2015

प्रेषित :

श्री/श्रीमति/सर्वश्री अशोका मिनरल ग्राइंडिंग मिल्स
द्वारा श्री अशोक कुमार अग्रवाल
निवासी – शाहपुरा रोड, नीम का थाना (सीकर)

विषयः–एम.एम.डी.आर. अधिनियम, 1957 की धारा 8 ए में किये गये संशोधन अनुसार खनन पट्टों की अवधि वृद्धि के संबंध में।

प्रसंगः–आपके पक्ष में धारित खनन पट्टा वास्ते खनिज रेड ओकर, फायरक्ले, क्वार्ट्ज निकट ग्राम ...... तहसील खेतड़ी जिला झुन्झुनू के संबंध में।

महोदय,

उपरोक्त विषयान्तर्गत आपको सूचित किया जाता है कि हाल में एम.एम.डी.आर. (संशोधन) अध्यादेश, 2015 की धारा 8 ए का समावेश किया गया है, जो कि खनन पट्टों की समयावधि से संबंधित है।

आपके पक्ष में धारित प्रासांगिक खनन पट्टे की अवधि दिनांक 24-2-2003 तक वैद्य थी, उक्त अध्यादेश जारी होने की दिनांक को खनन पट्टे का प्रथम/द्वितीय/तृतीय नवीनीकरण आवेदन पत्र लम्बित था। एम.एम.डी.आर. संशोधन अध्यादेश 2015 की धारा 8ए(5)/8ए(6) (जो लागू हो) के अनुसार उक्त खनन पट्टे की अवधि दिनांक 24-2-2018 तक स्वतः बढ़ गई है।

अतः संबंधित खनन पट्टे की संविदा स्वतः ही उक्तानुसार संशोधित हुई मानी जाती है।

भवदीय

खनि अभियन्ता, झुन्झुनू

क्रमांकः सम/ दिनांक .02.2015

प्रतिलिपिः निम्न को सूचनार्थ प्रेषित है।

1. संयुक्त शासन सचिव, जयपुर को उनकी पत्रावली संख्या प–4(333)खान/ग्रुप–2/82 के क्रम में सूचनार्थ।
2. श्रीमान् निदेशक महोदय खान एवं भू विज्ञान विभाग, उदयपुर को उनकी पत्रावली संख्या निखाभू/नीम/प–1(1)8/82 के क्रम में सूचनार्थ।
3. श्रीमान् अतिरिक्त निदेशक (खान) जयपुर क्षेत्र जयपुर को उनकी पत्रावली संख्या .... के क्रम में सूचनार्थ।
4. श्रीमान् अधीक्षण खनि अभियन्ता जयपुर वृत जयपुर को उनकी पत्रावली संख्या अखअ/जय/नीम/प–16/82 के क्रम में सूचनार्थ।

खनि अभियन्ता, झुन्झुनू

D:\vicky\amit\performa.doc

23(01)R)

राजस्थान सरकार
कार्यालय खनि अभियन्ता, सीकर

संयुक्त अग्रिम सीमांकन

एम.एल नं. 23/01(R)

आज दिनांक 25/9/08 को निम्न हस्ताक्षरकर्ता कार्यालय पत्रांक 2931 दिनांक 2/4/08 की अनुपालना में श्री M/s Ashoka Mineral Grinding mills निवासी [illegible] के पक्ष में आवेदित खनन पट्टा प्रस्त खनिज [illegible] निकट ग्राम महरावा तहसील खेतड़ी जिला झुन्झुनूं क्षेत्र 4.9600 हैक्टर का हल्का पटवारी [illegible] की उपस्थिति में अग्रिम सीमांकन किया गया। जिसका विवरण निम्नानुसार है –

1. सर्वे उपकरण जीपी एस– प्रिजमैटिक कम्पास इत्यादि।

2. विवरण सूचना कार्यालय से प्राप्त प्लान एव विवरण सूची अनुसार।

3. स्थाई बिन्दु – Centre of Deviji temple situated Mahrona hill top.
Long. 075°49'27.6" Lat 28°08'58.1"

कहां से	कहां को	बिमरिंग	दूरी
Deviji temple situated Mahrona hill top	A	134°30'	350mt
A	E	357°0'	50mt
E	Q	267°0'	752mt
Q	F	267°0'	248mt
F	O	357°0'	200mt
O	P	87°0'	248mt
P	Q	177°0'	200mt

Total Area QFOPQ – 4.9600 hector.

सहायक लोक सूचना अधिकारी
खान एवं भू विज्ञान विभाग
झुंझुनूं (राज.)

Pillar Reference: Pillar Q falls near Kikar tree in Nalai type portion
① pillar Q to top of Mataji Ka temple – 63°30'
② pillar Q to top of hill near Mataji Ka temple – 49°30'
pillar F falls on plane cultivated land on East side of hill.
① pillar F to Mataji Ka temple top – 70°30'
② pillar F to top of hill nr Singana – 154°0'
③ pillar F to top of hill nr Khanpura – 280°0'

PTO.

pillar 0 falls on SE slope of hill Near top of hill

① pillar 0 to top of hill Mr Singhana - 143° 0'

② pillar 0 to top of hill Mr Khanpur - 267° 30'

③ pillar 0 to top of hill Mr Copper - 198° 30'

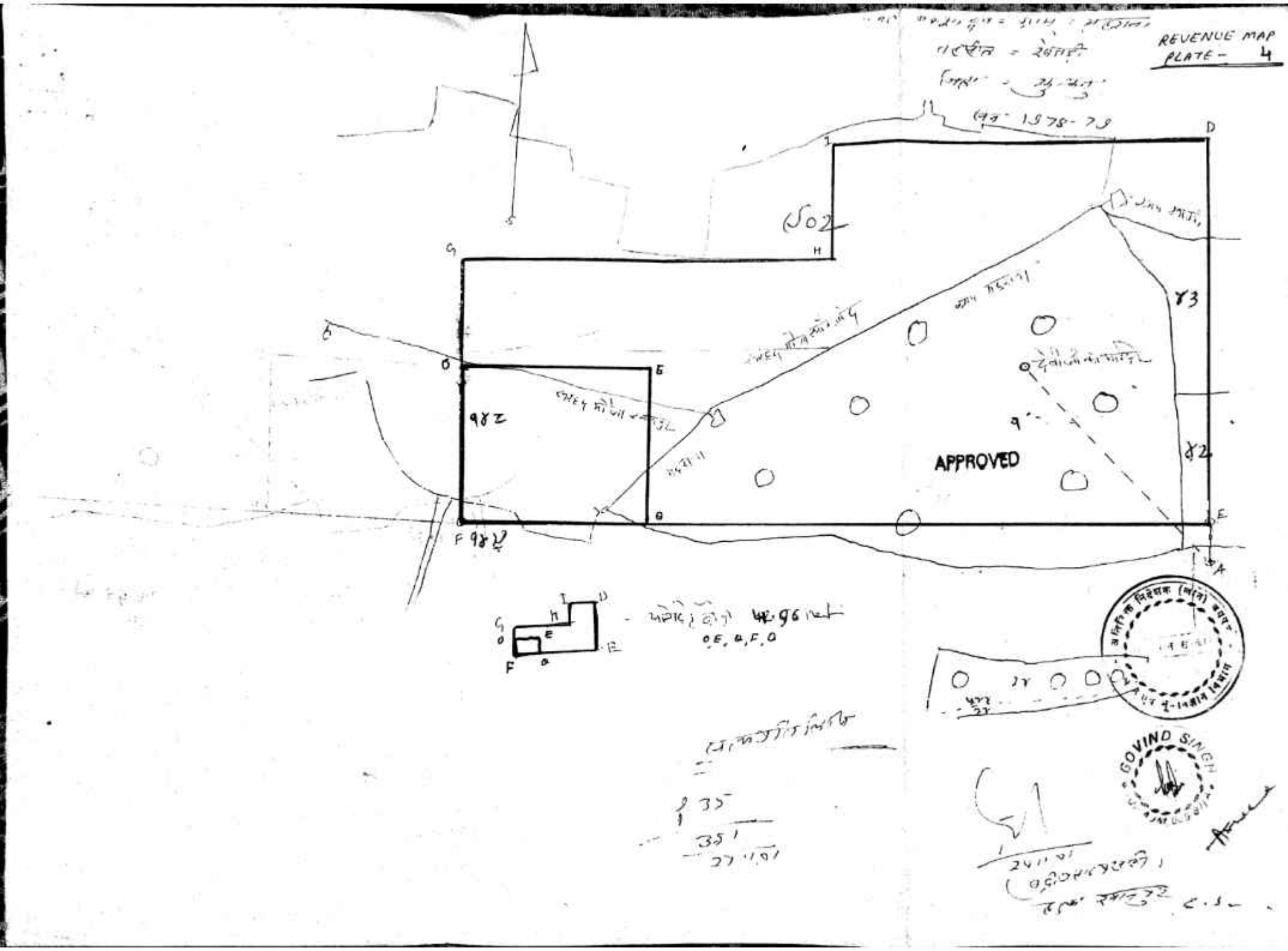
pillar 0 falls on East slope of hill on hilly Terrain Belt.

Due to Rocky Scarp & steep slope Reforestation not taken

मौके पर सम्बन्धित सीमांकन कार्यवाई कार्यालय से प्राप्त खान एवं खनिज सूची अनुसार स्थाई चिन्ह Centre of Devi Ji temple situated on Mahrana hill top से सर्वे शुरू कर आवेदित/सीमांकित क्षेत्र के प्रत्येक पीलर को मौके पर चिन्हित किया जाकर, मौके पर उपलब्ध आंकड़ो/प्रतिवेदन को वास्तविक सीमांकित क्षेत्र 4.96 hectare की वास्तविक मौका स्थिति से अवगत कराया गया। Aravalli आदि से संबंधित रिपोर्ट एवं तकनीकी मापदण्ड प्राप्त कराया जाना आवश्यक होगा। मौका वन विभाग की सहमति अनुसार सीमांकित क्षेत्र वन सीमा के 25mt की दूरी में नहीं होगा। (as per Forest Act meaning के अनुसार वन क्षेत्र की सीमा में नहीं आता है) मौके पर उपलब्ध स्थल पहचान को उनके समक्ष रिपोर्ट में वर्णित खनिज सूची अनुसार सीमांकन कराये गये सीमांकित क्षेत्र QFOPA - 4.96 hectare क्षेत्र में आई वाली सम्पूर्ण खनिज संपदा, रसायनिक आदि की पूर्ण व स्पष्ट रिपोर्ट एवं मैप तथा आवेदक द्वारा खनिज नमूना में आई किया गया आवेदित क्षेत्र QFOPA - 4.96 hector मौके पर सीमांकन कराये गये सीमांकित क्षेत्र QFOPA - 4.96 hector से मिलान करता है एवं नदी में संबंधित पूर्ण व स्पष्ट रिपोर्ट करने हेतु निर्देशित किया गया।

उपखण्ड अधिकारी
सीकर

REVENUE MAP
PLATE- 4



ITEM NO.12 COURT NO.3 SECTION PIL-W

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

Writ Petition(s)(Civil) No(s). 202/1995

IN RE : T.N. GODAVARMAN THIRUMULPAD Petitioner(s)

VERSUS

UNION OF INDIA AND ORS. Respondent(s)

(INTERLOCUTORY APPLICATION FOR 23.07.2024 "ONLY"
[1] IN RE : "CONSTRUCTION OF MULTI STOREYED BUILDINGS IN FOREST LAND MAHARASHTRA" [i] I. A. No. 2079 OF 2007 [Application For Impleadment And Directions] WITH [ii] I.A Nos. 2301-2302 OF 2007 [Applications For Impleadment And Directions] AND [iii] I.A. Nos. 3044-3045 OF 2011 [Applications For Impleadment And Directions] AND [iv] I.A. Nos. 2771-2772 OF 2009 [Applications For Impleadment And Directions] AND [v] I.A.Nos. 111725 AND 154041 OF 2018 [Applications For Substitution Of Applicant, I.E. Smt. Housabai Haribhau Bhairat And Condonation Of Delay In Filing Application For Substitution In I.A. Nos. 2771-2772/2009] AND

[2] I.A. NOS. 100352 AND 100351 OF 2024 (Applications for Directions and Impleadment) IN RE : SHRI RAM KRISHNA PANDEY AND

[3] I. A. NOS. 157777 AND 157782 OF 2023 [Applications For Impleadment And Directions] IN RE : PRADEEP IN RE : MINING WITHIN 10 KMS WETLAND AND

[4] I.A. NOS. 1424-1425 OF 2005 AND 2749 OF 2009 (Applications for Directions and Stay) IN RE : ALLEGED NON-FORESTRY ACTIVITIES AND ENCROACHMENT BY BALCO AND [ii] I.A. NOS. 2211 OF 2008 (Applications for Clarification of Court's Order dated 29.02.2008) In Re : BALCO AND [iii] I.A. NO. 3427 OF 2012 (Applications for Directions) WITH I.A. NOS. 167802 AND 167804 OF 2019 (Applications For Directions And Exemption From Filing O.T.) WITH I.A. NOS. 187590 AND 187591 OF 2019 (Applications For Directions And Exemption From Filing O.T.) IN RE : BALCO, RESPONDENT NO. 7 IN I.A.NO. 1424-1425 WITH [iv] CONTEMPT PETITION (C) No. 388 OF 2009 IN I.A. NOS. 1424-1425 IN WRIT PETITION(C) NO. 202 OF 1995 WITH SPECIAL LEAVE PETITION(C) NO. 37511 OF 2013 WITH WRIT PETITION (C) NO. 469 OF 2005 AND

[5] I.A. NO. 920 OF 2003 (Application for Intervention/Directions) IN I.A. NO. 703 OF 2001 (Application by the Amicus Curiae for Directions against illegal enchroachment of forests) AND I.A. NO. 988 OF 2003 (Application for Modification/Clarification of order dated 25.08.2003 in I.A. 920/2003) AND I.A. NO. 1129 OF 2004 (Application seeking leave to

withdraw Affidavit of Fishries Department) AND I.A. NO. 1151 OF 2004 (Application seeking leave to withdraw Affidavit filed on behalf of Forest Department of State of West Bengal) IN RE: NATIONAL FISHWORKERS' FORUM (NFF) (THROUGH ITS CHAIRPERSON HAREKRISHNA DEBNATH 1073, A.G. COLONY, P.O.-MANIKTALA-743263, 24 PARGANAS(N), WEST BENGAL AND

[6] I.A. NO. 20650 OF 2023 (CEC REPORT NO. 3/2023 - REPORT OF CEC IN APPLN. NO. 1558/2021 FILED BEFORE IT BY GAURAV KUMAR BANSAL) WITH I.A. NO. 75033 OF 2023 (Application For Exemption From Filing O.T.) IN RE : GAURAV KUMAR BANSAL AND

[7] I. A. NOS. 130609 AND 130612 OF 2024 [Applications For Impleadment And Directions] IN RE : M/S. ASHOKA MINERAL GRINDING MILLS THROUGH POWER OF ATTORNEY HOLDER AND

[8] I. A. NOS. 134900, 134904 AND 134906 OF 2024 [Applications For Impleadment, Directions and official translations] IN RE : M/S. SHRI MODI MINERAL GRINDING MILLS PVT. LTD. AND

[9] I. A. NOS. 149950 AND 149951 OF 2024 [Applications For Impleadment and Directions] AND IN RE : DELHI METRO RAIL CORPORATION LTD. AND

WITH
CONMT.PET.(C) No. 388/2009 In W.P.(C) No. 202/1995 (PIL-W)

W.P.(C) No. 469/2005 (X)

SLP(C) No. 37511/2013 (IV-C)
(IA No. 68210/2018 - EXEMPTION FROM FILING O.T.
IA No. 68208/2018 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES
IA No. 90909/2018 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES)

Date : 23-07-2024 These matters were called on for hearing today.

CORAM : HON'BLE MR. JUSTICE B.R. GAVAI
HON'BLE MR. JUSTICE K.V. VISWANATHAN

Mr. Harish N. Salve, Sr. Adv. [A.C.] (Not Present)
Mr. A.D.N. Rao, Sr. Advocate [A.C.] (Not Present)
Ms. Aparajita Singh, Sr. Advocate [A.C.] (Not Present)
Mr. Siddhartha Chowdhury, Advocate [A.C.]

Mr. K. Parameshwar, Advocate [A.C.]
Mr. M.V. Mukunda,Adv.
Ms. Kanti,Adv.
Ms. Aarti Gupta,Adv.
Mr. Chinmay Kalgaonkar,Adv.

Counsel for parties

Ms. Aishwarya Bhati, A.S.G.
Mr. Gurmeet Singh Makker, AOR
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Ms. Suhashini Sen, Adv.
Mr. S. S. Rebello, Adv.
Mr. Shyam Gopal, Adv.
Mr. Raghav Sharma, Adv.
Mr. Sughosh Subramanyam, Adv.
Ms. Ruchi Kohli, Adv.

Mr. K.M. Nataraj, A.S.G.
Mr. Mrinal Elkar Mazumdar, Adv.
Mr. Mukesh Kumar Verma, Adv.
Mr. Neeraj Kumar Sharma, Adv.
Ms. Indira Bhakar, Adv.
Mr. Harish Pandey, Adv.
Mr. Shashwat Parihar, Adv.
Mr. Vinayak Sharma, Adv.
Mr. Anuj Srinivas Udupa, Adv.
Mr. Piyush Beriwal, Adv.
Mr. Shreekant Neelappa Terdal, AOR

Mr. Shekhar Naphade, Sr. Adv.
Mr. Chnimoy Khaladkar, Adv.
Mr. B. K. Pal, AOR

Mr. Nishant R. Katneshwarkar, AOR

Mr. Dhruv Mehta, Sr. Adv.
Mr. Yashraj Singh Deora, Adv.
Mr. Priyesh Mohan Srivastava, Adv.
Mr. Abhishek Singh, Adv.
Ms. Sonal K Chopra, Adv.
For M/s. Mitter & Mitter Co.

Ms. Ranjeeta Rohtagi, AOR

Mr. C.S. Ashri, AOR

Mr. Siddharth Dharmadhikari, Adv.
Mr. Aaditya Aniruddha Pande, AOR
Mr. Bharat Bagla, Adv.
Mr. Sourav Singh, Adv.
Mr. Aditya Krishna, Adv.
Ms. Preet S. Phanse, Adv.
Mr. Adarsh Dubey, Adv.
Ms. Yamini Singh, Adv.

Mr. Saroj Tripathi, AOR (Not Present)

Mr. Mayank Aggarwal, AOR

Mr. Pradeep Kumar Aggarwal, Adv.
Mr. Vineet Yadav, Adv.
Mr. Amir Yadav, Adv.

Mr. Pranav Sachdeva, AOR

Mr. P.C. Sen, Sr. Adv.
Mr. Shivanshu Singh, Adv.
Ms. Rukmani Bobde, Adv.
Mr. P. S. Sudheer, AOR
Mr. Rishi Maheshwari, Adv.
Ms. Anne Mathew, Adv.
Mr. Bharat Sood, Adv.
Ms. Miranda Solaman, Adv.
Mr. Paul P. Abraham, Adv.
Ms. Nivedita Sudheer, Adv.

Mr. Nishant Patil, AOR

Mr. Aswathi M.K., AOR

Mr. Puneet Jain,Adv.
Ms. Pratibha Jain, AOR

Mr. Sunil Kumar Jain, AOR

Mr. Satish Kumar,
Mr. Satish Kumar, AOR
Mr. S S Bandyopadhyay, Adv.

Mr. Shankar Divate, AOR

Ms. Binu Tamta, AOR

Mr. Rohit K. Singh, AOR

Mrs. Yogmaya Agnihotri, Adv.
Mr. Rohit K. Singh, AOR

Mr. Rajesh Srivastava, AOR

Mr. Radha Shyam Jena, AOR

Ms. Aparna Bhat, AOR (Not Present)

Ms. Jyoti Mendiratta, AOR

Mr. Atmaram N S Nadkarni, Sr. Adv.
Dr. Abhishek Atrey, AOR
Ms. Ishita Bisht, Adv.
Ms. Vidyottma Jha, Adv.

Mr. S. Niranjan Reddy, Sr. Adv.

Ms. Aruna Gupta, AOR
Mr. Ramesh Allanki, Adv.
Mr. Syed Ahmad Naqvi, Adv.
Mr. Yash Gupta,Adv.

Mr. Tarun Johri, AOR
Mr. Ankur Gupta, Adv.
Mr. Vishwajeet Tyagi, Adv.

Mr. Jaswant Singh Rawat, AOR

Mr. Akshat Kumar, AOR

Mr. Kuldip Singh, AOR

Mr. Apoorv Kurup, A.A.G.
Ms. Ankita Sharma, AOR
Mr. Arjun D Singh, Adv.

Mrs. Aishwrya Bhati, A.S.G.
Mr. Archana Pathak Dave, Sr. Adv.
Mr. Raj Bahadur Yadav, AOR
Mrs. Ruchi Kohli, Adv.
Mr. Uday Prakash Yadav, Adv.
Mr. Suhasini Sen, Adv.
Mr. S S Rebello, Adv.
Mr. Shyam Gopal, Adv.
Mr. Raghav Sharma, Adv.
Mr. Sughosh Subramanium, Adv.

Mr. Sudip Shrivastava,Adv.
Mr. Prashant Bhushan,Adv.

Mr. Shrey Kapoor,Adv.

Petitioner/Applicant-in-person

UPON hearing the counsel the Court made the following

O R D E R

[1] I. A. NOS. 130609 AND 130612 OF 2024
IN RE : M/S. ASHOKA MINERAL GRINDING MILLS THROUGH POWER OF ATTORNEY HOLDER

AND

[2] I. A. NOS. 134900, 134904 AND 134906 OF 2024
IN RE : M/S. SHRI MODI MINERAL GRINDING MILLS PVT. LTD. AND

1. I.A. Nos.130612/2024 and 134904/2024 are filed seeking following prayers:-

"I.A. No.130612/2024

1. To direct the State of Rajasthan to further process the Application for Renewal of the Mining Lease pending since last 14 years and/or

2. To direct the State of Rajasthan to issue necessary instructions for obtaining statutory clearances from the various authorities for present mining lease.

3. To direct the State of Rajasthan to consider the present application and grant permission to commence mining operation and/or

I.A. No.134904/2024

a) To direct the Respondent State to process the application for Diversion of the applicant expeditiously in terms of approval granted by the Govt. of India vide permission dated 07.10.2008 and

b) to direct the Respondent State to consider the present application for Automatic Renewal in terms of section 8A of M.M.D.R. (Amended) Act 2015 and grant permission to commence mining operation or"

2. Vide order dated 09.05.2024 this Court had clarified that though the State Government would be at liberty to consider and process the applications for grant of mining leases and also for renewal thereof including obtaining statutory clearances from the various authorities but no final permission shall be granted for mining in the Aravalli Hills/Ranges, as defined in the FSI Report dated 25.08.2010, without permission from this Court.

3. Indisputably, the area in respect of which the permission is being sought falls within the area of Aravalli Hills/Ranges, as defined in the FSI Report dated 25.08.2010.

4. We, therefore, direct the State Government to process the proposal for renewal of the mining licences including obtaining statutory clearance from the various authorities, however no final permission shall be granted for renewal of the mining lease, without obtaining prior approval of this Court.

[3] I. A. NOS. 149950 AND 149951 OF 2024
IN RE : DELHI METRO RAIL CORPORATION LTD.

1. I.A. No. 149951 of 2024 has been filed with the following prayers:-

> "a) Refer the matter to the Central Empowered Committee appointed by this Hon'ble Court for detailed consideration and examination of the proposal of the Applicant for temporary diversion of 0.19 ha (0.15 + 0.04) of Ridge Reserve forest and 0.39 ha of Morphological Ridge Area, on South Central/Morphological Ridge, for timely completion of Neb Sarai metro station forming part of 23.623 km Aerocity – Tughlakabad metro corridor being proposed for construction of Phase-IV of MRTS Project;
>
> b) Allow the instant Application and thereby, permit the Applicant to temporarily divert 0.19 ha of Ridge Reserve Forest and 0.39 ha of Morphological Ridge Area, for construction of Neb Sarai metro station forming part of 23.623 Km Aerocity – Tughlakabad metro corridor being proposed for

construction of Phase-IV of MRTS Project."

2. Taking into consideration the importance of Delhi Metro and since the prayer is only for referring the matter to the Central Empowered Committee (CEC), we are inclined to allow this application insofar as prayer clause (a) is concerned. Ordered accordingly. So far as prayer clause (b) is concerned, we will consider it after the CEC submits its Report.

3. Four weeks' time is granted to CEC to submit its report.

4. List after four weeks.

[4] IN RE : "CONSTRUCTION OF MULTI STOREYED BUILDINGS IN FOREST LAND MAHARASHTRA"
[i] I. A. No. 2079 OF 2007 WITH
[ii] I.A Nos. 2301-2302 OF 2007 AND
[iii] I.A. Nos. 3044-3045 OF 2011 AND
[iv] I.A. Nos. 2771-2772 OF 2009 AND
[v] I.A.Nos. 111725 AND 154041 OF 2018,
I.A. NOS.25496/23 & 37911/24, AND W.P.(C) NO.301/2008

1. The facts in the present case are glaring. The predecessor-in-title of the petitioner(s)/appellant(s) succeeded up to this Court for getting possession of the land which was illegally occupied by the State Government. Subsequently, the stand of the State Government was that the land owned by the predecessors of the petitioners was occupied by Aramament Research Development Establishment Institute (for short, 'ARDEI'), which was a unit of Defence Department of the Union of India. In the execution proceedings, the ARDEI has opposed the same.

2. Faced with this situation and realizing its mistake the State Government allotted another piece of land in lieu of the land which

was in possession of the ARDEI.

3. However, the record shows that the land which was allotted to the petitioner(s)/applicant(s) was notified as a forest land.

4. Learned senior counsel appearing for the petitioner(s)/applicant(s) submits that the land in question is shown as grazing land in the revenue records.

5. In any case, the petitioner(s)/applicant(s) who succeeded up to this Court cannot be denied the benefits of the decree passed in their favour. Firstly, the action of the State Government in encroaching upon the land of a citizen was itself illegal. Secondly, the State Government ought to have taken due precaution before allotting a piece of land. A land which is notified as forest land could not have been allotted. The State ought to have allotted a land, which has clear title and also the land which has a marketable value.

6. The matter has been pending for almost fifteen years, still the State Government has not yet come up with a concrete proposal.

7. We permit the petitioner(s)/applicant(s) to place on record the ready reckoner rates of the land in Pashan as well as the land at Kondre Khurd.

8. We, therefore, direct the State Government to come with a clear stand:

i. As to whether another piece of equivalent land will be offered to the petitioner(s)/applicant(s); or

ii. As to whether adequate compensation would be paid to the petitioner(s)/applicant(s); or

iii. As to whether the State Government proposes to move the

Central Government for denotification of the said land as forest land.

9. The State Government shall file an affidavit specifying its stand within a period of two weeks from today.

10. The matter is directed to be posted on 07.08.2024 at S. No.1. We clarify that if we find that the State Government does not come with a clear stand we would be compelled to direct the personal presence of the Chief Secretary of the State.

[5] I.A. NOS. 100352 AND 100351 OF 2024
IN RE : SHRI RAM KRISHNA PANDEY

1. When the matter was listed on 15.05.2024, no one was present for the applicant(s). Today also, no one is present for the applicant(s).

2. These applications are dismissed for want of prosecution.

[6] I. A. NOS. 157777 AND 157782 OF 2023
IN RE : PRADEEP
IN RE : MINING WITHIN 10 KMS WETLAND

1. List on 21.08.2024.

2. Report be filed in the meantime.

[7] [i] I.A. NOS. 1424-1425 OF 2005 AND 2749 OF 2009
IN RE : ALLEGED NON-FORESTRY ACTIVITIES AND ENCROACHMENT BY BALCO
AND [ii] I.A. NOS. 2211 OF 2008 In Re : BALCO AND
[iii] I.A. NO. 3427 OF 2012 WITH
I.A. NOS. 167802 AND 167804 OF 2019 WITH
I.A. NOS. 187590 AND 187591 OF 2019 IN RE : BALCO,
IN I.A.NO. 1424-1425 WITH
[iv]CONTEMPT PETITION (C) No. 388 OF 2009 IN I.A. NOS. 1424-1425
IN WRIT PETITION(C) NO. 202 OF 1995 WITH SPECIAL LEAVE PETITION(C)
NO. 37511 OF 2013 WITH WRIT PETITION (C) NO. 469 OF 2005

1. Shri Sen, learned senior counsel appearing for the

petitioner(s)/applicant(s), submits that when Bharat Aluminium Company Ltd (BALCO) was originally established 1804 acres of Government land was allotted to it. He further submits that 914 acres of private land was also acquired and given to BALCO. He further submits that in 1971, BALCO was in possession of 1136 acres of land, out of which 947.95 acres was a notified forest land. It is submitted that a compensation for converting the said forest land for non-forest purposes and felling of trees was already paid to the State Government.

2. He further submits that most of the felling of trees has been from the area in this 947.95 acres. Learned senior counsel fairly admits that after the order restraining the felling of trees was passed by this Court on 29.02.2008, there have been felling of trees. He submits that the same is only restricted to 9 acres and not 97.36 acres as has been found in the Report of the CEC dated 22.02.2019.

3. Shri Sen further submits that around 55 lakhs trees have been planted by BALCO in its premises over the years till 2014-15.

4. Shri Sudip Shrivastava, learned counsel appearing on behalf of the original contempt petitioner(s) submits that the report of the CEC dated 22.02.2019 does not depict the correct picture. He submits that the Report of the CEC dated 17.10.2007 depicts the correct picture. He further submits that the CEC in the 2007 Report has found that the entire land of 1751 acre is a revenue forest land.

5. We find that, taking into consideration the passage of time, it will be appropriate that the CEC considers the matter afresh and

submits a report. The CEC shall also verify and assess the area of forest land, which was put to non-forest use after 29.02.2008. The CEC shall assess the NPV to be payable by BALCO in respect of the forest area, which was put to non-forest use after 25.10.1980. While determining the same, the CEC shall also take into consideration as to whether there has been any compensatory afforestation made by the BALCO.

6. We also find that it will be appropriate that the State Government of Chhattisgarh identifies and assesses the area of forest land which was put to non-forest use after 25.10.1980 i.e. the date on which the Forest (Conservation) Act, 1980 came into force.

7. Insofar as the action to be taken against BALCO or any of its Directors concerned, including the imposition of penalty, the same shall be considered after the reports of the CEC and the State Government are submitted.

8. Three months' time is granted to the CEC to submit its report in this regard.

9. List after receipt of the report from the CEC.

[8] I.A. NO. 920 OF 2003 IN I.A. NO. 703 OF 2001 AND
I.A. NO. 988 OF 2003 AND
I.A. NO. 1129 OF 2004
IN RE: NATIONAL FISHWORKERS' FORUM (NFF) (THROUGH ITS CHAIRPERSON HAREKRISHNA DEBNATH 1073, A.G. COLONY, P.O.-MANIKTALA-743263, 24 PARGANAS(N), WEST BENGAL

1. When the matter was listed on the last date, no one was present for the applicant(s). Today also, no one is present for the applicant(s).

2. These applications are, therefore, dismissed for want of prosecution.

[9] I.A. NO. 20650 OF 2023 (CEC REPORT NO. 3/2023 - REPORT OF CEC IN APPLN. NO. 1558/2021 FILED BEFORE IT BY GAURAV KUMAR BANSAL)
WITH I.A. NO. 75033 OF 2023
IN RE : GAURAV KUMAR BANSAL

1. In pursuance of our orders dated 06.03.2024, a Status Report has been filed by the State of Uttrakhand pointing out various actions taken against the officers of the Forest Department. Learned counsel appearing for the State of Uttrakhand seeks three months' time for filing a further affidavit. Time as prayed for is granted.

2. The Inspector General of Forest (Wildlife), Ministry of Environment, Forest and Climate Change (Wildlife Division), has also sent a communication dated 20.07.2024 to Shri K. Parameshwar, learned Amicus Curiae, pointing out various steps taken in pursuance of the aforesaid order with regard to finalization of the Standard Operating Procedure (SOP) for tiger projects/wildlife sanctuaries, the same is taken on record. It has been requested in the said communication to grant eight more weeks for submission of final report. Time as prayed for is granted.

3. The CBI also filed its status report, in pursuance of the directions issued by this Court on 06.03.2024. The same is taken on record and be resealed and kept in safe custody. As requested in the said Report, a further time of six months' is granted to complete the investigation. However, the CBI also shall file a further Status Report after a period of three months.

4. List after three months.

I.A. NOS.156703/2024 & 156707/2024

1. These applications were mentioned by the learned counsel for the applicant(s) for listing before the Court.

2. List on 24.07.2024.

(NARENDRA PRASAD)
DEPUTY REGISTRAR

(ANJU KAPOOR)
COURT MASTER

ANNEXURE II

APPROVED MINING PLAN

राजस्थान सरकार

कार्यालय अधीक्षण खनि अभियन्ता, खान एवं भूविज्ञान विभाग, जयपुर वृत्त जयपुर।

क्रमांक: अखअ/जय/खयो/प-421/2024/

मैसर्स [illegible]
द्वारा श्री [illegible] कुमार [illegible]
[illegible] रोड, [illegible] नीमकाथाना।

विषय: राजस्थान अप्रधान खनिज रियायत नियम, 2017 के नियम 20 के अन्तर्गत माईनिंग प्लान [illegible] माईनिंग [illegible] खनन पट्टा संख्या **38/1992 (20/2001 नया)** खनिज [illegible] क्षेत्र [illegible] 4.86 हैक्ट., [illegible] जिला नीमकाथाना (पूर्व में झुन्झुनू) का अनुमोदन।

प्रसंग: आपका पत्र दिनांक 20.09.2024 इस कार्यालय के पत्र दिनांक 08.10.2024 तथा कार्यालय खनि अभियन्ता, झुन्झुनू के पत्र दिनांक 23.10.2024 के क्रम में।

महोदय,

राजस्थान अप्रधान खनिज रियायत नियम, 2017 के नियम 20 के तहत प्रदत्त शक्तियों का प्रयोग करते हुए [illegible] माईनिंग प्लान [illegible] माईनिंग [illegible] प्लान का अनुमोदन निम्नलिखित शर्तों के अधीन प्रदान किया जाता है:-

1. इस खनन योजना का अनुमोदन केन्द्र सरकार अथवा अन्य किसी अधिकारी द्वारा खान पर समय-समय पर लागू किए गए कानूनों पर प्रतिकूल प्रभाव डाले बिना किया गया है।
2. यह भी स्पष्ट किया जाता है कि इस खनन योजना के अनुमोदन से खान एवं खनिज (विकास और विनियमन) अधिनियम, 1957 या राजस्थान अप्रधान खनिज रियायत नियम, 2017 या और किसी अन्य कानून जिसमें वन (संरक्षण) अधिनियम, 1980, पर्यावरण संरक्षण अधिनियम, 1986 सहित अन्य किसी कानून के किसी अन्य प्रावधान की शर्तों के अनुसार किसी भी प्रकार से सरकार का अनुमोदन समाविष्ट नहीं हुआ है।
3. इस खनन योजना का अनुमोदन किसी भी न्यायालय के समक्ष विचाराधीन के किसी आदेश या निर्देश पर प्रतिकूल प्रभाव डाले बिना किया गया है।
4. खान अधिनियम, 1952 के अन्तर्गत खान को शुरू करने की सूचना, खान प्रबन्धक एवं अन्य वैधानिक नियुक्तियों की बाध्यता [illegible] उक्त अधिनियम के सभी नियमों एवं उप-नियमों की पालना की जायेगी।
5. खनन योजना का निष्पादन/क्रियान्वयन विवादग्रस्त/अतिक्रमण, यदि कोई हो तो, के अध्यधीन होगा।
6. खान एवं खनिज (विकास एवं विनियमन) अधिनियम या इसके तहत बने नियमों तथा खान अधिनियम के अन्तर्गत अपेक्षित कोई सूचना/विवरण या अपूर्ण योजना/विवरण, यदि पाया जाता है और उसके सुधार हेतु कोई प्रयास भी नहीं किया जाता है अथवा स्वीकृत क्षेत्र से बाहर के क्षेत्र में खनन योजना प्रस्तुत की गयी हो तो खनन योजना का अनुमोदन तुरन्त प्रभाव से वापस लेना मान लिया जाएगा।
7. किसी भी समय पर, यदि यह पाया जाता है कि दस्तावेज में दी गई, उपलब्ध करवाई गई सूचनाएं असत्य अथवा गलत ढंग से दर्शायी गयी है, तो दस्तावेज का अनुमोदन तत्काल प्रभाव से निरस्त कर दिया जायेगा।
8. खनन योजना का क्रियान्वयन उक्त क्षेत्र से सम्बन्धित भूमि मालिक से अनापत्ति/सहमति प्राप्त कर ही किया जायेगा।
9. इस खनन योजना का अनुमोदन किसी भी न्यायालय में लंबित किसी भी वाद के अंतिम निर्णय के अध्यधीन होगा।
10. इस खनन योजना का अनुमोदन इस खनन पट्टा क्षेत्र के संबंध में माननीय सर्वोच्च न्यायालय द्वारा दिनांक 09.05.2024 व 23.07.2024 को दिये गये निर्णय के अध्यधीन होगा।

E-signed
(एन.एस.शक्तावत)
अधीक्षण खनि अभियन्ता,
जयपुर वृत्त जयपुर

प्रतिलिपि निम्न को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है:-

1. खनि अभियन्ता झुन्झुनू को अनुमोदित खनन योजना की प्रति के साथ।
2. अधीक्षक भूवैज्ञानिक, जयपुर को अनुमोदित खनन योजना [illegible] साथ।
3. [illegible] माईनिंग, डी-86, [illegible], जयपुर। 12089395
4. रक्षित पत्रावली।

Signature valid
Digitally signed by N[illegible] Singh Shaktawat
Designation: [illegible] Mining Engineer
Date: 2024.11.26 [illegible]:31:26 IST
Reason: Approved

MINING PLAN

WITH PROGRESSIVE MINE CLOSURE PLAN

with

Quartz, Pyrophyllite, Red & Yellow Ocher Mine

(Submitted Under Rule 29(1) & 29(2)(ii) of RMMCR 2017)

M.L. Number 08/1982 (23/91 R)

Lease Area-4.96 hectare

V/s-Maharana, Tehsil- Khetri,

District- Neem Ka Thana (previous Jhunjhunu) (Rajasthan)

Lease area : Government Land

Lease Period : up to 24.02.2033

Period of this Mining Plan: 2024-25 to 2028-29

Lessee:-

M/s Ashoka Mineral Grinding Mills

Shahpura Road
Neem Ka Thana
Station Road
District-Neem Ka Thana
State-Rajasthan

Pin Code: 332713

This Mining Plan has been approved vide Order No. SME/JP/MP 5721/24 dated 24/11/24 under RMMCR 2017

Prepared By:-

Pinkcity Mining

"KHACHARIYAWAS HOUSE"

D-88, Meera Marg, Banipark, Jaipur (Rajasthan)

Mobile/Office: 96491 23428, 93140 71068, 94140 71070

e-mail:naruka.consultancy@gmail.com

List of Chapters

List of Annexure

ANNEXURE NO	TITLE
1	LETTER FOR SUBMISSION OF THE MINING PLAN
2	LEASE RIDER AGREEMENT
3	PLAN OF AREA
4	DEMARCATION REPORT
5	JAMABANDI
6	MINE CLOSING NOTICE
7	COVER PAGE OF PREVIOUS APPROVED MINING PLAN
8	RECOGNIZED PERSON DOCUMENT

List of Plates

NUMBER	TITLE
1	LOCATION PLAN
2	KEY PLAN
3	ENVIRONMENT PLAN
4	REVENUE MAP
5	SURFACE GEOLOGICAL PLAN & SECTIONS
6	COMPOSITE PLAN & YEARWISE SECTIONS
7	CONCEPTUAL PLAN
8	PROGRESSIVE MINE CLOSURE PLAN

M/s Ashoka Mineral Grinding Mills

Shahpura Road
Neem Ka Thana
District- Neem Ka Thana(Rajasthan)
Pin code- 332713

APPROVED

CONSENT LETTER/UNDERTAKING/CERTIFICATE FROM THE LESSEE

01 *The Mining Plan in respect of Quartz, Pyrophyllite, Red and Yellow Ochres Mine, over an area of 4.96 ha. in village- Maharana, Tehsil- Kherli, District- Neem Ka Thana of Rajasthan State, under rule 29(5) of MMR 2017 and PMCP under rule 29(5) (vi) of RMMCR 2017 has been prepared by Shri Govind Singh Recognized person, Ex-RQP for Pinkcity Mining.*
This is to request the Superintending Mining Engineer, Jaipur Circle, Jaipur, to make any further correspondence regarding any correction of the Modified Mining Plan with the said recognized person at his address below:

M/s Pinkcity Mining engaged Shri Govind Singh
Qualified Person, Mining Engineer
Khachariyawas House
D-88, Meera Marg, Bani Park,
Jaipur-302016
e.mail.neruka.consultancy@gmail.com
Mobile: 9414071070, 9314071069

I hereby undertake that all modification/ updating as made in the said Mining Plan by the said recognized person be deemed to have been made with our knowledge and consent and shall be acceptable on us and binding in all respects.

02 *It is certified that the progressive Mine Closure Plan of Quartz, Pyrophyllite, Red and Yellow Ochers Mine Maharana of M/s Ashoka Mineral Grinding Mills over an area of 4.96 ha. complies with all statuary rules, regulations, Orders made by Central or State Government, Statuary organization, Court etc which have been taken into consideration and wherever any specific permission is required the lessee will approach the concerned authorities.*

03 *The information furnished in the Progressive Mine Closure Plan is true and correct to the best of our kind knowledge and records.*

04 *"The provisions of Mines Act, Rules and Regulations made there under have been observed in the Mining Plan over an area of 4.96 ha. in Neem Ka Thana district of Rajasthan State belonging to Quartz, Pyrophyllite, Red and Yellow Ochers Mine Maharana and where specific permissions are required, the applicant will approach the DGMS. Further, standards prescribed by D.G.M.S. in respect of miner's health will be strictly implemented."*

Place: Jaipur
Dated - 17.09.2024

For M/s Ashoka Mineral Grinding Mills
Lessee

Pinkcity Mining

Engineer, Ex RQP, Recognized Person
Khachariyawas House
D-95, Meera Marg, Bani Park
Jaipur, Pin 302 016
email: [illegible]
Mobile- 94140 71070, 4021511

APPROVED

CERTIFICATE

The provisions of Rajasthan Minor Mineral Concession Rules 2017 have been observed in the preparation of the Mining Plan for Quartz, Pyrophyllite, Red and Yellow Ochers Mine Mine M.L. 23/01(B), over an area of 4.96 ha. of M/s Ashoka Mineral Grinding Mills, Village – Maharoni, Tehsil-Khetri of District- Neem Ka Thana of State Rajasthan and whenever specific permission are required, the lessee will approach the concerned authorities of Department of Mines and Geology.

The information furnished in the Mining Plan is true and correct to the best of my knowledge.

Place- Jaipur
Dated-6.10. 2024

Govind Singh for Pinkcity Mining
Recognized Person, Ex RQP
Mining Engineer
Mine Planner since 1987

1.0 GENERAL

INTRODUCTION

Lessee :-

M/s Ashoka Mineral Grinding Mills owned a mining lease for mineral [illegible] Pyrophyllite, Red and Yellow Ochre Mine, M.L.No. 23011(R), area 4.96 hectares. The mining lease area is located near village Maharana, Tehsil Khetri of district Neem Ka Thana (Previous Jhunjhunu).

M.L. 23011(R)	Lease Area 4.96 hectare	G.T Sheet 44 P/16

Lease Details:-

Present Status

Lessee	M/s Ashoka Mineral Grinding Mills
Lease Area	4.960 ha
M.L.No.	23/01(R)
Lease Period	50 years w. e. f. 25.02.1983

Lease History

Original Lessee	M/s Ashoka Mineral Grinding Mills
Agreement Registered On	25.02.1983
Lease Period	25.02.1983 to 24.02.2003 (20 Year)
Lease period automatically extend for 50 years as per rule 9(2) of RMMCR 2017	25.02.1983 to 24.02.2033 (50 Years)

Period of the mining scheme approved by ADM Jaipur	The previous mining plan was approved by ADM (Mines) Jaipur vide order dated 28.01.2004 for 5 years from 25.02.2003 to 24.02.2008. The Plan was approved for renewal of the mining lease.
Cancelation of renewal	The renewal was cancel as the area comes in Aravali. The work closed by order of ME Sikar dated 05.03.2010 (refer annexure). The lessee went to Honorable Supreme Court of India. As per the decision of Honorable Supreme Court of India, the mining Engineer asked to submit the approved mining plan by his letter dated 18.9.2024.(refer annexure).
Submission of this mining plan	This mining plan is submitted under rule 29(5) with PMCP under rule 29(5)(vi) of RMMCR 2017.
Period of this Mining Plan	2024-25 to 2028-29

For preparation of the Mining Plan with PMCP the lessee appointed [illegible] Recognized Person, Ex. RQP and authorized him for preparation of Mining Scheme with Progressive Mine Closure Plan (refer letter for authorization). The survey work was conducted in September 2024 and the Mining Plan with progressive mine closure plan has been prepared. This Mining Plan with Progressive Mine Closure Plan has been prepared as per the guide lines [illegible] by the approving authorities and circulars issued time to time.

APPROVED

Approach:

The route is as follows:

From	To	Approach	Distance	Direction
Mine Site	Tar road	KR	0.04 km	W
Mine Site	Mahasana	KR,	0.70 kms	S
Mine Site	Singhana	KR, TR	7.0 Kms	S
Mine Site	Kheiri	KR, TR, SH	21.0 kms	SSW
Mine Site	Jhunjhunun	KR, TR, NH	65.0 Kms	W

KR- Kacha Rasta, TR- Tar road, SH- State Highway, NH -National Highway

Name and address of Lessee	
Lessee	M/s Ashoka Mineral Grinding Mills
Address	Shahpura Road Neem Ka Thana District- Neem Ka Thana State- Rajasthan
Pin code	332713
Mobile	

a) **Status of Lessee:**
The lessee is a partnership firm.

b) **Mineral which are included in prospecting license:**

It is an existing lease for Quartz, Pyrophyllite, Red and Yellow Ochre.

c) **Mineral which are included in the letter of Intent/ lease deed**
It is an existing lease for Quartz, Pyrophyllite, Red and Yellow Ochre.

d) **Mineral which lessee intends to mine**
Quartz, Pyrophyllite, Red and Yellow Ochre.

e) **Name of Recognized Person under rule 29 (3) of RMMCR 2017 Who prepare the mining plan/ scheme**

Lessee	Pinkcity Mining, engaged Recognized Person, involved in mine planning since 1987 with IBM and States
Address	Khachariyawas House, D-88, Meera Marg, Bani Park, Jaipur State Rajasthan
Pin code	302016
Mobile	94140 71070, 93140 71068

2.0 LOCATION AND ACCESSIBILITY

a) **Lease details**

Name of the mine:
Quartz, Pyrophyllite, Red and Yellow Ochre Mine.
N/V- Maharana, Tehsil- Khetri District- Neem Ka Thana (Previous Jhunjhunun)
FRP: Center of Devji Temple situated on Maharana Hill Top.
GT Sheet number 4 P/16,
Latitude 28°08'58.1" longitude 75°49'27.6"
Lease period: up to 24.2.2033

b) **Name of Lessee:**

Lessee	M/s Ashoka Mineral Grinding Mills
Address	Shahpura Road Neem Ka Thana District- Neem Ka Thana State- Rajasthan
Pin code	332713
Mobile	

c) **Details of lease area with location plan**
Location plan is enclosed as Plate-1.

Forest		Non Forest	
Forest land	Nil	Govt. Land Khasra no Sawlod 907——0.32 ha Khunpur 148,149—4.49 ha Maharana 9——0.15 ha	4.96 ha

The total lease area is of 4.96 ha and it forms a part of Survey of India G.T. Sheet number 44 P/16.
District- Neem Ka Thana (Previous Jhunjhunu), **State**- Rajasthan
Taluka- Khetri, **Village**- Maharana.

Weather the area falls under coastal Regulation Zone (CRZ)
No

APPROVED

Existence of public road/ railway line

From	To	Approach	Distance	Direction
From	To	Approach	Distance	Direction
Mine Site	Tar road	KR	0.04 km	W
Mine Site	Maharana	KR	0.70 kms	W
Mine Site	Singhana	KR, TR	7.0 Kms	S
Mine Site	Khetri	KR, TR, SH	21.0 kms	S
Mine Site	Jhunjhunun	KR, TR, NH	65.0 Kms	SSW
Mine site	Jhunjhunun RS	KR, TR, NH	65.0 Kms	W
Mine Site	Jhunjhunun Air Port	KR, TR, SH	66.0 Kms	W

KR- Kacha Rasta, TR- Tar road, SH- State Highway, NH- National Highway

Available facilities: Circuit house is at Jhunjhunun, Rest house is at Khetri. Primary school is located at all prominent villages. School, College etc arte observed at Singhana. Market facility is available at Singhana. Police Station is also available at Singhana.

d) The Location Plan (not to scale) is enclosed (plate-1) showing the access routes with a Key plan (Plate-2) on GT Sheet Map in 1 cm= 500 metres showing access up to the Mine Site.

Pillars of the lease area:

FRP Center of Devji Temple situated on Maharana Hill Top.
GT Sheet number 4 P/16,
Latitude: 28°08'58.1" **Longitude** 75°49'27.6"

From	To	Bearing	Distance (Metres)
FRP	A	134°30'00"	350.00
A	E	357°00'00"	050.00
E	Q	267°00'00"	752.00
Q	F	267°00'00"	248.00
F	O	357°00'00"	200.00
O	P	087°00'00"	248.00
P	Q	177°00'00"	200.00

Coordinates are not available as the lease was canceled since long.
Lease Area = 4.96 ha.

3.0 DETAILS OF APPROVED MINING PLAN/ SCHEME OF MINING

3.1	Date and reference of earlier approved Review of Mining Scheme	Approval Date 18.01.2004 by ADMG Period: up to 2007-08
3.2	Details of last modification if any(for the previous approved period) of approved mining plan/scheme indicating date of approval, reason for modification	No modification carried out after approval of the mining plan
3.3	Gist review of earlier approved proposals (if any) in respect of exploration, excavation and reclamation	Not proposed and not carried out
3.3.1	Exploration	Not proposed
	Proposed	Not Proposed
	Compliance	Not carried out
3.3.2	Excavation of minerals	Quartz, Phyllite, Yellow and Red Ochre

Year	Mineral Quartz, Pyrophyllite, Red and Yellow Ochers	Production	Dispatch
2003-04		Nil	Nil
2004-05		Nil	Nil
2005-06		Nil	Nil
2006-07		Nil	Nil
2007-08		Nil	Nil
2009-2024		Nil	Nil

The lease is closed since

3.3.3	Reclamation	
	The plantation proposed in 0.10 ha in the period of the plan/scheme	The plantation provided in 0.10 ha area during the period of the mining plan/scheme. The plantation destroyed by local habitants during the long closed period.
3.3.4	Waste Disposal	

	Around 4023 tons of waste was proposed to generate during the period of the mining scheme. The dump is proposed inside the lease area in 0.08 ha area	No waste generated during the period
3.4	Indicate and give details of any suspension/ closure, prohibitory order issued by and Government agency under any rule or court of law	No closure come across
3.5	In case the MP/ SOM submitted under rules 29 of RMMCR 2017 for approval of modification, specify reason and justification under these rules	No mining plan/ scheme submitted During the approved period of the mining scheme

APPROVED

4.0 GEOLOGY AND RESERVES

- Brief describe the topographic, drainage pattern, vegetation, climatic and rainfall data of the area lease area.

The lease area comprises small mound trending roughly E- W. Highest Contour is 400mRL and Lowest Contour is 325mRL.

The spot levels are provided on the Surface Geological Plan

Drainage in the lease area is almost southerly along slope of the mound. General drainage outside the area is almost northeasterly by non perennial seasonal nalah.

Area broken by nalahs in surroundings is illustrated on plate-2.

No habitation observed in the area, nearest habitation is observed in Maharana village towards southern side around 0.7 kms away.

Minerals are exposed in the lease area.

The deposit is in Government land. The area is not falls in any type of forest land. No PWD road passes through the area.

Geology

As per geological and mineral atlas of India sheet no 14, miscellaneous bulletin no-30 and Mineral resource map of district the rocks of the area belong to Ajabgarh group of Delhi Super Group. The stratigraphic succession of rocks is as follows

REGIONAL STRATIGRAPHIC SUCCESSION

Source: District Resource Map of Jhunjhunun by GSI

Quaternary		Alluvium and blown sand
Malani Igneous Suite		Quartz reesite, Granite porphyry, rhyolite granite
Intrusive		Quartz vein, pegmatite, Granite, Amphibolite
Delhi Super Group	Ajabgarh Group	Schist and metagreywacke, ortho-quartzite, Andalusite schist, Garnet-amphibole schist
	Alwar Group	Marble, Amphibole quartzite, Quartzite
unconformity		
Bhilwara Super Group	Mangalwar Complex	Mica schist, marble/ dolomite/ calc silicate rock, Sillimanite bearing paragneiss, quartzite

Succession of rocks in the lease area (Local Geology)

Recent		Soil
Intrusive		Quartz
Delhi super Group	Ajabgarh Group	Pyrophyllite, Ochers, Quartzite

c. Detailed description of geology

LITHOLOGY
The red and yellow ochre are exposed in the area with quartzite. Quartz small veins and pyrophyllite layers also observed in the area.

STRUCTURE
No fault, fold or any other geological disturbances encounter in the lease area. Joints are located along and across the strike.

Trend of mineralization is E to W and dip seems 85° due northerly.

NATURE OF MINERALIZATION
The red and yellow ochres observed in the area across the mixed in layers between quartzite. Ferruginous quartzite is observed in the area in layers with ochres. The quartz observed towards eastern side in small quantity. Pyrophyllite also observed in the area in small quantity.

RECOVERY
As per field observation the recovery of red and yellow ochre, quartzite and Pyrophyllite seems 75% in the mound and rest 25% waste as quartzite.

WEATHERING EFFECT
The prominent weathering effect observed in the leave area.

NATURE OF WALL ROCKS
The wall rock is not exposed in the leave area so far as whole lease area has minerals and waste.

OCCURANCE
The ocher occurs as sedimentary deposit formed due to dehydration of limonite between the quartzite rocks. Quartz occurs in small veins between quartzite.

PHYSICAL AND CHEMICAL CHARACTRISTICS

Physically the red ochre is of reddish colour and yellow ochre is yellowish in colour. The mineral is soft. The bulk density of ocher's is considered 2.6 tons per cu. Meter as it is associated with quartzite. Quartz is white in colour. Luster is vitreous and bulk density is 2.6 tones per cu. Meter. The recovery may increase or decrease as per minerals and waste come across at depth.

TOPOGRAPHICAL PLAN:

The topographical plan in scale 1:1000 is prepared with 60 meter contour interval. All requisite details are given in this plan "Surface Geological Plan & Sections" plate-5.

SECTIONS:

Geological sections prepared at 60 meter interval in 1:1000 scale is provided on plate-5.

Details of prospecting/ exploration already carried out in the area.

The pits are observed in the lease area. The pit location is shown on plate surface geological plan. The minerals observed in this pit. The pit is illustrated on plate-5.

f. **Surface plan is provided as plat-5**
g. **Surface Geological Plan is provided as plate-5**
h. **Geological sections are provided on plate-5**

I **FUTURE PROGRAM OF EXPLORATION:**

As the maximum lease area will expose by the proposed workings of proposed five years, thus proposed prospecting work is not needed and no prospecting is proposed.

J **RESERVES AND RESOURCES AS PER UNFC (AS PER RECENT SERVEY)**

The reserves are calculated by the following formula:

Volume of mineral = Area of section x sectional influence length.

Mineral in tones = Volume of mineral X bulk density.

The bulk density of the mineral is 2.6 tons per cu. meter as per pit data and past experience.

The reserves are calculated for proved, probable and possible categories.
The area of sections is computed excluding the overburden.
The above method is adopted to calculate the overburden and side burden.

PROVED CATEGORY (111+211)

Considering the exposure of minerals in the lease area and pits and exposures located in the area the strike the proved category reserves are computed up to 320mRL. The whole mound is considered for reserves. The reserves are computed for whole lease area considering the pits. The roved category reserves are shown on plate-5.

As per UNFC considering economically viability, feasibility study and Geological exploration the probable category reserves are computed under code 111 and 211 of UNFC.

PROBABLE CATEGORY (121+222)

Considering the continuity of mineral in depth beyond the proved category, the probable category reserves are computed for 30 meters in thickness beyond the proved category reserves. The reserves are computed between 320mRL and 290mRL. The other limits are considered same as considered for proved category.

As per UNFC considering economically viability, feasibility study and Geological exploration the probable category reserves are computed under code 121 and 222 of UNFC.

POSSIBLE CATEGORY (333)

Considering the possibility of continuing the mineral in depth beyond the probable category, the possible category reserves are computed for 10 meters in depth vertically beyond the probable category reserves i.e. between 290mRL and 280mRL. The other limits are considered same as considered for proved reserves limit.

As per UNFC considering economically viability, feasibility study and Geological exploration the probable category reserves are computed under code 333 of UNFC.

Proved category Reserves

Sections	Area of section	Sectional influence length	Volume of ROM Minerals	Volume of Mineral 75%	Mineral in tons
a	b	c	d	e	f=e x 2.6
	Sq. Meter	*Meter*	*Cu. meter*	*Cu. Meter*	*Tons*
AA	7950	60	477000	357750	930150
BB	8920	60	535200	401400	1043640
CC	7840	60	470400	352800	917280
DD	5640	68	383520	287640	747864
Total					**3638934**
Total in nearest tens					**36,38,950**

Probable Category

Sections	Area of section	Sectional influence length	Volume of ROM Minerals	Volume of Mineral 75%	Mineral in tons
a	b	c	d	e	f=e x 2.6
	Sq. Meter	*Meter*	*Cu. meter*	*Cu. Meter*	*Tons*
AA	5000	60	300000	225000	585000
BB	5000	60	300000	225000	585000
CC	5000	60	300000	225000	585000
DD	5000	68	340000	255000	663000
Total					**2418000**
Total in nearest tens					24,18,000

Possible Category

Section	Area of section	Sectional influence length	Volume of ROM Minerals	Volume of Mineral 58%	Mineral
a	b	c	d	e	
	Sq. Meter	Meter	Cu. meter	Cu. Meter	
AA	2000	80	120000	90000	234000
BB	2000	60	120000	90000	234000
CC	2000	60	120000	90000	234000
DD	2000	48	156000	102000	265200
Total					967200
Total in nearest tens					0,67,200

Reserves as per UNFC

The mineral reserves as per UNFC are as follows:

Total Mineable reserves = Demonstrated reserves (Proved + Probable) – Reserves in boundary barrier, 7.5 meter barrier etc (Proved + Probable)

Reserves of minerals (Reserves are in tons)

Total Mineral Resources (A+B)	Code	Mineral
A-Mineral Reserves		
Proved Reserves	111	29,11,100
Probable Reserves	121	16,92,600
Total Reserves		**46,03,700**
B- Remaining Mineral Resources		
Feasibility Resources	211	7,27,830
Pre-Feasibility Resources	221	7,25,400
Inferred Resources	333	9,67,200
Total Resources		**24,20,430**

Quartz and Pyrophyllite are not separately assessable and not separately mineable. The quantity seems around 5% of both minerals in the deposit. It may be lower side also.

MINEABLE RESERVES AND ANTICIPATED LIFE OF THE MINE

Period of plan is passed so no proposed production is given. Reserves are sufficient for this plan period. The mineable reserves will increase after doing workings of next five years.

Mineral	Minable reserves	Excavation during period of the Plan 5 years	Reserves left after the plan	Target per year after plan	Life of the mine
	tons	tons	tons	tons	years
Red Ochre/yellow Ochre quartz, phyllite	**46,03,700**	**24,10,310**	21,93,390	6,00,090	5+3.65=8.65 Years

5.0 Mining:

Mining is excavation of mineral and waste systematically and in scientific manner keeping in view the conservation of mineral and less damage to environment. Loading of mineral and waste, transportation, dumping and stacking activities are also part of mining.

After approval of mining plan, the lessee will take Environment Clearance and Consent to establish and Consent to Operate. After completion of these work the lessee will start the work in the area.

The lessee will arrange the staff and labourers for operating the mine and deploy the machineries.

Reclamation, Environment Management: To plant the trees at proposed site as suggested in plan/scheme, protection and proper watering arrangements of the trees. Work for maintaining the Air, Noise pollution within the prescribed limit. Watering arrangements for local basin, birds etc.

Period of proposals in Modified Mining Plan:
The proposals in this mining scheme for mining activities are from year 2024-25 to 2028-29.

Existing Mining:
Presently the mine is not in operation since long. Previous mining was manual.

Proposed Method of Mining:
The opencast semi mechanized method of mining is proposed considering the nature of deposit and the required target of production.
Proposed mining is opencast semi mechanized with the help of hydraulic machineries, deep and short hole blasting, transportation by tippers, construction and maintenance of approach roads etc. The details are given in next pages.

Working Shifts: Presently one shift is proposed. The lessee may start 2nd shift after taking permission from DGMS.

Processing/ crushing Plant: It is mining and the mining of mineral depends on availability of market. The lessee will install the crushing/ processing plant in the lease area as it is the part of mining. The capacity will 400 TPD or more. The plant includes Jaw Crusher, Disintegrator, rotary and vibratory screens, belt conveyors etc etc. The place will be informed at the time of installation.

B Requisite Necessary Works:

1. The Lease pillars will be constructed as per norms. If available it should be maintained time to time with intermediate pillars.
Lease Pillars: The yellow colour with top 10 cms red colour RCC pillars of 0.30 x 0.30 x 0.7 meters in length, with and height on ground should be constructed and properly marked the name of pillar and bearing and distance of backward and forward pillar with coordinates(rule 28(iv) of RMMCR 2017)

2. A sign board with full lease details will be provided at main entry of the lease along side of the approach road.
3. The workings will be fenced with bob-wire to check the in advertent entry of human and live stock in the mining zone.
4. The approach roads will be provided as per norms and maintained time to time. As per regulation 106(3)(2)(a) of Metalliferous Mines Regulations, the bench height should be 6 meters and width also 6 meters. In hard stone the bench may apply to increase the height of the bench up to 7.5 meters with 6 meters width.
5. The bottom of the pit and approach roads will be kept clean during mining activities for safety. Unwanted stones and material should not be present at the bottom and on the approach roads. Water sprinkler's will be provided on the approach road if required to check the dust during vehicular movement.
6. All workers should be under insurance cover. Periodic regular health check up camps for workers will be provided. The protective wears and respiratory devices will be provided to labourers.
7. All measures will be provided to control the Air, noise and water pollutions. Water sprinklers on road, wet drilling, maintenance of machineries and vehicles will be provided. Workings should be above the ground water table.
8. The blasting should be with minimum ground vibration and should be arrest fly rocks and boulders. Blasting shall be carried out by certified blaster. Deep hole blasting shall be carried out as per permission of the DGMS.
9. The mining operations should be carried out in such a manner so as to ensure systematic development of the mine, conservation of mineral, Protection of environment and safety of man and machineries.
10. The soil come across during mining will be temporary stacked at a safe place to be used for plantation during monsoon.
11. Fresh water should be stored/ provided in water pitchers for drinking purpose and in cement tank for other purpose.
12. The monsoon water should be collect in deep cuttings for use for plantation and spray on the approach roads.
13. The plantation will be provided around the lease boundary and along the kachha approach road, near site office and other place as suggested by officials. The plantation will be in around 33% of the lease area. Regular maintenance is also proposed for survival of the plantation.
14. The waste will be dumped at one place and stabilized by retaining walls of rubble stone. The drain towards lower side with a siltation tank will be provided for catch the silt during monsoon. All measures will be provided for stabilization.
15. In mechanized mixing small pieces of mineral will also transport with waste and thus arrangements should be provided to sort out the mineral pieces from the waste dump and stacked separately.
16. The First Aid boxes will be provided at requisite places for giving First Aid to any injured person. The mates and manager should be first Aid Trained.
17. Safety devices i.e. helmet, shoes etc will be provided to the labourers and staff. Nobody should allowed in the mine area without safety devices.
18. No loose material or debris should be present near the crust of benches up to 3 meters distance which may fall on bench and injured the labourers. No tree should be plant or remain in existence in three meters from the edge of crust.

19. The face should not be undercut. The undercut crosses overhanging which may cause fall of face.
20. In case of any say road, permanents structure within and near the lease area the lessee will not work in 10 meters Rule 28(xvii) to 45 meters distance as per Rule 28(xxx) of RMMCR 2017.
21. The mining operations should be in such a manner so as to ensure systematic development of the mine, conservation of mineral, protection of the environment and safety of the man and machineries.
22. During vehicular transport the vehicles should have sound horn so that human divert from the road otherwise serious accident may occur.
23. During blasting nobody should be present in danger zone.
24. The lessee may erect the buildings/site services as required for bonafide purpose in the lease area(rule 28(2)(iii) of RMMCR 2017.
25. As per rule 28(2)(iv)(b) of RMMCR the lessee shall keep production of minerals within the limit of the mining plan/scheme or permitted under applicable law. In case the lessee excavate 10% more from the production proposed in mining plan/CTO. The lessee will pay the single time royalty of the excavated mineral.
26. In case of common lease boundary, the lessee will take permission for amalgamation with change of mine boundary for common side under regulation 111(1) & 111(3) of the Metalliferous Mines Regulations 1961 from Director of Mines Safety Ajmer Region, Ajmer.

Safety: *No loose material/stone should be placed 3 meters from crust of pit and benches. This material may fall in the pit by vibration or by any other means.*
Recently many accidents occurs due to rock fall by cavity and cracks. The rocks near cavity/ cracks fall due to vibrations of drilling and blasting. The manager should daily inspect the faces for any looseness of face, side wall due to cavity etc. or cracks. The loose rock/side wall may collapse/ fall in the pit due to vibration due to drilling, blasting and vehicle movement.
Proper maintained vehicles with sound horn should be deployed. The persons employed at mines should know the main safety rules.
During loading of stones by loaders in tippers the stone may fall and create lifting injuries to the nearby labourers. Only care is remedy. The persons should be away during loading of stone.
Heat Exposures: High temperature with humidity may result heat strokes which can be fatal. Better care of workers. Change of working hours during hot weather, proper water/ lemon water arrangement are remedy.
The accidents may occur during vehicular movement. The workers and drivers should careful during vehicular movement and sharp horn should be provided to the vehicles.

Health and Safety

The main occupation diseases for labourers are lung damages and hearing damage due to dust and unwanted sound. The main danger is injury from machineries and fall of stones and other material.

Fresh water	At requisite places fresh water will be provided in water pots/bottles/ coolers. During hot weather season lemon water should also be provided to the labour.
First Aid Box	First Aid box portable will be provided at site office with some needful medicines.
Rest Shelter	It is provided near the workings for taking lunch and rest of labourers during off/ rest hours.
Protective dress	Specially Helmet and Safety Shoes should be provided to the labourers. The helmet and shoes will protect the head and legs from injury.
Health Check up camp	The health Check Up camp will be arranged once in an year.

C Indicate Year-wise tentative excavation in cubic metres

The development is proposed for next five years

(i) Insitu Tentative Excavation

The development is proposed from 2024-25 to 2028-29

1. Insitu Tentative Excavation

Year	Bench Level	Total Tentative Excavation	Thickness Of Bench	Total Tentative Excavation In	Waste material 25%	Minerals 75%
	mRL	Sq. meters	Meters	Cu. Meters	Cu. Meters	Cu. Meters
2024-25	391	6300	6	37800	9450	28350
	385	8400	6	50400	12600	37800
2025-26	379	11530	6	69300	17325	51975
	373	12100	6	72600	18150	54450
	367	13800	6	82800	20700	62100
2026-27	361	14950	6	89700	22425	67275
	355	17250	6	103500	25875	77625
	349	19080	6	114480	28620	85860
2027-28	343	22000	6	132000	33000	99000
	337	24200	6	145200	36300	108900
	331	5090	6	30540	7635	22905
2028-29	331	23000	6	138000	34500	103500
	325	28290	6	169740	42435	127305

The lessee will apply the EC according to proposed production and Generation of waste. For Zero waste mining the lessee will sell the waste also as per state government policy and permission.

Year wise production in tones is as follows:

Year	Tentative Excavation in Tons (ROM)	Waste material	Mineral
	Tons	Tons	Tons
2024-25	2,29,320	57,330	1,71,990
2025-26	5,84,310	1,46,050	4,38,160
2026-27	7,99,970	1,99,900	5,99,980
2026-27	8,00,120	2,00,030	6,00,090
2027-28	8,00,120	2,00,030	6,00,090
2028-29	8,00,120	2,00,030	6,00,090
Total	**32,13,740**	**8,03,430**	**24,10,310**

(ii) **Dump rehandling (for the purpose of recovery of mineral)**
The re-handling of waste dump is proposed if required. The sorting and stacking the saleable material/ mineral from the waste dumps is proposed. The lessee may sale the waste after crushing and grinding or as it is as per requirement.

(iii) **Enclose year-wise development plans and sections**
It is a semi mechanized mine. The development plan and year wise sections are enclosed as Plate-6 in scale 1 cm = 10 metres showing all requisite details.

D PROPOSED METHOD OF MINING

Method :- The method of mining will be opencast semi mechanized.
Shift :- There will be one working shift in the area. The lessee may work in two shifts after getting permission from requisite department.

(i) **Excavation of Mineral and Waste:**

Excavation is either with the help of **blasting** as stated in blasting paragraph in mining chapter. The Rock Breakers and pneumatic breakers will also use for breaking the rocks if free face available.

(ii) **Rock Breaker** is a powerful percussion hammer fitted to an excavator for demolishing rocks. It is powered by an auxiliary hydraulic system from the machine, which is fitted with a foot operated valve for the purpose.

The life of the **hammer** depends on maintenance, care of machine and type and hardness of the rock. It varies from 200 hours to 500 hours.

Deep Hole Drill Machine Drill Hole 4"(100MM). 6 metres deep	The drill machine drilled 2 holes in an hour and total 14 holes (84 metres in total length) in a shift of 7effective hours. Around 5 minat per meter
Hydraulic excavator/loader	The excavator of 2.3 Cu. Meter (5.5tons) bucket capacity will excavate

Hydraulic excavator/loader	and load around 700 tons per shift. One excavator of 3.1 Cu. Meter bucket capacity will excavate [illegible] and load around 400 tons per shift.
Wire Saw available as 200HP, 600HP and 750HP capacity	Wire saw cut capacity is 20mm to 25 mm depending on hardness of rock.
Rock Breakers	One rock breaker hammer fitted on excavator breaks around 150 tons of stone per hour or 1000 tons of stone per shift of 7 effective hours. One breaker hammer breaks around 30,000 tons of rock or after 200 hours work required maintenance of hammer or change the hammer.
Tippers	One tipper of 20 tons capacity uses for waste transportation from face to dump site is suitable for around 240 tons waste per shift of 7 hour effectiveness.

Hydraulic Shovel

Tippers for transportation purpose

(iii) Transportation and haul roads

Mine transport is the major processes involved in the mining of minerals accounting for approximately 35% of labour and cost expenditure.

Good quality tippers of rated capacity are proposed to deploy at mine for transportation of mineral up to stock and waste up to dump site.

Good transport roads/ haul roads are essential for successful tippers transport/ movement in opencast mine.

A wide, smooth haul road with sufficient gradient, well designed as per the capacity of the tippers will reduce the cost of transport and maintenance of tippers. It also proves safe transport. Proper signals will be provided on road for drivers. A drain will be provided along the inner side of the road to flow out the monsoon water without damaging the haul road.

(iv) Others:

The lessee may use any other machineries/ newly introduced machineries for mining as and when required time to time for mining activities.

The overall layout of workings and other mining activities has been illustrated on plate 6.

(v) *Without knowing the surface profile of an area at the time of sanction of the lease, it is not possible to calculate the total excavation on the basis of length, width and depth. The cavities, inter-burden and mining losses during mining will also affect the quantity of mineral.*

Rock breaker attachment for shoval

E. EXTENT OF MECHANIZATION

ROM production as per Plan	8,00,124
Total working days in an year	300
Daily production of mineral	2667.06 or say 2270 TPD

Machineries	Capacity	Number
Hydraulic excavator/ loader	700 tons per shift	Three/ As per requirement available at mine
Excavator fitted with rock breaker arrangement	150 tons per hour' or 1000 tons per shift	One or two as required to break the boulders and rock.
Long hole drill	110 mm bit 6 meter deep hole. Total 84 metres hole per shift (14 holes of 6 metres depth each) total 84 meters holes. 190 tons per hole'	One/As per required
Wire Saw	Required capacity	One and one stand by
Jack hammers	32mm bit and 1.5 to more long drill roads	Two/As per required
Tractor trolley	4 tones capacity	Two/As per required
Tippers	20 tones capacity	Eight/As per required
Tractor tanker	5000 liter	One/As per required

The lessee will deploy Other machineries as required time to time for systematic and scientific mining and processing. The present machineries as well as the newly introduced machineries for mining and processing.

F **CONCEPTUAL MINING PLAN**

After Survey work firstly prepared the Surface Geological plan and Consolidated reserves. The conceptual plan is selected for knowing the upper limit excavation (without any disturbance) and slope of the faces for working lease area up to bottom of possible reserves. The selected site of working should not be disturbed up to conceptual.

APPROVED

Considering these aspects the conceptual mining plan for this mine workings is suggested as below:

(i) **Ultimate and extent and size of the pit**

The ultimate extent of the pit i.e. final mine crust at the time of exhaust of mineral or at the time of end of lease is provided over the Conceptual plan with spot levels.

(ii) **The Final Slope angle adopted**

Considering the stability of rocks the final slope angle or says ultimate pit slope is proposed 45°. This slope angle will remain quite safe for this deposits.

(iii) **Ultimate capacity of dumps**

The waste will be used for construction of approach roads, site services etc. Some waste may be used by local habitants. The lessee may also sale the waste after grinding and crushing as dust of mineral. The waste may also use as M Sand as per state government policy. The rest waste will dump in the area at proposed site in 0.01 ha area for 3 meters height.

(iv) **Stabilization of Dumps**

The waste dump will be stabilized by retaining walls of rubble stone to arrest the rolling downs. A drain will be provided from upper to lower side with a settling tank to arrest the silt during monsoon.

(v) **Ultimate Pit Limit**

Ultimate pit limit is the limit of the workings i.e. pit crust at the end of reserves' end of life of the mine. It is designed by preparing sections along and across the strike.

H **BLASTING**

Blasting:

As per rule 34(vii) and (ix) of RMMCR 2017 the lessee shall have approval of Director General of Mines Safety.

In mining for excavation of **mineral and waste**, blasting is generally considered the quickest and less costly method. Blasting is of two category i.e. Deep hole blasting and short hole blasting. For mechanized mining mainly deep hole blasting is needed.

Blasting process is reducing, break a solid body, such as rock, to fragments by using an explosive. Conventional blasting operations include (1) drilling holes, (2) placing a charge and detonator in each hole with connecting, detonating the charge, and (4) clearing away the broken material. (Detonators are ordinary or electric delay detonators)

Broad blasting parameters

Item	In Meters	Others
Deep Hole Blasting		Dawn the hole drill
Deep Hole Machine	6 meters effective length	
Deep hole drill rood	3 meters	
Burden	4 meters	
Spacing	100 mm to 110 mm	
Hole Diameter		
Short Hole Blasting		Jack Hammer
Drill Machine	1.5 meters effective length or more	
Drill Rood	0.8 meter	
Spacing	1.0 meters	
Burden	32 mm	
Hole Diameter		

8 **EXPLOSIVE USED**

Blasting will be done by using permitted explosives

Blasting will be done by various types of explosives. Generally the following conventional types of explosives may be used:

Slurry explosive class 2 viz. Neoprime (Special), power gel, Acquadyne, Superdyne etc. and other permitted.

Booster is proposed as Packaged Slurry Explosive, Emulsion explosives available in 100gms to 500 gms cartridge. The Raj Gel, Raj Power explosive cartridge of RECL Dhelpar, and other suitable and permitted explosive may also use.

Initiation is proposed by half second delay detonators.

Explosive is a solid ore liquid substance or mixture of both, which is itself capable by chemical reaction of producing gas at such a temperature and pressure and such a speed as to cause damage to the surroundings.
Booster is a high explosive sensitive enough to pickup initiation from a detonator and then reliably initiate bulk blasting agent like ANFO and any permitted explosive.
Detonator electric is a device containing a detonating charge that is used to initiate an explosion reliably.

C POWDER FACTOR

Deep Hole:

Deep Hole Drill

Booster	0.125 kg One Cartridge
Explosive	6 kg per meter total 36 kg
Initiation	Electric detonators
Powder factor	Effective Depth of hole X Burden X Spacing X Bulk Density / Total charge in Kg
	6 X 3 X 4 X 2.6 / 0.125 + 36
	5.18 tones of rock per kg of explosive

Jack Hammer

Short Hole:

Booster	0.125 kg One Cartridge
Explosive	0.5 kg
Initiation	Electric detonators
Powder factor	Effective Depth of hole X Burden X Spacing X Bulk Density / Total charge in Kg
	1.5 X 0.8 X 1 X 2.6 / 0.125 + 0.5
	4.992 tones of rock per kg of explosive

Secondary Blasting

Secondary blasting is uses to re-blast a part of the rock after primary blasting reduced the size of the rock.

Now a days the big pieces left after primary blasting reduced by the help of rock breakers and thus secondary blasting is not needed.

Storage of explosive

Not required as the lessee will engaged the magazine for explosive and licensee blasters for blasting.

If required, considering the consumption of explosive a 200 kg portable magazine is proposed for storing the explosive.

ANFO mixing shed is proposed for manufacture of ANFO. A room will provide for storage of Ammonium Nitrate.

It is advised to lessee that he should apply for explosive magazine for 100 kg capacity to the competent authority and for ANFO mixing shed to the competent authority. It is expected that the lessee

	Precaution during drilling *The drillers should not wear loose cloths* *The drillers should use safety goggles for eye's protection* *All safety guards should be in place while drilling is in operation* *Keep the fingers and hands away from rotating drill roads* *Before blasting remove all the persons from blast area before the blast fired* *The guards with red flags should be present at access routes to the blast area to prevent the persons and vehicles to the blast area* *The peoples should be away from blasting danger zone*

1 LAND USE PATTERN INCLUDING RECLAMATION

S. No.	Item	As on date	End of 5th year	End of [illegible] year
1	Degradation by excavation	0.45	2.30	3.60
2	Top soil stack	0.00	0.00	0.00
3	Dump of overburden	0.00	0.01	0.01
4	Mineral/Sub-grade stack	0.00	0.00	0.00
5	Infrastructure, site services	0.00	0.01	0.00
6	Roads/ approach roads	0.02	0.02	0.01
7	Green belt	0.10	0.20	0.40
8	Reclamation	0.00	0.00	0.00
9	Others Plant	0.00	0.10	0.00
	Total Disturbed land	0.57	3.64	4.01

Reclamation: end of mining	
By plantation along the lease boundary	0.40 hectare
By plantation on upper benches	1.23 hectare
By reservoir in excavated land	0.80 hectare
Total reclamation	2.43 hectare

6.0 MINE DRAINAGE

a) **Minimum and Maximum depth of water table based on discussion from nearby wells and water bodies:**

Mine drainage is removing the mine water from pit bottom. It is of two type

1. Monsoon water collects in the pit
2. The ground water comes across in pit during mining.

In this mine drainage will require for removing (dewatering) the monsoon water only . Ground water will not encounter in workings at any stage.

The rain water directly precipitate over the workings collects in the mine bottom of deep cuttings exists. It depends on quantity of rains. Maximum rain fall will be around 300mm but it is in two months. Thus small water quantity has to dewater time to time.

The ground water level is not remains fix. It varies with quantity and type of rains.

The details is as follows:	
General Ground Level	300mRL
Depth of Ground water Table	100mbgl
General level of ground water table	200mRL

*As per tube wells of nearby area

a) **Indicate minimum and maximum depth of workings**

Minimum depth of working	375mRL
Maximum depth of working	280mRL

b) **Quality and quantity of water likely to be encountered, the pumping arrangements and places where the mine water is finally proposed to be discharged**

There is a sufficient gap between proposed workings up to conceptual and level of ground water table, thus ground water will not encountered in the workings at any stage

c) **Describe regional and local drainage pattern with annual rain fall, catchment area, and likely quantity of rain water to flow through the lease area, arrangement to arresting the solid wash off etc.**

The water comes across in the workings during monsoon. The water will fill in the pits. This water has to dewater during and after the monsoon.

The monsoon water which directly precipitate over the lease area and workings will flows down towards lower altitude side by slope of the mound. The rainfall remains around 300mm per year towards maximum. The water accumulate in deep cuttings is proposed to dewatered by required HP water pumps. The rubble stone walls are constructed towards lower side of the dumps to check the wash off during monsoon.

Lease area	49600 sq. meters or 4.96 Ha.
Excavated are during the period of the plan	49600 Sq. Meters
Average rain fall encountered	300mm or 0.30
Monsoon water encountered	49600 x 0.30 = 14880 C.u. Meter

A sump of suitable size is propose to develop towards lowest side in the pit. The dewatering will be from the sump after settling the monsoon water. A sedimentation/ settling tank is proposed to provide at surface and dewatering is proposed through this tank. The tank allows suspended particles to settle out of water waste water as it flows slowly through the tank.

It is also proposed to collect the monsoon water in deep cutting in a part of the open pit. The suitable size/capacity of water pump will be deployed for dewatering purpose. The collected water will also uses for plantation and for spraying on the approach roads time to time. The reservoir will also help in water balance of the area.

This mine water (silt free) may also dewatered in nearby talav/ pond as it may be suitable for livestock and humans during dry season.

Centrifugal Pump for dewatering

7.0 STACKING OF MINERL REJECTS/ SUB GRADE MATERIAL AND DISPOSAL OF WASTE

a) **Indicate briefly the nature and quantity of top soil, overburden/waste and mineral rejects to be disposed off.**

No separate soil will come across during mining. If the soil comes across the small patches it will be used for plantation. The mineral rejects not come across during mining. The waste which comes across during the period of this planning is illustrated in discussed in mining chapter.

b) **The proposed dumping ground within the lease area be proved for presence or absence of mineral and be outside the UPL unless simultaneous backfilling is proposed or purely temporary dumping for a short period is proposed in mineralized area with technical constraints and justification**

The details are given in Conceptual Mining Plan in chapter 5.

c) **Attach a note indicating the manner of disposal of waste, configuration and sequence of year wise build up of dumps along with the proposals for protective measures**

The waste is proposed to dump in the area as described above. The proposed dumps are shown on plate-6. The stone walls will be provided time to time towards lower altitude side of the dumps to arrest the solid wash off. Plantation will also provide along both side of the dump. The waste may also sale by lessee after getting permission from the department.

8.0 USE OF MINERAL AND MINERAL REJECTS

a) Describe briefly the requirement of end use industry specially in terms of their physical and chemical compositions.

Hematite is a more reddish variety of Iron Oxide and is the main ingredient of red ochre.
When limonite is roasted it burns partially to the more reddish hematite and become red ochre.
Red Ochre consists of Silica and Clay owing its colour to Iron Oxide.
Hematite is a more reddish variety of Iron Oxide.

Uses:
-Main use of red ochre is as a coloring agent.
-Ochre is uses as adhesive. Its powder is as effective aggregate in resin adhesive to mount tools onto handles or shafts.
-Red ochre is non- toxic, thus it is uses in paint industries for manufacturing the Primer and other colours. Primer uses as protective coating that prevents rust metal surface exposed to humidity and air.
-The cement grade mix raw material requires a minimum quantity of iron and alumina. Red ochre mixed with lime stone makes a perfect mix of constituents in the raw material fed to the cement manufacturing units.

b) Give brief requirement of intermediate industries involved in upgradation of mineral before end use.

Not required.

c) Give details requirement for other industries, captive consumption export associated industrial use

Not applicable

d) Indicated precious physical and chemical specification stipulated by buyers

The lessee dispatches the mineral as per own specification to the different consumers.

e) Give details of processes adopted to upgrade the ROM to suit the user requirement

The lessee will separate the blocks in required size blocks at site by wire saw or by any other method.

9.0 PROCESSING OF ROM AND MINERAL REJECTS

No process takes place at mine site and none is required. The ROM mineral is being dispatched to the consumers.

a) If processing/ beneficiation of the ROM or Mineral Rejects is planned to be conducted, briefly describe nature of processing/ beneficiation.

The lessee may install the Crushing/screening plant in the lease area. The details will be provided at the time of installation.

b) Give a material balance chart with a flow sheet or schematic diagram of the processing procedure indicating feed, product, recovery and its grade at each stage of processing

Not applicable

c) Explain the disposal method for tailings or reject from the processing plant

Not applicable.

d) Quantity and quality of tailing/ rejects proposed to be disposed

Not applicable.

e) Specify quantity and type of chemicals if any to be used in the processing plant

Not applicable.

f) Specify quantity and type of chemicals to be stored

Not applicable.

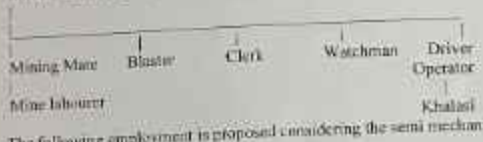
g) Indicate quantity (Cu. M per day) of water required for mining and processing and sources of supply of water, disposal of water and extent of recycling.

Water required	Drinking and others	Sprinkling	Plantation
5 KLD	0.5KLD	2 KLD	2 KLD
Transport	In water tankers from nearby tube wells		
Stored in	Water pitchers for drinking and cement tanks for other purpose		

10 **OTHERS**

a) **Site services**
It is a small mine hence no much site service facilities are required. A site office, rest shelter, Water bat, small workshop etc will be provided at mine site either inside or outside near the lease area. The other site services will be provided as suggested by officials time to time.

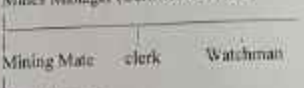
b) **Employment Potential**
The following supervisory personnel are proposed with management chart:
Mining Engineer (Degree Holder) or (1st Class, 2nd Class Certificate holder, & Geologist) as per rule 30(X)(ii) of RMMCR 2017.



The following employment is proposed considering the semi mechanized opencast mining :

S.No.	Labourers	Number
1	Highly Skilled	2
2	Skilled	10
3	Semi Skilled	10
4	Un Skilled	20

The following supervisory personnel are proposed with management chart:
Mining Engineer (Degree Holder) – Geologist



Duty of Manager: It shall be the duty of qualified person employed to take all necessary steps to plan and conduct mining operation, so as to ensure conservation of minerals, systematic development of the mineral deposits, protection of environment and safety of persons in and around the mining lease area

B. Personal Protective Equipments

It is proposed to provide to the labourers:

1. **Safety Helmet**- Uses for the safety of head (to all labourers)
2. **Safety Goggles**- Uses for the safety of Eyes from sun, welding and flying rock particles (to welders, drillers etc).
3. **Dust Respirators**: Uses for dust free air at dusty areas in the mine (to drillers specially).
4. **Ear Plugs**- Uses for protection of ear from unwanted sound i.e. noise pollution (to the persons who will work near noise making machineries).
5. **Safety Belts with Rope**- For safety of body which may fall from high faces (to the labourers who works at high level).
6. **Hand Gloves**- for protection of hand during welding or other hot things/ articles.
7. **Safety Boots**- For protection of foot from fall of stone and for safety from injury (All labourers).
8. **Insurance Cover** will be provided to all labourers as per rules (all labourers).

C. Other requisite requirements for labourers will be provided:

1. WC (Latrines and Urinals) one for each and up to 50 labourers. Separate for Male and Females (Rule 20 Mines Act, 33 of Mines Rules).
2. Rest Shelter for labourers for taking rest during off hours (Rule 62 of Mines Rules).
3. Water hut for storing of cold water for labourers (at least 2-3 liters for each labour for drinking purpose) (Rule 19 Mines Act, 30 of Mines Rules).
4. First Aid Boxes in sufficient numbers (Rule 21 of Mines Act).
5. The lessee will organize regular health check up camps for the workers, staff engaged at the mine and also arrange periodically occupational health surveillance program for workers to observe any impact of dust.

Rule 28(2)(iii) of RMMCR 2017

The lessee may erect on the area granted to him any building required for bonafied purpose (office, rest shelter, godown, workshop etc) and such building shall be the property of the Government after the expiry of the lease or earlier determination or surrender of the lease.

The ambulance number is 108.
The manager remains at mines as responsible person. Dispensary is at Maharana and hospital is available at Singhana and Khetri.

11.0 ENVIRONMENT IMPACT ASSESSMENT AND ENVIRONMENT MANAGEMENT PLAN

11.1 Environment Base Line Information's:

The lease area is in revenue land. The land details are given in introduction chapter.

The pits, dumps, roads etc observed in the lease area are illustrated on plate-5.

The present degradation of land is as follows:

S.No.	Item	As on date
1	Area to be excavated	0.45
2	Storage of top soil	0.00
3	Overburden dump	0.00
4	Mineral/Sub-grade stack	0.00
5	Infrastructure	0.02
6	Roads	0.10
7	Green belt	0.00
8	Reclamation	0.00
9	Others	0.57
	Total Disturbed land	

Water Regime:

No water reservoir or perennial stream etc observed in the lease area and around 500 metres periphery of the lease area. No water reservoir observed in five kilometers periphery of the lease area. No static water observed in the reservoirs and the reservoirs remain empty throughout the year.

Quality of air:

The lease area is away from the habitation, the present workings are semi mechanized and proposed workings are also semi mechanized. The rock breakers are uses for excavation and breaking the stones. Blasting is not needed as regular practice. Thus the present air pollution is within the prescribed limit.

Ambient Noise Level:

The noise level in the lease area is within the prescribed limit as the workings are towards lower side and workings are manual.

Flora:

In the lease area the main flora is shrubs and bushes. The trees planted by forest dept. observed in and near the lease area.

Climatic Conditions:

Climate of the area is semi arid zone type. The average rain fall remains around 300mm to 350mm per year. The maximum, mean and lowest temperature remain around 44°C, 24°C and 4°C. Maximum precipitation takes place during month of July and August. The hottest months are May and June and coldest are of December and January.

Human Settlement:

No human settlement observed in the lease area. Nearest village is in Maharana village. The habitants belong to ST, SC, Minority, OBC and general categories. The main vocation of the habitants is agriculture. The habitants also has job in nearby mines and nearby towns Khetri, Singhana and Neem Ka Thana.
The population of villages observed in five kilometers periphery of the lease area is as follows:

As per CENSUS 2011 the population details is as follows:

Revenue Village	Population	Male	Female
Maharana	1747	929	813
Khangar	1445	738	707
Sattriya	1741	906	835
Chitoria	1771	927	844
Puhanian	2226	1166	1060
Singhana	11372	6016	5356
Jaisinghpura	927	487	440
Hamir Bas	932	477	455
Thali	1968	1002	966
Saga	2100	1087	1013
Sanvled	2416	1266	1150
Khala Khari	2094	1087	1007
Palota	1146	609	537
Shyamputa	922	467	455
Mal Nana	2220	1144	1076
Mal Sadda	1421	734	687
Mal Bhatu	1451	729	722
Bhainsawata Khurd	1566	795	771
Total	**39460**	**20566**	**18894**
Percentage	**100%**	**52.11%**	**47.89%**

Public building, place of worship and monuments

No such things are observed in and around the lease area. The other public [illegible] observed in five kilometers periphery is illustrated on plate-2

Indicate any sanctuary is located in the vicinity of leasehold

No sanctuary etc observed in the vicinity of the lease area.

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11.2 Impact Assessment:

The land of the lease area will degrade by excavation, dumps and roads.

i) The infrastructure, waste dump, roads etc are already in existence. Thus the area mainly will degrade by excavation and improves by plantation. The area likely to be degraded due to quarrying, dumping, roads, workshop, processing plant, tailing pond/dam, township etc.
The lease area is already degraded by workings, road and dumps. Some fresh area will also degrade by proposed mining excavation, dumps and roads where as some area will improve by proposed plantation. The aesthetic beauty will also improve by proposed systematic mining.
The degradation existing and proposed is as follows:

S.No	Item	As on date	End of 5th year
1	Area to be excavated	0.45	3.30
2	Storage of top soil	0.00	0.00
3	Overburden dump	0.00	0.01
4	Mineral/Sub-grade stack	0.00	0.00
5	Infrastructure	0.00	0.01
6	Roads	0.02	0.02
7	Green belt	0.10	0.20
8	Reclamation	0.00	0.00
9	Others	0.00	0.10
	Total Disturbed land	0.57	3.64

ii) **Air Quality:**

The quality of air is likely to be effected by drilling, blasting and transportation of mineral and waste. The drilling and blasting will not a regular practice it is uses to break the hard strata. The lessees will use rock breaker for excavation of mineral and waste.
The drilling will be by wet process. Dust from blasting will be momentarily and suppressed out soon with air in opencast mine.
Water spray will be provided over the haul/ approach roads time to time especially during dry season.

iii) **Water Quality**

The quality of water is affected by mining if water comes across mineralized zone by having any toxic mineral in the lease area. There is a high gap between the level of ground water table and the depth of proposed deepest working. Thus ground water will not intersect the workings at any stage. In absence of toxic mineral the quality of water will not get any adverse impact.

iv) Noise Level

The diesel operated machineries and blasting will create noise in the mining area. The following measures are proposed:
The high quality silencers will be provided to the diesel operated machineries uses for excavation and loading of material and waste and uses in water pump etc. The approach roads will be provided smooth and wide to check the noise pollution. The vehicles will be load up to rated capacity. The blasting will be towards lower side on high demand and noise from blasting will be momentarily and thus no measures are called for.

v) Vibration level (Due to Blasting)

Blasting will not be a regular practice. The excavation is by rock breakers and loading is by loaders. Blasting is towards lower side and on small scale. The area is in interior and covered with plantation, thus vibrations from blasting will not be very much significant.

vi) **Water Regime:**

No perennial water regime is observed in and near the lease area in 500 metres periphery. No toxic mineral is observed in and near the lease area. Thus water regime will not disturbed by proposed mining activities.

vii) **Acid Mine Drainage**

Not applicable in this mine.

viii) Surface subsidence

It is an opencast mining and no such subsidence will come across in past by mining and none is expected by future mining.

ix) Socio- Economic

The socio economic conditions of an area will gate favorable impact by having and economic activity near by the habitation. The local habitants will get permanent extra income from the source of employment near the villages.

x) Historical Monuments etc

In absence of such monuments in and around the lease area no impact will be anticipated

11.3 PROGRESSIVE RECLAMATION PLAN

The mining is from top to bottom side and extension of existing workings on sides and in depth, which reduces the height of the faces and workings will be in depth. The waste will use for construction and maintenance of approach roads time to time. The maximum quantity of waste is sellable and the lessee sell the waste as per state government polices and permission. Thus reclamation of excavated land is not proposed. The excavated land (deep cuttings) will be used as water reservoir. The monsoon water which will collect in the excavation will be useful for nearby crops, plants and live stock.

11.3.1 MINED OUT LAND

S.No	Item	As on date	End of 5th year	End of lease
1	Area to be excavated	0.45	3.30	3.60
2	Storage of top soil	0.00	0.00	0.00
3	Overburden dump	0.00	0.01	0.00
4	Mineral/Sub-grade stack	0.00	0.00	0.00
5	Infrastructure	0.00	0.01	0.00
6	Roads	0.02	0.02	0.01
7	Green belt	0.10	0.20	0.40
8	Reclamation	0.00	0.00	0.00
9	Others	0.00	0.10	0.00
	Total Disturbed land	0.57	3.64	4.01

The deposit is in government land and proposed mining will be in government land. No reclamation/ rehabilitation are proposed.

11.3.2 TOP SOIL MANAGEMENT

No separate soil will come across during mining. If some soil will come in small patches in cuts and vines then it will be used for plantation.

11.3.3 TAILING DAM MANAGEMENT

In absence of such tailing dams no management require and none is proposed

11.3.4 ACID MINE DRAINAGE

In absence of acid mine drainage no management is require and none is proposed.

11.3.4 SURFACE SUBSIDENCE

Surface subsidence mitigation measures through backfilling of voids or by any other means and its monitoring mechanism.

No such subsidence occurs in open cast mining.

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YEARWISE PROPOSALS FOR PMCP

ITEM	DETAILS	AREA (HECT)	QUANTITY	EXPENDITURE	REMARKS
(A) RECLAMATION AND REHABILITATION OF MINED OUT AREA	(i) Backfilling	Nil	NA	NA	NA
	(ii) Afforestation on backfilled area	Nil	NA	NA	NA
	(iii) Others (please specify) Afforestation on exhausted benches	Nil	NA	NA	NA
	(iv) Pisciculture	Nil	NA	NA	NA
	(v) converting into water reservoir/ recreation spot	Nil	NA	NA	NA
(B) STABILIZATION & REHABILITATION OF DUMPS (mine waste)	(i) Terracing	Nil	NA	NA	NA
	(ii) Pitching	[illegible]			
	(iii) Construction of parapet wall/ retaining wall at toe of dump	Nil [illegible] Along [illegible]	NA [illegible]	NA Rs.[illegible]	NA [illegible] toe of dump
	(iv) Construction of check dams along slope of nallas etc.	Nil	NA	NA	NA
	(v) Construction of settling ponds (Garland drains etc)	Nil	NA	NA	NA
	(vi) Desilting of settling ponds, drains	Nil	NA	NA	NA
	(vii) Afforestation on dumps	Nil	NA	NA	NA
	(viii) Others (please specify)				
(C) REHABILITATION OF BARREN LAND (lease area)	(i) Afforestation (Greenbelt building)	[illegible] Ha Per year	[illegible] trees	[illegible]	Along lease boundary and along road
	(ii) Others (Please Specify) Wire Fencing	150 meter Per year	150 running meter per year	[illegible]	Around the excavation
(D) ENVIRONMENTAL MONITORING (Core Zone & Buffer Zone separately)	(i) Ambient air quality	Lease area	1 sample	[illegible]/-	From lease area
	(ii) Water quality	well	1 sample	[illegible]/-	From nearby well
	(iii) Noise Level Survey	Lease area	1 measurements	[illegible]/-	Near working pits and hydraulic machineries
	(iv) Ground Vibration	Nil	NA	NA	NA
	(v) Others (Specify)	Nil	NA	NA	NA

11.4 DISASTER MANAGEMENT PLAN

No landslide and inundation like disaster some come across in this area and nearby the area is past. The workings are proposed from top to bottom by forming proper benching. The proposed workings will be by opencast mining method. Underground mining is not proposed. Face height will minimize safe. No tailing dam is proposed. That high risk accidents like land slide, subsidence, flood, inundation, fire, seismic activities etc. not come across. Small accidents like fire, explosion in explosive and accident and fall of face like disaster may come across. A fire fighting station (sand filled buckets) is proposed at site in the supervision of mines manager and mate. After receiving the information, the officials will reach up to site and will remove men and machineries from the site. Magazine approved is proposed for storing the explosive and approved boxes are proposed for handling the explosive from magazine to site. Any person, who notices any explosion or accident, should immediately take steps to give warning by suitable means and at the same time take necessary action for withdrawal of men from the site. He shall also inform the mines manager and other officials without any delay. The persons should be trained properly to handle the situation. Detailed warning system, implementation procedure, emergency control center, shall be maintained at the mine with names of trained persons. Proper arrangements should be made for treatment of injured persons. Fire fighting arrangements should be provided at all the prone sites. All the safety equipments should be available at mine site. A vehicle should always remain at site (vehicles remain available on road passes through the area. The lessee is capable to meet any type of risk. The fire station is available at Khetri. Hospital is located at Khetri, Singhana. Dispensary is available at Mahurana.

The responsible person is as follows:
Partners of Lessee and manager of mines

11.5 CARE AND MAINTENANCE DURING TEMPORARY DISCONTINUENCE:

No mining operation is proposed to temporary discontinuance during the period of this progressive mine closure plan. During any discontinuance the mining workings will be in the watch of a watchman. Before re-open of the mine the maintenance will be provided to all the machineries deployed at mine. Before entering the labourers into mine the workings are proposed to inspect by manager for safety purpose as per Mines Act.

12.0 PROGRESSIVE MINE CLOSURE PLAN

UNDER RULE 29 (5) (vi) OF RMMCR 2017

At the end of lease period/at the time of abandoning of mine/at the time of [illegible] surrendering of mine, the Final Mine Closure Plan (FMCP) will be submitted.

12.1	**Introduction:** As per rule 29(5)(vi) of Rajasthan Minor Mineral Concession Rules 2017, the Progressive mine closure plan as a component of the mining plan have [illegible] with the mining plan.
12.1.2	**Name and Address of the Lessee:** M/s Ashoka Mineral Grinding Mills Shahpura Road Neem Ka Thana District- Neem Ka Thana State- Rajasthan Pin Code: 332713
12.1.3	**Location of the area:** Near village – Maharana Tehsil- - Kherli District- - Neem Ka Thana State- - Rajasthan
12.1.4	**Extent of the lease:** The lease area is 4.96 ha and the area covers Survey of India G.T. Sheet number 44 P/16. The lease period is for 50 years. The coordinates of the pillars are provided in the Mining Plan. The land is government land as discussed in chapter 2 of the plan.
12.1.5	**Mining Method:** It is an existing mining lease. The mining will be semi mechanized opencast with hydraulic machineries and tippers. Approach roads are available up to bottom of the pit.
12.1.6	**Mineral Processing:** Mineral processing plant is not located at the mine site. The lessee is dispatch the ROM mineral to the consumers.
12.2.1	**Reason for Progressive Mine Closure:** It is prepared as per the rule 29(5)(vi) of RMMCR 2017. The reason is to suggest the reclamation, rehabilitation, plantation and other works during the period of PMCP.
12.2.2	**Statutory obligations:** It is for protection of environment during the mining operations.
12.2.3	**The plan is prepared by** Pinkcity Mining engaged Govind Singh Recognized Person, Ex. RQP, Mining Engineer Naruka Consultants D/88, Meera Marg, Bani Park, Jaipur Pin Code:302016 | Phone: 94140 71070

12.3.0 **Mine Description**

12.3.1 **General Geology and Local Geology**

Regional Geology is given in Chapter Geology and Reserves of the Plan.

Shahpura Road	Neem Ka Thana	
State- Rajasthan		
Shahpura Road	Neem Ka Thana	District- Neem Ka Thana

12.3.2 **Reserves**

The reserves are provided in Geology and Reserves Chapter

Total Mineral Resources (A+B)	Code	Ochers, Pyrophyllite, Quartz
A-Mineral Reserves		
Proved Reserves	111	29,11,100
Probable Reserves	121	16,92,600
Total Reserves		46,03,700
B- Remaining Mineral Resources		
Feasibility Resources	211	7,27,830
Pre-Feasibility Resources	221	7,25,400
Inferred Resources	332	9,67,210
Total Resources		24,20,430

12.3.3 **Mining Method:**

It is a running mining lease for Quartz, Phyllite, Red and Yellow Ochre and minerals are available in the area on surface and in pits.

12.3.4 **Mineral Beneficiation:**

No mineral beneficiation is at existence at site and the mineral processing/ crushing plant may install at site. The ROM mineral will also dispatches to the consumers.

12.3.5 Review of implementation of mining plan including five years progress is provided in the Mining Scheme

12.4.0 **Closure Plan**

12.4.1 **Mined out land**

No mine out land is observed in the lease area. The deposit is continuing in the pit and mining is going on. The land details is as follows:

No	Item	As on date	End of 5th year	End of lease
1	Degradation by pits	0.45	3.30	3.60
2	Top soil stack	0.00	0.00	0.00
3	Dump of waste rock	0.00	0.01	0.00
4	Stack of mineral/Sub-grade	0.00	0.00	0.00
5	Infrastructure	0.00	0.01	0.00
6	Approach Roads	0.02	0.02	0.01
7	Green belt/ Plantation	0.10	0.20	0.40
8	Reclamation/ back filled	0.00	0.00	0.00
9	Others, Crushing Plant	0.00	0.10	0.00

	10	Total Disturbed land	0.17	3.84	4.01
	11	Total Lease area	4.96	4.96	4.96

12.4.2 **Water Quality Management**
No water courses are observed in and near the lease area. Ground water is not encountered in the workings as the ground water table is far below the proposed depth of the workings.
The monsoon water of direct precipitation will encounter in the workings and this water has to dewater in nearby area and in plantation.
This water mainly collects in the deep workings and the collected water is used for spray on approach roads and for plantation during the year.

12.4.3 **Air Quality Management:**
The air quality observed fresh at the time of field survey. The wet drilling is proposed for minimizing the dust during drilling. Water spray is proposed on kachu approach roads if dust creates towards higher side. The plantation around the lease area also helps against spread of dust.

12.4.4 **Waste Management:**
The ROM mineral is being dispatch to the consumers. The waste is dumped in and near the area. The waste also uses for maintenance of approach roads. The lessee may use the waste as M Sand as per government policy and RMMCR 2017 from taking permission from department. The waste left at site is proposed to dump in the lease area and nearby the area as discussed in mining chapter. The retaining walls, drains with parapet walls will be provided for check the rolling downs and silt.

12.4.5 **Top Soil Management**
Maximum area is already soil removed, however any soil come across it will be scraped and stacked separately to be uses for plantation during monsoons.

12.4.6 **Tailing Dam Management**
No toxic mineral observed in the area. No tailing dam proposed in the mining plan, thus no management is called for.

12.4.7 **Infrastructure**
No infrastructural facilities are available at site. The site services will be provided at mine site.

12.4.8 **Disposal of Mining Machineries:**
It is an existing mine and the machineries which deployed will be on higher basis as well as lessee's own. The disposal is not required and not proposed.

12.4.9 **Safety and Security:**
The bob wire fencing will be provided around the excavation and fencing around the fresh excavation is protected by bob wire to check the inadvertent entry of human and live stock in the mining zone. The chowkidar/ watchman will be provided to check the entry of other persons in the lease area.
Safety equipments i.e. personal protective equipments will provided to the labourers for safety purpose.
Proper bench height and width will be maintained.
The workings always remain in the supervision of technical and certified staff.
During off hours the approach roads are fenced and nobody is allowed to enter in the working area.
The mine and infrastructure always remain in the watch of watchman for security and safety.

12.4.10	**Disaster Management Plan and risk assessment:** The landslide and inundation like disasters are not come across in the mine and the nearby area as part. The workings are proposed from top to bottom by opencast mining method. Underground mining is not proposed. Face height will maintain safe. No tailing dam in the mine. That high -risk accidents like land slide, subsidence, flood, inundation, fire, seismic activities etc. not come across. Small accidents like fire, explosion by explosive and accident and fall of persons at site in the supervision of mines manager and mate. After receiving the information, the officials will reach up to site and will remove men and machineries from the site. Magazine approved is proposed for storing the explosive and approved boxes are proposed for handling the explosive from magazine to site. Any person, who notices any explosion or accident, should immediately take steps to give warning by suitable means and at the same time take necessary action for withdrawal of men from the site. He shall also inform the mines manager and other officials without any delay. The persons should be trained properly to handle the situation. Detailed warning system, implementation procedure, emergency control center, shall be maintained at the mine with names of trained persons. Proper arrangements should be made for treatment of injured persons. Fire fighting arrangements should be provided at all the prone sites. All the safety equipments should be available at mine site. A vehicle should always remain at site (vehicles remain available on road passes through the area. The lessee is capable to meet any type of risk. The fire stations are available at Khetri. Hospital is located at Khetri and Singhana. Dispensary is available at Mahasana.
12.4.11	**Care and Maintenance during temporary Discontinuance:** In case of temporary closure of the mine by any order or circumstances the following measures will be provided: Notice of closure will be given to DGMS as per MMR 1961. The mining machineries will be parked at a safe place under the supervision of watchman. The entry will be fenced and locked. Regular cleaning and look care of machineries and infrastructure will be provided. The area will remain in the watch of watchman for safety and security. Competent persons shall inspect the area on regular basis. The Air, Noise and Water monitoring is proposed to carried out as per HPCB and CPCB Norms The care should be taken for plantation.
12.5	**Economic Repercussion of closure of mine and manpower Retrenchment:** During the period of this progressive mine closure plan there is no proposal for close the working. The mine owner become unable if it closed by any government order. The employees direct get benefit from the mine and nearby persons will get work by indirect means. Thus there will no adverse impact on employment will encounter by the proposed mining activities. The manpower may be temporary disturbed due to closure of mine for short period.

12.6	**Time Scheduled for abandonment** There is no proposals for abandonment of the mine during the period of [illegible] ears Progressive Mine Closure Plan. The details of time scheduled for abandonment whenever a mine comes [illegible] will be provided at the time of submitting the Final Mine Closure Plan.
12.7	**Abandonment Cost:** The abandonment cost will be provided in the Final Mine Closure Plan [illegible] plantation etc is provided in previous chapter.

12.8 Financial Assurance

The financial assurance for Progressive Mine Closure Plan is Rupees 15,000/- per hectare as per rule 29 (xv) of RMMCR 2017. The lessee will deposit the financial assurance to the concerning mining office.

Sl.No.	Head	Area put on use at start of plan (A)	Additional requirement during plan period (B)	Total C=A+B	Area considered as fully reclaimed & rehabilitated (D)	Net area considered for submission E=C-D
1	Area under mining	0.40	2.85	3.30	0.00	3.30
2	Storage of top soil	0.00	0.0	0.00	0.00	0.00
3	Waste dump site	0.00	0.01	0.01	0.00	0.01
4	Mineral storage	0. 00	0.00	0.00	0.00	0.00
5	Infrastructure (workshop, administrative building etc)	0.00	1.00	1.00	0.00	1.00
6	Roads	0.02	0.00	0.02	0.00	0.02
7	Green belt	8.10	8.10	16.20		16.20
Total	Grand Total	0.27	1.07	2.64	0.00	2.64

For M/s Ashoka Mineral Grinding Mills
Lessee

Govind Singh for Pinkcity Mining
Ex RQP, Recognized Person,
Mining Engineer

सहायक खान अभियन्ता

This Mining Plan has been approved vide Order No. SME/JP/MP- [illegible] dated [illegible] under RMMCR

Annexure-1

राजस्थान सरकार
कार्यालय खनि अभियन्ता, खान एवं भू-विज्ञान विभाग, झुन्झुनूं

क्रमांक – खन/झुन्झुनूं/ई/अप्र/खन-8/82 /2044 दिनांक – 18.09.2024

प्रेषित –

मैसर्स अशोक मिनरल्स ट्रेडिंग कंपनी,
द्वारा श्री अशोक कुमार अग्रवाल पुत्र श्री कुन्दन,
निवासी शाहपुरा रोड नीमकाथाना तहसील नीमकाथाना
जिला नीमकाथाना।

विषय:– खनन पट्टा संख्या 8/82 खनिज क्वार्ट्ज, फेल्डस्पैथर, पायरोफाईलाईट सिकट ग्राम मेहराना तहसील कुशला जिला झुन्झुनूं में आपके पक्ष में स्वीकृत खनन पट्टा में खनन कार्य प्रारम्भ करने से पूर्व सम्बन्धित विभागों से वैधानिक मंजूरी लेने बाबत।

प्रसंग:–श्रीमान अतिरिक्त निदेशक (खान) जयपुर के पत्र क्रमांक अनिदा/जय/झुन्झुनूं/सीसी II/F-01093/ख.प.08/82 दिनांक 13.08.2024 के क्रम में।

महोदय,

उपरोक्त विषयान्तर्गत लेख है कि आपके पक्ष में स्वीकृत विधायिकित खनन पट्टा हेतु आप द्वारा माननीय उच्चतम न्यायालय द्वारा दिनांक 09.05.2024 तथा 23.07.2024 से जारी आदेश की प्रति सह प्रतिवेदन श्रीमान अतिरिक्त निदेशक (खान) जयपुर के समक्ष प्रस्तुत कर माननीय न्यायालय के आदेश की पालना हेतु खनन पट्टा के माईनिंग प्लान, ईसी, सी.टी.ओ. आदि समस्त वैधानिक मंजूरी दिलवाने हेतु निवेदन किया गया।

अतः आपको अवित पत्र सूचित किया जाता है कि माननीय न्यायालय के आदेश की पालना में खनन पट्टा का माईनिंग प्लान, ईसी, सी.टी.ओ. अन्तर प्रतिभूति राशि की एफ.डी.आर., अन्तर प्रकीर्णक राशि की एफ.डी.आर., वित्तीय आश्वासन की एफ.डी.आर. इत्यादि समस्त प्रकार की पूर्तियां कर इस कार्यालय को अवगत कराने का श्रम करावें जिससे अग्रिम कार्यवाही की जा सके।

भवदीय
खनि अभियन्ता झुन्झुनूं

ITEM NO.12 COURT NO.3 SECTION PIL-W

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

Writ Petition(s)(Civil) No(s). 202/1995

IN RE : T.N. GODAVARMAN THIRUMULPAD Petitioner(s)

VERSUS

UNION OF INDIA AND ORS. Respondent(s)

(INTERLOCUTORY APPLICATION FOR 23.07.2024 "ONLY"
[1] IN RE : "CONSTRUCTION OF MULTI STOREYED BUILDINGS IN FOREST LAND MAHARASHTRA" [i] I. A. No. 2879 OF 2007 [Application For Impleadment And Directions] WITH [ii] I.A Nos. 2301-2302 OF 2007 [Applications For Impleadment And Directions] AND [iii] I.A. Nos. 3044-3045 OF 2011 [Applications For Impleadment And Directions] AND [iv] I.A. Nos. 2771-2772 OF 2009 [Applications For Impleadment And Directions] AND [v] I.A.Nos. 111725 AND 154041 OF 2018 [Applications For Substitution Of Applicant, I.E. Smt. Housabai Haribhau Bhairat And Condonation Of Delay In Filing Application For Substitution In I.A. Nos. 2771-2772/2009] AND

[2] I.A. NOS. 100352 AND 100351 OF 2024 (Applications for Directions and Impleadment) IN RE : SHRI RAM KRISHNA PANDEY AND

[3] I. A. NOS. 157777 AND 157782 OF 2023 [Applications For Impleadment And Directions] IN RE : PRADEEP IN RE : MINING WITHIN 10 KMS WETLAND AND

[4] I.A. NOS. 1424-1425 OF 2005 AND 2749 OF 2009 (Applications for Directions and Stay) IN RE : ALLEGED NON-FORESTRY ACTIVITIES AND ENCROACHMENT BY BALCO AND [ii] I.A. NOS. 2211 OF 2008 (Applications for Clarification of Court's Order dated 29.02.2008) In Re : BALCO AND [iii] I.A. NO. 3427 OF 2012 (Applications for Directions) WITH I.A. NOS. 167802 AND 167804 OF 2019 (Applications For Directions And Exemption From Filing O.T.) WITH I.A. NOS. 187590 AND 187591 OF 2019 (Applications For Directions And Exemption From Filing O.T.) IN RE : BALCO, RESPONDENT NO. 7 IN I.A.NO. 1424-1425 WITH [iv] CONTEMPT PETITION (C) No. 388 OF 2009 IN I.A. NOS. 1424-1425 IN WRIT PETITION(C) NO. 202 OF 1995 WITH SPECIAL LEAVE PETITION(C) NO. 37511 OF 2013 WITH WRIT PETITION (C) NO. 469 OF 2005 AND

[5] I.A. NO. 920 OF 2003 (Application for Intervention/Directions) IN I.A. NO. 703 OF 2001 (Application by the Amicus Curiae for Directions against illegal enchroachment of forests) AND I.A. NO. 988 OF 2003 (Application for Modification/Clarification of order dated 25.08.2003 in I.A. 920/2003) AND I.A. NO. 1129 OF 2004 (Application seeking leave to

Withdraw Affidavit of Fishries Department) AND I.A. NO. 1151 OF 2004 (Application seeking leave to withdraw Affidavit filed on behalf of Forest Department of State of West Bengal) IN RE: NATIONAL FISHWORKERS' FORUM (NFF) (THROUGH ITS CHAIRPERSON HAREKRISHNA DEBNATH 1073, A.G. COLONY, P.O.-MANIKTALA-743263, 24 PARGANAS(N), WEST BENGAL AND

[6] I.A. NO. 20658 OF 2023 (CEC REPORT NO. 3/2023 - REPORT OF CEC IN APPLN. NO. 1558/2021 FILED BEFORE IT BY GAURAV KUMAR BANSAL) WITH I.A. NO. 75033 OF 2023 (Application For Exemption From Filing O.T.) IN RE : GAURAV KUMAR BANSAL AND

[7] I. A. NOS. 130609 AND 130612 OF 2024 [Applications For Impleadment And Directions] IN RE : M/S. ASHOKA MINERAL GRINDING MILLS THROUGH POWER OF ATTORNEY HOLDER AND

[8] I. A. NOS. 134906, 134904 AND 134906 OF 2024 [Applications For Impleadment, Directions and official translations] IN RE : M/S. SHRI MODI MINERAL GRINDING MILLS PVT. LTD. AND

[9] I. A. NOS. 149950 AND 149951 OF 2024 [Applications For Impleadment and Directions] AND IN RE : DELHI METRO RAIL CORPORATION LTD. AND

WITH
CONMT.PET.(C) No. 388/2009 In W.P.(C) No. 202/1995 (PIL-W)

W.P.(C) No. 469/2005 (X)

SLP(C) No. 37511/2013 (IV-C)
(IA No. 68210/2018 - EXEMPTION FROM FILING O.T.
IA No. 68208/2018 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES
IA No. 90909/2018 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES)

Date : 23-07-2024 These matters were called on for hearing today.

CORAM : HON'BLE MR. JUSTICE B.R. GAVAI
HON'BLE MR. JUSTICE K.V. VISWANATHAN

Mr. Harish N. Salve, Sr. Adv. [A.C.] (Not Present)
Mr. A.D.N. Rao, Sr. Advocate [A.C.] (Not Present)
Ms. Aparajita Singh, Sr. Advocate [A.C.] (Not Present)
Mr. Siddhartha Chowdhury, Advocate [A.C.]

Mr. K. Parameshwar, Advocate [A.C.]
Mr. M.V. Mukunda, Adv.
Ms. Kanti, Adv.
Ms. Aarti Gupta, Adv.
Mr. Chinmay Kalgaonkar, Adv.

Counsel for parties

Ms. Aishwarya Bhati, A.S.G.
Mr. Gurmeet Singh Makker, AOR
Ms. Archana Pathak Dave, Adv.
Ms. Suhashini Sen, Adv.
Mr. S. S. Rebello, Adv.
Mr. Shyam Gopal, Adv.
Mr. Raghav Sharma, Adv.
Mr. Sughosh Subramanyam, Adv.
Ms. Ruchi Kohli, Adv.

Mr. K.M. Nataraj, A.S.G.
Mr. Mrinal Elkar Mazumdar, Adv.
Mr. Mukesh Kumar Verma, Adv.
Mr. Neeraj Kumar Sharma, Adv.
Ms. Indira Bhakar, Adv.
Mr. Harish Pandey, Adv.
Mr. Shashwat Parihar, Adv.
Mr. Vinayak Sharma, Adv.
Mr. Anuj Srinivas Udupa, Adv.
Mr. Piyush Beriwal, Adv.
Mr. Shreekant Neelappa Terdal, AOR

Mr. Shekhar Naphade, Sr. Adv.
Mr. Chinmoy Khaladkar, Adv.
Mr. B. K. Pal, AOR

Mr. Nishant R. Katneshwarkar, AOR

Mr. Dhruv Mehta, Sr. Adv.
Mr. Yashraj Singh Deora, Adv.
Mr. Priyesh Mohan Srivastava, Adv.
Mr. Abhishek Singh, Adv.
Ms. Sonal K Chopra, Adv.
For M/s. Mitter & Mitter Co.

Ms. Ranjeeta Rohtagi, AOR

Mr. C.S. Ashri, AOR

Mr. Siddharth Dharmadhikari, Adv.
Mr. Aaditya Aniruddha Pande, AOR
Mr. Bharat Bagla, Adv.
Mr. Sourav Singh, Adv.
Mr. Aditya Krishna, Adv.
Ms. Preet S. Phanse, Adv.
Mr. Adarsh Dubey, Adv.
Ms. Yamini Singh, Adv.

Mr. Saroj Tripathi, AOR (Not Present)

Mr. Mayank Aggarwal, AOR

Mr. Pradeep Kumar Aggarwal, Adv.
Mr. Vineet Yadav, Adv.
Mr. Amir Yadav, Adv.

Mr. Pranav Sachdeva, AOR

Mr. P.C. Sen, Sr. Adv.
Mr. Shivanshu Singh, Adv.
Ms. Rukmani Bobde, Adv.
Mr. P. S. Sudheer, AOR
Mr. Rishi Maheshwari, Adv.
Ms. Anne Mathew, Adv.
Mr. Bharat Sood, Adv.
Ms. Miranda Solaman, Adv.
Mr. Paul P. Abraham, Adv.
Ms. Nivedita Sudheer, Adv.

Mr. Nishant Patil, AOR

Mr. Aswathi M.K., AOR

Mr. Puneet Jain, Adv.
Ms. Pratibha Jain, AOR

Mr. Sunil Kumar Jain, AOR

Mr. Satish Kumar,
Mr. Satish Kumar, AOR
Mr. S S Bandyopadhyay, Adv.

Mr. Shankar Divate, AOR

Ms. Binu Tamta, AOR

Mr. Rohit K. Singh, AOR

Mrs. Yogmaya Agnihotri, Adv.
Mr. Rohit K. Singh, AOR

Mr. Rajesh Srivastava, AOR

Mr. Radha Shyam Jena, AOR

Ms. Aparna Bhat, AOR (Not Present)

Ms. Jyoti Mendiratta, AOR

Mr. Atmaram N S Nadkarni, Sr. Adv.
Dr. Abhishek Atrey, AOR
Ms. Ishita Bisht, Adv.
Ms. Vidyottma Jha, Adv.

Mr. S. Niranjan Reddy, Sr. Adv.

Ms. Aruna Gupta, AOR
Mr. Ramesh Allanki, Adv.
Mr. Syed Ahmad Naqvi, Adv.
Mr. Yash Gupta,Adv.

Mr. Tarun Johri, AOR
Mr. Ankur Gupta, Adv.
Mr. Vishwajeet Tyagi, Adv.

Mr. Jaswant Singh Rawat, AOR

Mr. Akshat Kumar, AOR

Mr. Kuldip Singh, AOR

Mr. Apoorv Kurup, A.A.G.
Ms. Ankita Sharma, AOR
Mr. Arjun D Singh, Adv.

Mrs. Aishwrya Bhati, A.S.G.
Mr. Archana Pathak Dave, Sr. Adv.
Mr. Raj Bahadur Yadav, AOR
Mrs. Ruchi Kohli, Adv.
Mr. Uday Prakash Yadav, Adv.
Mr. Suhasini Sen, Adv.
Mr. S S Rebello, Adv.
Mr. Shyam Gopal, Adv.
Mr. Raghav Sharma, Adv.
Mr. Sughosh Subramanium, Adv.

Mr. Sudip Shrivastava,Adv.
Mr. Prashant Bhushan,Adv.

Mr. Shrey Kapoor,Adv.

Petitioner/Applicant-in-person

UPON hearing the counsel the Court made the following

O R D E R

[1] I. A. NOS. 130609 AND 130612 OF 2024
IN RE : M/S. ASHOKA MINERAL GRINDING MILLS THROUGH POWER OF ATTORNEY HOLDER

AND

[2] I. A. NOS. 134900, 134904 AND 134906 OF 2024
IN RE : M/S. SHRI MODI MINERAL GRINDING MILLS PVT. LTD. AND

1. I.A. Nos.130612/2024 and 134904/2024 are filed seeking following prayers:-

"I.A. No.130612/2024

1. To direct the State of Rajasthan to further process the Application for Renewal of the Mining Lease pending since last 14 years and/or

2. To direct the State of Rajasthan to issue necessary instructions for obtaining statutory clearances from the various authorities for present mining lease.

3. To direct the State of Rajasthan to consider the present Application and grant permission to commence mining operation and/or

I.A. No.134984/2024

a) To direct the Respondent State to process the application for Diversion of the applicant expeditiously in terms of approval granted by the Govt. of India vide permission dated 07.10.2008 and

b) to direct the Respondent State to consider the present application for Automatic Renewal in terms of section 8A of M.M.D.R. (Amended) Act 2015 and grant permission to commence mining operation or"

2. Vide order dated 09.05.2024 this Court had clarified that though the State Government would be at liberty to consider and process the applications for grant of mining leases and also for renewal thereof including obtaining statutory clearances from the various authorities but no final permission shall be granted for mining in the Aravalli Hills/Ranges, as defined in the FSI Report dated 25.08.2010, without permission from this Court.

3. Indisputably, the area in respect of which the permission is being sought falls within the area of Aravalli Hills/Ranges, as defined in the FSI Report dated 25.08.2010.

4. We, therefore, direct the State Government to process the proposal for renewal of the mining licences including obtaining statutory clearance from the various authorities, however no final permission shall be granted for renewal of the mining lease, without obtaining prior approval of this Court.

[3] I. A. NOS. 149950 AND 149951 OF 2024
IN RE : DELHI METRO RAIL CORPORATION LTD.

1. I.A. No. 149951 of 2024 has been filed with the following prayers:-

"a) Refer the matter to the Central Empowered Committee appointed by this Hon'ble Court for detailed consideration and examination of the proposal of the Applicant for temporary diversion of 0.19 ha (0.15 + 0.04) of Ridge Reserve forest and 0.39 ha of Morphological Ridge Area, on South Central/Morphological Ridge, for timely completion of Neb Sarai metro station forming part of 23.623 km Aerocity - Tughlakabad metro corridor being proposed for construction of Phase-IV of MRTS Project;

b) Allow the instant Application and thereby, permit the Applicant to temporarily divert 0.19 ha of Ridge Reserve Forest and 0.39 ha of Morphological Ridge Area, for construction of Neb Sarai metro station forming part of 23.623 Km Aerocity - Tughlakabad metro corridor being proposed for

construction of Phase-IV of NRTS Project."

2. Taking into consideration the importance of Delhi Metro and since the prayer is only for referring the matter to the Central Empowered Committee (CEC), we are inclined to allow this application insofar as prayer clause (a) is concerned. Ordered accordingly. So far as prayer clause (b) is concerned, we will consider it after the CEC submits its Report.

3. Four weeks' time is granted to CEC to submit its report.

4. List after four weeks.

[4] IN RE : "CONSTRUCTION OF MULTI STOREYED BUILDINGS IN FOREST LAND MAHARASHTRA"
[i] I. A No. 2079 OF 2007 WITH
[ii] I.A Nos. 2301-2302 OF 2007 AND
[iii] I.A. Nos. 3044-3045 OF 2011 AND
[iv] I.A. Nos. 2771-2772 OF 2009 AND
[v] I.A.Nos. 111725 AND 154041 OF 2018,
I.A. NOS.25496/23 & 37011/24, AND W.P.(C) NO.301/2008

1. The facts in the present case are glaring. The predecessor-in-title of the petitioner(s)/appellant(s) succeeded up to this Court for getting possession of the land which was illegally occupied by the State Government. Subsequently, the stand of the State Government was that the land owned by the predecessors of the petitioners was occupied by Aramament Research Development Establishment Institute (for short, 'ARDEI'), which was a unit of Defence Department of the Union of India. In the execution proceedings, the ARDEI has opposed the same.

2. Faced with this situation and realizing its mistake the State Government allotted another piece of land in lieu of the land which

was in possession of the ARDEI.

3. However, the record shows that the land which was allotted to the petitioner(s)/applicant(s) was notified as a forest land.

4. Learned senior counsel appearing for the petitioner(s)/applicant(s) submits that the land in question is shown as grazing land in the revenue records.

5. In any case, the petitioner(s)/applicant(s) who succeeded up to this Court cannot be denied the benefits of the decree passed in their favour. Firstly, the action of the State Government in encroaching upon the land of a citizen was itself illegal. Secondly, the State Government ought to have taken due precaution before allotting a piece of land. A land which is notified as forest land could not have been allotted. The State ought to have allotted a land, which has clear title and also the land which has a marketable value.

6. The matter has been pending for almost fifteen years, still the State Government has not yet come up with a concrete proposal.

7. We permit the petitioner(s)/applicant(s) to place on record the ready reckoner rates of the land in Pashan as well as the land at Kondre Khurd.

8. We, therefore, direct the State Government to come with a clear stand:

i. As to whether another piece of equivalent land will be offered to the petitioner(s)/applicant(s); or

ii. As to whether adequate compensation would be paid to the petitioner(s)/applicant(s); or

iii. As to whether the State Government proposes to move the

Central Government for denotification of the said land as forest land.

9. The State Government shall file an affidavit specifying its stand within a period of two weeks from today.

10. The matter is directed to be posted on 07.08.2024 at S. No.1. We clarify that if we find that the State Government does not come with a clear stand we would be compelled to direct the personal presence of the Chief Secretary of the State.

[5] I.A. NOS. 100352 AND 100351 OF 2024
IN RE : SHRI RAM KRISHNA PANDEY

1. When the matter was listed on 15.05.2024, no one was present for the applicant(s). Today also, no one is present for the applicant(s).

2. These applications are dismissed for want of prosecution.

[6] I. A. NOS. 157777 AND 157782 OF 2023
IN RE : PRADEEP
IN RE : MINING WITHIN 10 KMS WETLAND

1. List on 21.08.2024.

2. Report be filed in the meantime.

[7] [i] I.A. NOS. 1424-1425 OF 2005 AND 2749 OF 2009
IN RE : ALLEGED NON-FORESTRY ACTIVITIES AND ENCROACHMENT BY BALCO
AND [ii] I.A. NOS. 2211 OF 2008 In Re : BALCO AND
[iii] I.A. NO. 3427 OF 2012 WITH
I.A. NOS. 167802 AND 167804 OF 2019 WITH
I.A. NOS. 187598 AND 187591 OF 2019 IN RE : BALCO,
IN I.A.NO. 1424-1425 WITH
[iv]CONTEMPT PETITION (C) No. 388 OF 2009 IN I.A. NOS. 1424-1425
IN WRIT PETITION(C) NO. 202 OF 1995 WITH SPECIAL LEAVE PETITION(C)
NO. 37511 OF 2013 WITH WRIT PETITION (C) NO. 469 OF 2005

1. Shri Sen, learned senior counsel appearing for the

petitioner(s)/applicant(s), submits that when Bharat Aluminium Company Ltd (BALCO) was originally established 1804 acres of Government land was allotted to it. He further submits that 914 acres of private land was also acquired and given to BALCO. He further submits that in 1971, BALCO was in possession of 1136 acres of land, out of which 947.95 acres was a notified forest land. It is submitted that a compensation for converting the said forest land for non-forest purposes and felling of trees was already paid to the State Government.

2. He further submits that most of the felling of trees has been from the area in this 947.95 acres. Learned senior counsel fairly admits that after the order restraining the felling of trees was passed by this Court on 29.02.2008, there have been felling of trees. He submits that the same is only restricted to 9 acres and not 97.36 acres as has been found in the Report of the CEC dated 22.02.2019.

3. Shri Sen further submits that around 55 lakhs trees have been planted by BALCO in its premises over the years till 2014-15.

4. Shri Sudip Shrivastava, learned counsel appearing on behalf of the original contempt petitioner[s] submits that the report of the CEC dated 22.02.2019 does not depict the correct picture. He submits that the Report of the CEC dated 17.10.2007 depicts the correct picture. He further submits that the CEC in the 2007 Report has found that the entire land of 1751 acre is a revenue forest land.

5. We find that, taking into consideration the passage of time, it will be appropriate that the CEC considers the matter afresh and

submits a report. The CEC shall also verify and assess the area of forest land, which was put to non-forest use after 29.02.2008. The CEC shall assess the NPV to be payable by BALCO in respect of the forest area, which was put to non-forest use after 25.10.1980. While determining the same, the CEC shall also take into consideration as to whether there has been any compensatory afforestation made by the BALCO.

6. We also find that it will be appropriate that the State Government of Chhattisgarh identifies and assesses the area of forest land which was put to non-forest use after 25.10.1980 i.e. the date on which the Forest (Conservation) Act, 1980 came into force.

7. Insofar as the action to be taken against BALCO or any of its Directors concerned, including the imposition of penalty, the same shall be considered after the reports of the CEC and the State Government are submitted.

8. Three months' time is granted to the CEC to submit its report in this regard.

9. List after receipt of the report from the CEC.

[8] I.A. NO. 920 OF 2003 IN I.A. NO. 703 OF 2001 AND
I.A. NO. 988 OF 2003 AND
I.A. NO. 1129 OF 2004
IN RE: NATIONAL FISHWORKERS' FORUM (NFF) (THROUGH ITS CHAIRPERSON HAREKRISHNA DEBNATH 1073, A.G. COLONY, P.O.-MANIKTALA-743263, 24 PARGANAS(N), WEST BENGAL

1. When the matter was listed on the last date, no one was present for the applicant(s). Today also, no one is present for the applicant(s).

2. These applications are, therefore, dismissed for want of prosecution.

[9] I.A. NO. 20650 OF 2023 (CEC REPORT NO. 3/2023 - REPORT OF CEC IN APPLN. NO. 1558/2021 FILED BEFORE IT BY GAURAV KUMAR BANSAL) WITH I.A. NO. 75033 OF 2023
IN RE : GAURAV KUMAR BANSAL

1. In pursuance of our orders dated 06.03.2024, a Status Report has been filed by the State of Uttrakhand pointing out various actions taken against the officers of the Forest Department. Learned counsel appearing for the State of Uttrakhand seeks three months' time for filing a further affidavit. Time as prayed for is granted.

2. The Inspector General of Forest (Wildlife), Ministry of Environment, Forest and Climate Change (Wildlife Division), has also sent a communication dated 20.07.2024 to Shri K. Parameshwar, learned Amicus Curiae, pointing out various steps taken in pursuance of the aforesaid order with regard to finalization of the Standard Operating Procedure (SOP) for tiger projects/wildlife sanctuaries, the same is taken on record. It has been requested in the said communication to grant eight more weeks for submission of final report. Time as prayed for is granted.

3. The CBI also filed its status report, in pursuance of the directions issued by this Court on 06.03.2024. The same is taken on record and be resealed and kept in safe custody. As requested in the said Report, a further time of six months' is granted to complete the investigation. However, the CBI also shall file a further Status Report after a period of three months.

4. List after three months.

I.A. NOS.156703/2024 & 156707/2024

1. These applications were mentioned by the learned counsel for the applicant(s) for listing before the Court.

2. List on 24.07.2024.

(ANJU KAPOOR)
COURT MASTER

(NARENDRA PRASAD)
DEPUTY REGISTRAR

TWO RUPEES भारत TWO RUPEES

1997

Rider Agreement in connection with mining lease for Pyrophillite, Red & Yellow occur Near village Meharana Tehsil Khetri Distt. Jhunjhunu (Raj.) between the Governor of Rajasthan & Ashoka Minerals & Grinding Mills Pvt. Ltd. Shahpura Road [illegible]

This Indenture made this 03 day of [illegible] 1997 between the Governor of Rajasthan (here in after reffered to as the State Goverment which expression shall where the context [illegible] include the successors and assigns [illegible] Minerals & Grinding Mills [illegible] the Lessee which expression shall where the context so admits be deemed to include his heirs Executors, Administrators, Representatives and Permitted Assignees (of the other parts.

Whereas by and aggreement dated 10/02/93 Registered on dated 25/02/93 The Governor of Rajasthan had granted to Ashoka Mineral and Grinding Mills a mining lease for extraction of Pyrophillite Red & Yellow occur area [illegible].80 Hect. near village Meharana Tehsil Khetri Distt. Jhunjhunu for a period of 20 years w.e.f from 25/02/83 (and the area partial surrendered 78.50 Hect. sanctioned vide Govt. order No. F2 (26) Khan/Gr.2/90 dated 21/02/92 Retained area 42.50 Hect. in favour of the lessee w.e.f. 25/02/88)

खनि अभियन्ता
[illegible] विभाग
झुंझुनू

INDIA

TWO RUPEES भारत TWO RUPEES

[redacted]

12/../1997

And whereas the lessee Ashoka Minerals and Grinding Mills applied for the inclusion of mineral Silica Sand and Quartz in the said Mining lease and the State Govt. have conveyed their approval for the inclusion of mineral Silica Sand and Quartz vide Govt. No. F-3 (25)Khan/Gr.2/96 Dated 20/05/97. Royalty as per M.M.R.D. act 1957 and ammended from time to time and on the terms and conditions already mentioned in the said mining lease agreement 10/02/85.

Now the Directorate has conveyed their letter No. DMG/Meee/CC-2/F-1(10)/02/1958 Dated 28/05/97 to again execution of Rider agreement.

1- Mineral at Included in the existing Lease - Silica Sand and Quartz

2- Period - for the date of execution in of original agreement to expire of original lease period

3- Royalty - As per M.M.R.D. act 1957 and ammended from time to time

The Mineral Silica Sand and Quartz therefore treated to have been included in the said mining lease w.e.f. the date of execution of this Rider agreement and the Rider agreement shall be valued and for the same period for which the said mining lease is valued and operative.

[illegible] present here into [illegible] ... 1997.

Signature
For and on behalf of the
Government of Rajasthan

Signed by
For and on behalf of the Lessee

Attested

Mining Engineer [illegible] Thana

Witness No.-1 (B.K. [illegible])

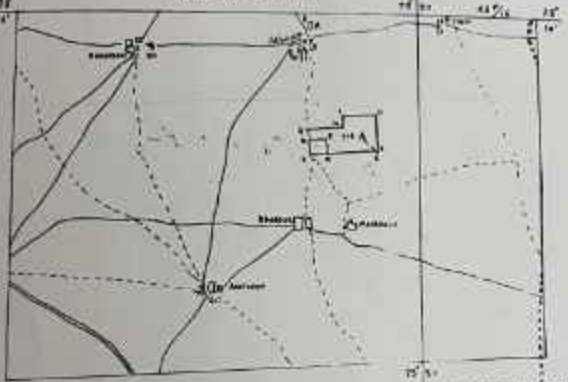
Witness No.-2

ANNEXURE-3

APPROVED

PLAN AND DESCRIPTION REPORT OF PARTIALLY SURRENDER AND PARTIALLY RETAINED OF EX. ML 8/82-04 i/c 21/01(R) FOR THE MINERAL RED OCHER, YELLOW OCHER & PHYROPHYLITE NEAR VILLAGE MAHARANA TEH BUNJAHA DISTT JHUNJHUNU RAJ OF M/S ASHOKA MINERAL SPINNING MILLS

SCALE 1cm= 200mt



DESCRIPTION REPORT OF PARTIALY RETAINED AREA

FIXED POINT DEVI JI TEMPLE (CENTER) SITUATED MAHARANA HILL TOP

FROM	TO	BEARING	DISTANCE
CENTRE OF DEVI JI TEMPLE	A	134°30'	350MT
A	E	357°00'	50MT
E	G	261°00'	752MT
G	F	247°00'	248MT
F	O	357°00'	200MT
O	P	81°00'	248MT
P	Q	177°00'	200MT

PARTIALLY RETAINED AREA 4.9600HECT

DESCRIPTION REPORT OF PARTIALY SURRENDER AREA

FIXED REF POINT CENTER OF DEVI JI TEMP SITUATED MAHARANA HILL TOP

FROM	TO	BEAR.	DISTT
CENTER OF DEVI JI TEMPLE	A	134°30'	350MT
A	E	357°00'	50MT
E	G	261°00'	752MT
G	P	357°00'	200MT
P	O	247°00'	248MT
O	S	357°00'	150MT
S	H	81°00'	500MT
H	T	357°00'	150MT
T	D	81°00'	500MT
D	L	177°00'	500MT

PARTIALLY SURRENDER AREA 37.5400 HECT

TOTAL MINING LEASE AREA 42.50 HECT

PARTIALY SURRENDER AREA (-) 37.5400HECT

PARTIALY RETAINED AREA 4.9600 HECT

For Ashoka Mineral Spinning Mills

APPLICANT

ANNEXURE A

23(01)(R)

1

राजस्थान सरकार
कार्यालय खनि अभियन्ता, सीकर

संयुक्त अंतिम सीमांकन

प्रकरण क्रं 23(01)(R)

आज दिनांक 25/9/08 को [illegible] 2493 /

दिनांक [illegible] की अनुपालना में M/s Ashoka Minerals Grinding Mills

निवासी [illegible] [illegible]

[illegible] ग्राम [illegible] तहसील [illegible]

जिला [illegible] क्षेत्र 4.9560 हैक्टर का [illegible]

की उपस्थिति में अंतिम सीमांकन किया गया। जिसका विवरण निम्नानुसार है —

1. [illegible] जीपीएस [illegible] इत्यादि।

2. विवरण सूचना कार्यालय में प्राप्त नक्शा एवं विवरण सूची अनुसार।

प्रारम्भ बिन्दु — Centre of Devi's temple situated Mahsoon hill top.
Long. 75°43'57.6" Lat 28°08'58.1"

कोने से	कोने को	दिशा	दूरी
Devi's temple situated Mahsoon hill top	A	134°30'	350mt
A to E		357°00'	50mt
E to Q		267°00'	752mt
Q to F		267°00'	248mt
F to O		357°00'	200mt
O to P		87°00'	248mt
P to Q		177°00'	200mt

Total Area QFOPQ — 4.9600 hectr.

सहायक [illegible] खनि अभियन्ता
[illegible] (मु.)

Pillar Reference ① pillar Q falls near Kikar tree
[illegible] top portion

① pillar Q to top of Mataji Ka temple — 65°30'

② pillar Q to top of hill near Mataji Ka temple — 49°30'

pillar F falls on plane cultivated land on East side [illegible]

① pillar F to Mataji Ka temple top — 70°30'

② pillar F to top of hill nr Siyana — 154°00'

③ pillar F to top of hill nr Khanpura — 280°00'

[illegible] pillar F to top of [illegible]

pillar C falls on S E slope of hill Near top of hill

① pillar C to top of hill near Singhana – 143° 30'

② pillar C to top of hill near Khanpur – 267° 30'

③ pillar C to top of hill near Copper – 198° 30'

pillar D falls on East slope of hill as hill is Lavian Bele-

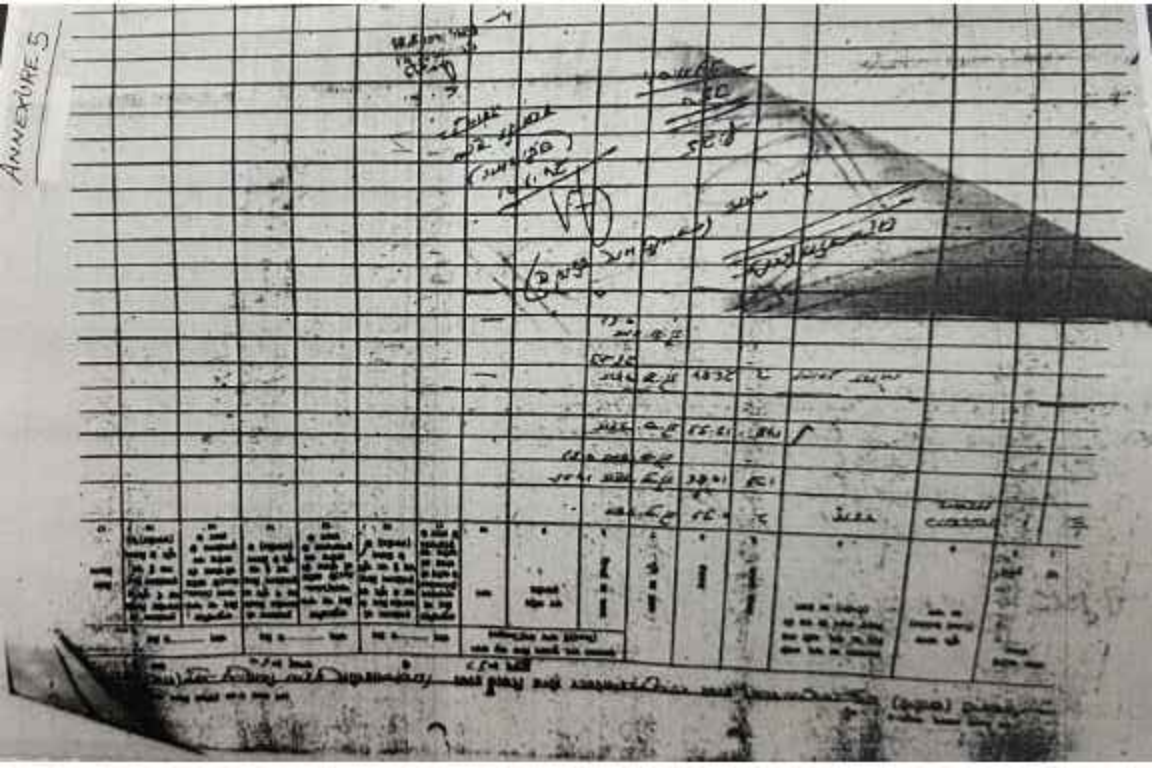
Due to Rangeland steep slope Refrences with to [illegible]

[illegible] कार्यालय से प्राप्त पत्र संख्या [illegible] मौके पर [illegible] सीमांकन [illegible] Centre of Devi Ji temple situated on [illegible] अनुसार [illegible] Mahama hill top से [illegible] पर [illegible] सीमांकित क्षेत्र के [illegible] मौके पर [illegible] उपस्थित [illegible] को [illegible] सीमांकित क्षेत्र 4.36 hectare की [illegible] स्थिति की [illegible] Aravalli आदि से संबंधित रिपोर्ट [illegible] [illegible] सीमांकित क्षेत्र की सीमा के 25 m की परिधि में [illegible] Blasting [illegible] रिपोर्ट [illegible] सीमांकन करवाने [illegible] सीमांकित क्षेत्र G F O P B – 4.96 hectare क्षेत्र में [illegible] आदि की [illegible] हेतु [illegible] में [illegible] क्षेत्र G F O P B – 4.96 hectare मौके पर सीमांकन करवाने [illegible] सीमांकित क्षेत्र G F O P B 4.96 hectare के [illegible] के [illegible] रिपोर्ट [illegible] किया गया।

[illegible signature]

[illegible]

ANNEXURE 5



ANNEXURE-6

राजस्थान सरकार
कार्यालय खनि अभियन्ता, खान एवं भू-विज्ञान विभाग, सीकर [illegible]

[illegible] email: [illegible]

क्रमांक: [illegible] / सीकर / [illegible] / [illegible] 23 / 01 / [illegible] दिनांक: [illegible] .03.2010

प्रेषिति:

[illegible]
[illegible]
[illegible] जिला सीकर (राज.)

विषय:— [illegible]
[illegible] जिला झुंझुनू [illegible]
[illegible] बन्द करने बाबत।

महोदय,

[illegible] जिला झुंझुनू में क्षेत्र 5.00 हैक्टेयर के लिए दिनांक 30.07.[illegible] [illegible] दिनांक 25.07.08 को 20 वर्ष तक के लिए प्रस्तुत किया गया। [illegible] नियमावली 1986 के नियम 24 के तहत [illegible]

माननीय सर्वोच्च न्यायालय द्वारा आई.ए. नम्बर 5750-[illegible] [illegible] रिट पिटिशन (सिविल नम्बर 202/1995 [illegible] दिनांक 19.02.2010 को आदेश दिये गये की पालना में [illegible] [illegible] 24.02.2010 के क्रम में एवं अतिरिक्त निदेशक (खान) जयपुर क्षेत्र जयपुर के आदेश क्रमांक [illegible] / जय / आई.ए. 1310 / 401-403 दिनांक 24.02.2010 तथा अधीक्षण खनि अभियन्ता जयपुर वृत जयपुर के आदेश क्रमांक [illegible] / जय / 231-236 दिनांक 24.02.2010 की अनुपालना में [illegible] खनन पट्टा क्षेत्र में प्रधान खनिज [illegible] नियमावली 1986 के नियम 24 के तहत [illegible] के खनन [illegible] की अनुमति [illegible] सर्वोच्च न्यायालय के आदेशों की अनुपालना में अग्रिम आदेशों तक खनन कार्य बन्द किया जाता है।

भवदीय

[illegible]

खनि अभियन्ता, सीकर

क्रमांक: [illegible] / दिनांक: .03.2010

प्रतिलिपि निम्न को उनके सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है।

1. [illegible] निदेशक, खान एवं भू विज्ञान विभाग, राजस्थान उदयपुर को उनके आदेश क्रमांक [illegible] / [illegible] / [illegible] 131 / 04-[illegible] दिनांक 24.02.2010 के क्रम में।
2. श्रीमान अतिरिक्त निदेशक (खान) जयपुर क्षेत्र जयपुर को उनके आदेश क्रमांक अनिखा / जय / आई.ए. 1310 / 401-403 दिनांक 24.02.2010 के क्रम में।
3. श्रीमान अधीक्षण खनि अभियन्ता, जयपुर वृत जयपुर को उनके आदेश क्रमांक [illegible] / जय / 231-236 दिनांक 24.02.2010 के क्रम में।
4. श्री राजेन्द्र सिंह चौधरी, खनि [illegible] को [illegible] खनन कार्य बन्द करवाकर पालना रिपोर्ट [illegible] प्रभाव से आवश्यक रूप से प्रस्तुत करें।

खनि अभियन्ता, सीकर

ANNEXURE-7

APPROVED

Mining Plan and Progressive Mine Closure plan

for

Quartz, Pyrophyllite, Red and Yellow Ochre Mine.

M.L. 21/01 ®

Near village	MAHARANA
Tehsil	KHETRI
District	JHUNJHUNUN
State	RAJASTHAN
Lease Area	4.96Hectare
Working	MANUAL
Area	Non Forest
Submission Under MCR 1960 for **Renewal of mining lease**	

This Mining Plan has been approved Vide [illegible] Under MCDR, MCR

APPLICANT:

M/S Ashoka Mineral Grinding Mills.
Shahpura Road,
Neem Ka Thana,
District- Sikar

Prepared By:

GOVIND SINGH

RQP/AJM/003/87/A

D-88,MEERA MARG, BANI PARK, JAIPUR
☎ 94140 71070

Application No. 145 ANNEXURE 9

जोधपुर विश्वविद्यालय

प्रमाणित किया जाता है कि
गोविन्द सिंह
ने इस विश्वविद्यालय से 1974 की परीक्षा में
बैचलर ऑफ इंजीनियरिंग
(खनन इंजीनियरी शाखा)
की उपाधि द्वितीय श्रेणी में प्राप्त की

THE UNIVERSITY OF JODHPUR

This is to certify that
GOVIND SINGH
obtained the degree of
BACHELOR OF ENGINEERING
(MINING ENGINEERING BRANCH)
of this University in the
Examination of 1974 and that
he was placed in the Second Division

Vice-Chancellor
उपकुलपति
April 7, 1975


झुन्झुनु
जिला नक्शा
LOCATION PLA
PLATE NO 1
हरियाणा
N
चूरू
सीकर
सीमाएं
राष्ट्रीय राजधानी
जिला सीमा
राज्य सीमा
रेलवे
जिला मुख्यालय
मुख्य नगर
Map not to Scale
Copyright © 2014 www.mapsofindia.com

REVENUE MAP
PLOT - 4

APPROVED

भारतीय गैर न्यायिक

भारत INDIA

रु. 500 HUNDRED RUPEES

पाँच सौ रुपये Rs. 500

INDIA NON JUDICIAL

राजस्थान RAJASTHAN

AB 676145

REGD NO. 39/2024
DATE: 12/03/2024

:: श्री ::

मुख्त्यारनामा

नाम निष्पादक :- मैसर्स अशोका मिनरल्स ग्राईंडिंग मील, महराना तहसील खेतड़ी हाल तहसील बुहाना जिला झुन्झुनूं (राज.) जरिये प्रोपराईटर श्री अशोक कुमार अग्रवाल पुत्र श्री कुरराम अग्रवाल उम्र 65 साल जाति महाजन निवासी शाहपुरा रोड, नीमकाथाना जिला नीमकाथाना (राज.) Aadhar No. 5292-3712-2228, Pan No. ABGPA7505F

IDENTIFIED AND WITNESS

बहक/मुख्त्यार : जितेन्द्र सिंह यादव पुत्र श्री मूलसिंह यादव उम्र 52 साल जाति अहीर निवासी खुशखेड़ी जिला अलवर (राज.) Aadhar No. 6123-5987-3017 Pan No. ABDPY7039B, Mob.No.9742090000

सम्पति का संक्षिप्त विवरण :-

1. यह कि एक खनन पट्टा क्रमांक 06/82 नया क्रमांक 23/01 क्षेत्रफल 4.96 हैक्टेयर निकट ग्राम महराना तहसील खेतड़ी हाल तहसील बुहाना जिला झुन्झुनूं के लिए मुख्त्यार नियुक्त किया गया है।

लगातार 2

FILE
12-3-2024
(RAM SINGH GURJAR)
NOTARY
NEEM KA THANA (SIKAR) RAJ.

Scanned by CamScanner

विवरण :- यह कि एक खनन पट्टा क्रमांक 08/02 नया क्रमांक 23/01 क्षेत्रफल 4.90 हैक्टेयर मिनरल ग्राम गहलोता तहसील खेतड़ी हाल तहसील बुहाना जिला झुन्झुनू (राज.) का निष्पादक पट्टाधारी है, यह खनन पट्टा खनिज फेल्सपार, क्वार्टज, सिलिका पाईरोफलाईट के खनन हेतु निष्पादक के हक में खान विभाग द्वारा जारी किया हुआ है, यह पट्टा दिनांक 24.02.2033 तक प्रभावी है, इस खनन पट्टा का निष्पादक एक मात्र काबिज मालिक पट्टाधारी है, उक्त खनन पट्टा किसी दीगर व्यक्ति या विधिक संस्था के रहन बैय नहीं है, मैं निष्पादक अपने घरेलू कार्य व अन्य कार्यों में व्यस्त रहने के कारण मैंने मेरे उपरोक्त वर्णित खनन पट्टा के सम्बन्ध में समस्त कार्य निष्पादित करने में असमर्थ होने के कारण मैंने अपनी ओर से उक्त खनन पट्टा से सम्बन्धित समस्त कार्य निष्पादित करने के लिए मेरे विश्वास पात्र जितेन्द्र सिंह यादव पुत्र श्री फूलसिंह यादव जाति अहीर निवासी [illegible] जिला अलवर (राज.) को सच्चा मुख्त्यार नियुक्त कर निम्न अधिकार प्रदान करता हूं कि :-

1. यह कि उक्त खनन पट्टा की बाबत किसी प्रकार का कोई वाद-विवाद उत्पन्न हो जावे तो उन सबका निपटारा करे, किसी भी कार्यालय अथवा न्यायालय, खान विभाग, पर्यावरण विभाग या अन्य आवश्यक किसी भी विभाग सरकारी या अर्द्ध सरकारी, राज्य या केन्द्र में मेरी ओर से उपस्थित होकर प्रत्येक प्रकार की लिखित कार्यवाही करे, अर्थात प्रार्थना-पत्र, शपथ पत्र, दावा, जवाब दावा, अपील, निगरानी, राजीनामा, याचिका, मुकदमा या अन्य आवश्यक कार्यवाही हेतु पेश सभी दस्तावेजों आदि पर मेरी ओर से अपने हस्ताक्षर करके, प्रस्तुत करे, प्रमाणित करे एवं बयान देवे, मेरी ओर से प्रत्येक प्रकार की लिखित एवं मौखिक साक्ष्य प्रस्तुत करे, मेरी ओर से किसी को भी नोटिस अथवा जवाब नोटिस प्रेषित करे, सम्मन, नोटिस आदि की तामिल करावे, डिक्री आदि की इजराय करावे, आवश्यकता पड़ने पर मेरी ओर से मेरे उपरोक्त वर्णित खनन पट्टा की बाबत किसी को भी एडवोकेट नियुक्त करे, मेहनताना अदा करे, रसीद प्राप्त करे। सभी तरह का शुल्क अदा करे सभी राजकीय कार्यालयों में उपस्थित होकर उक्त खनन पट्टा से सम्बन्धित समस्त कार्य करे, मेरी ओर से उक्त खनन पट्टा से सम्बन्धित समस्त दस्तावेजों पर हस्ताक्षर करे।
2. यह कि उपरोक्त खनन पट्टा के रहन, विक्रय, हस्तान्तरण व खनन कार्य दोनों पक्षों की सहमति से किया जावेगा।
3. यह मुख्त्यारनामा बिना किसी प्रतिफल के करवाया गया है, अर्थात इस लेख के माध्यम से किसी भी प्रकार की राशि का लेन-देन नहीं किया गया है।

लगातार 3

IDENTIFIED AND WITNESS

FILE

12.3.2024

(RAM SINGH GURJAR)
NOTARY
NEEMKATHANA (SIKAR) RAJ

साराश यह है कि उक्त खनन पट्टा के लिये जो भी कार्य एव कार्यवाहियाँ मुझ निम्नादक की ओर से मेरे हस्ताक्षरों से मेरे करने योग्य हो वे समस्त कार्य एवं कार्यवाहियाँ उक्त मुख्त्यार गेती और वो लिखित रूप से करे, उक्त मुख्त्यार द्वारा किये गये समस्त कार्य एवं कार्यवाहिया एवं समस्त लिखित मुझे अपने द्वारा अपने हस्ताक्षरों से किये हुये के समान स्वीकार व अगीकार होगें।

अत यह मुख्त्यारनामा मैंने अपनी राजी-खुशी, स्वस्थ्य चित्त तथा स्थिर बुद्धि अवस्था में बिना किसी दबाव व बहकावे के लिख दिया है कि जो सनद रहे वक्त जरूरत काम आवे।

दिनांक : 12.03.2024

हस्ताक्षर मुख्त्यार

हस्ताक्षर निष्पादक

हस्ताक्षर साक्षी WITNESS

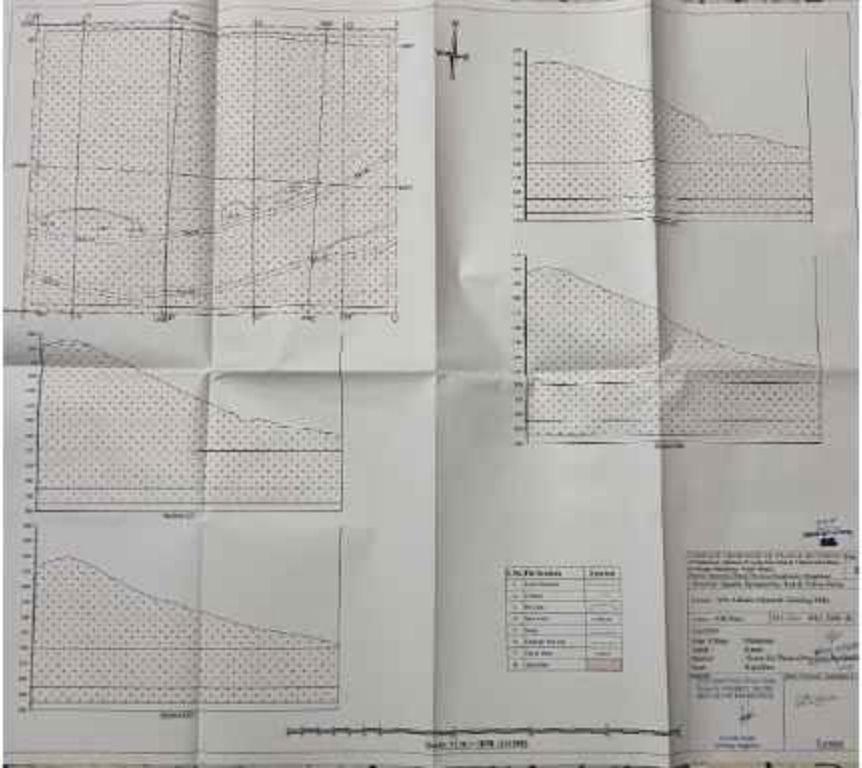
1. ललीत अग्रवाल पुत्र श्री अशोक कुमार उम्र 38 साल जाति महाजन निवासी वार्ड नं. 3, जोशी कॉलोनी, भीमकाथाना (राज.)
Aadhar No. 9339-9435-3754

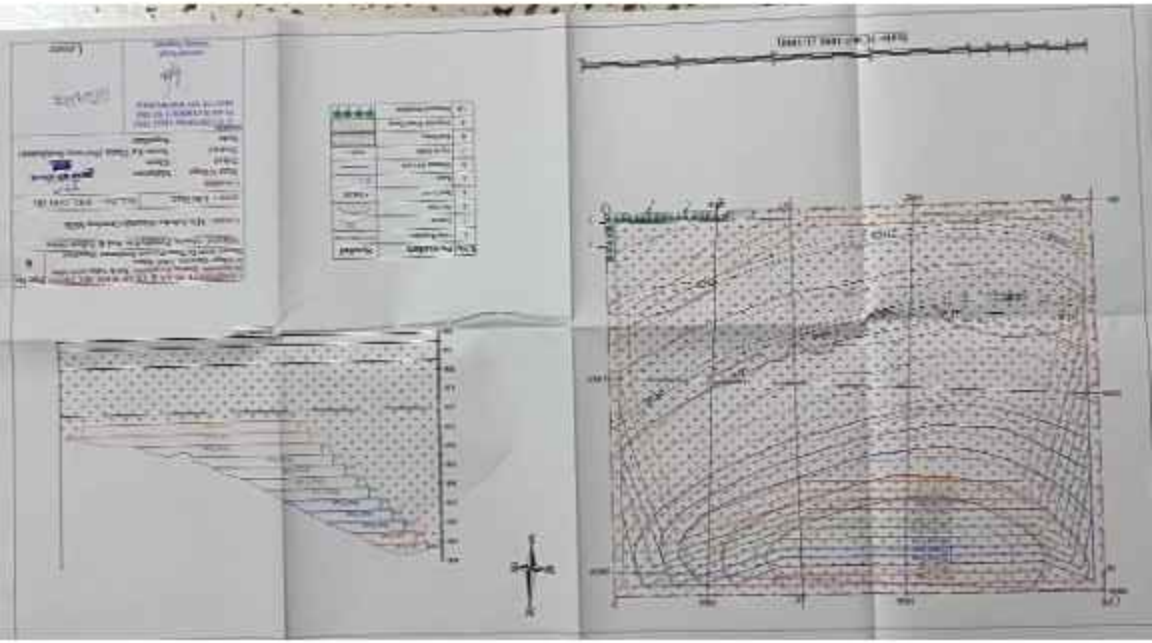
IDENTIFIED AND WITNESS

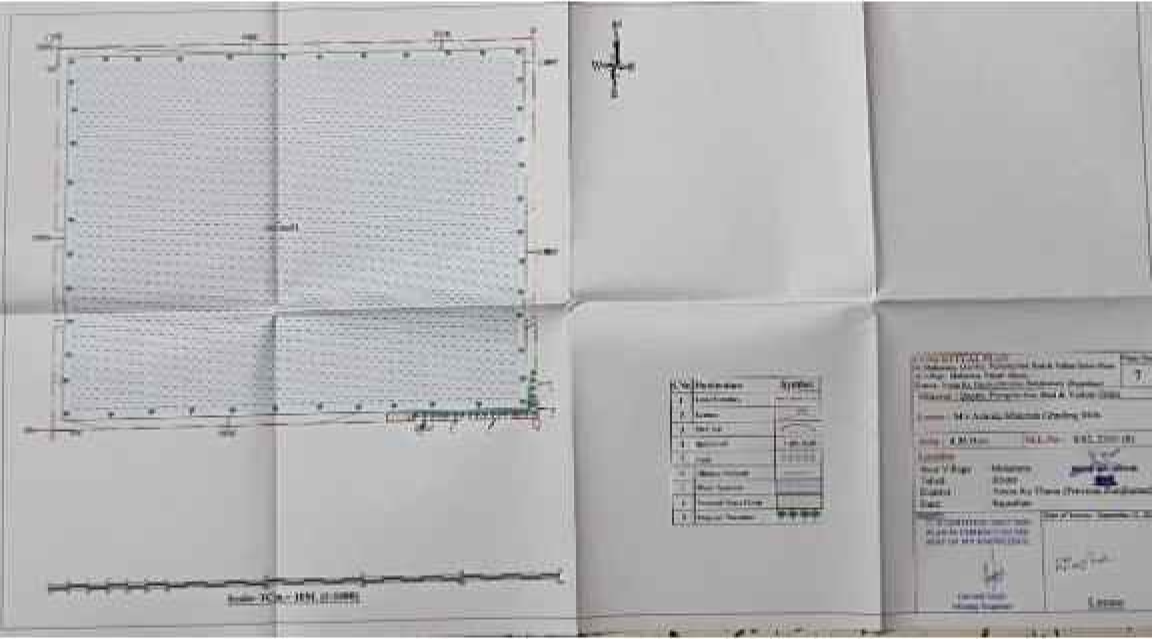
2. वेद प्रकाश यादव पुत्र श्री झाबरसिंह उम्र 61 साल जाति अहीर निवासी कायास, अलवर (राज.) Aadhar No.9938-3007-7255

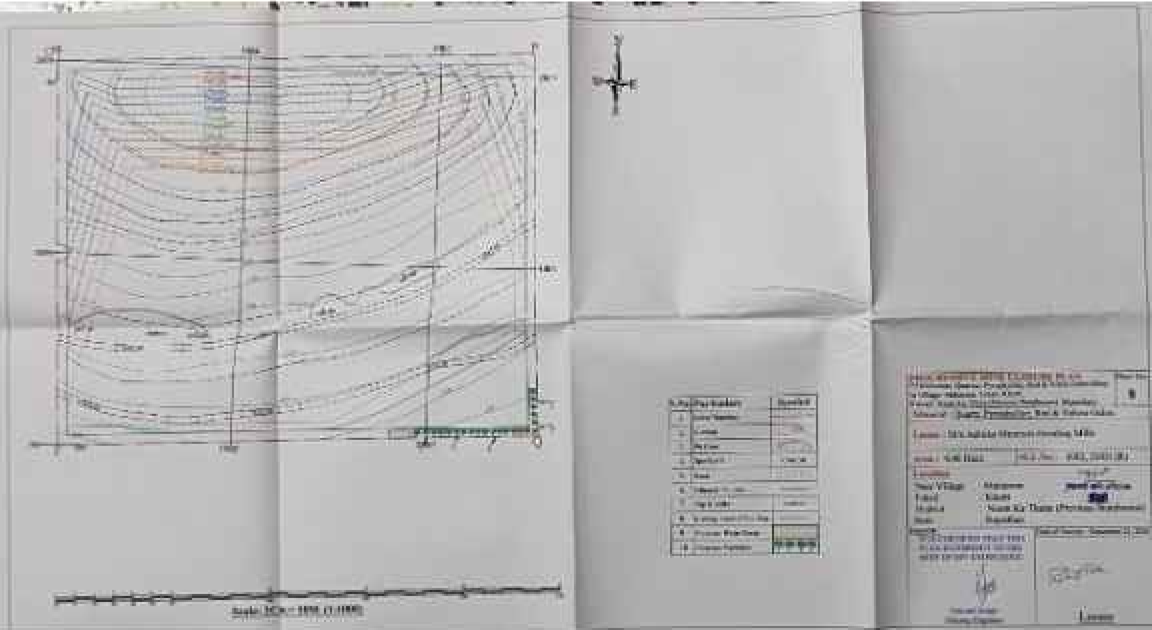
OFFICE OF DOCUMENT EXAMINED AND ADMITTED CORRECT RENCE

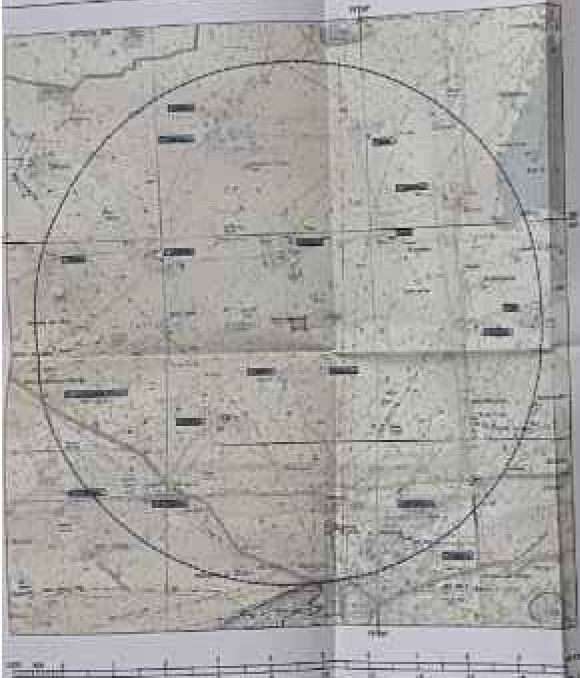
ATTESTED
12.03.24
(RAM SAHAY GURJAR)
NOTARY
NEEMKATHANA (SIKAR) RAJ.








Lessee



Scale-1cm = 500m(R.F.1:50,000)
2cms.=1km.

MAGNETIC MERIDIAN	PART OF TOPOSHEET	44-P/16
	AGRICULTURE LAND	
	BARREN LAND	
	FOREST LAND	
	GRAZING LAND	

POPULATION DETAILS AS PER CENSUS-2011

S.No.	Particulars	Refer
1	Lease Area	
2	Contour	
3	Nallah	
4	Village	
5	Road, Kacha Road	
6	Temple, Chatri	
7	Tube Well, Well	
8	Power Line	
9	Local Road	

KEY PLAN
Of Mahatma Quartz, Pyrophyllite, Red & Yellow Ochre Mine, in Village Mahatma, Tehsil Khetri
District Neem Ka Thana (Previous Jhunjhunun) (Rajasthan)

Plate No. 2

Mineral : Quartz, Pyrophyllite, Red & Yellow Ochre

Lessee : M/s Ashoka Minerals Grinding Mills

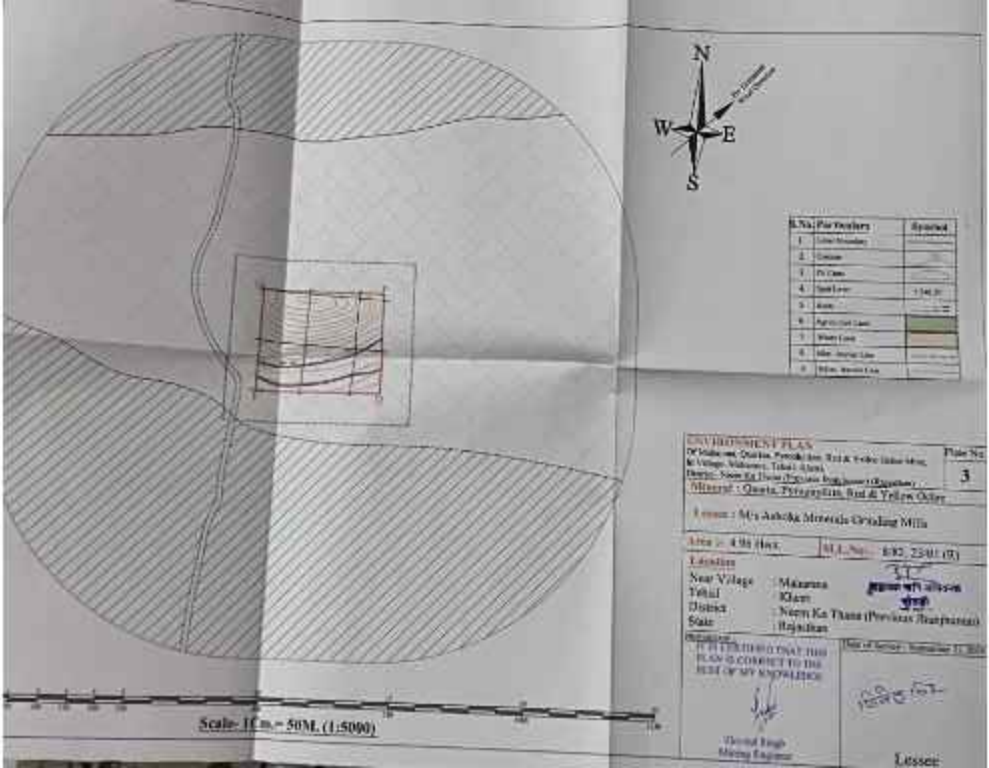
Area : 4.56 Hect. | M.L.No. 8/82, 21/01 (R)

Location
Near Village : Mahatma
Tehsil : Khetri
District : Neem Ka Thana (Previous Jhunjhunun)
State : Rajasthan

Prepared by :
IT IS CERTIFIED THAT THE PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE

Mining Engineer

Lessee


N
W
E
S
Scale- 1Cm.= 50M. (1:5000)
Lessee

ANNEXURE III

CLUSTER CERTIFICATE

राजस्थान–सरकार

कार्यालय खनि अभियन्ता, खान एवं भू–विज्ञान विभाग, झुंझुंनू

क्रमांकः– खअ/झुंझुंनू/खनन पट्टा 8/82/2024/ 2462 दिनांक 29 .11.2024

क्लस्टर प्रमाण–पत्र

यह प्रमाणित किया जाता है कि मेसर्स अशोका मिनरल ग्राइंडिंग मिल्स का खनन पट्टा 8/82 क्षेत्रफल 4.96 हैक्ट्र वास्ते खनिज **क्वार्ट्ज़, रेड ओकर, पायरो फाईलाइट**, निकट ग्राम मेहराना, तहसील **बुहाना,** व जिला झुंझुनू मे घृत है। पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार की अधिसूचना दिनांक 15.01.2016, 01.07.2016 व **शासन के पत्र दिनांक** 27.03.23 **की पालना में उक्त खनन पट्टे की** 500 **मीटर परिधि में दिनांक** 09.09.13 **को एवं इसके पश्चात सदृश्य खनिज के प्रभाव में आये खनन पट्टो व एल ओ आई को चिन्हित कर पुनः इस प्रकार आगे** 500 **मीटर की परिधि में सदृश्य खनिज के प्रभाव में आये खनन पट्टो व एल ओ आई को चिन्हित करने पर पाया कि** इस **क्लस्टर क्षेत्र के अंदर** दिनांक 09.09.2013 **को एवं इसके** बाद मे **सदृश्य खनिज का कोई भी खनन पट्टा या एल ओ आई एरिया नहीं आता है**। इस प्रकार दिनांक29.11.2024 की स्थिति अनुसार उक्त खनन पट्टा संख्या 8/82 दिनांक 09.09.2013 से पूर्व का पंजीकृत होकर प्रभाव में है, अतः पर्यावरण एवं वन मंत्रालय के नोटिफिकेशन दिनांक 14.09.2006 के परिशिष्ट 11 में पेरा 6 के स्थान पर पर्यावरण एवं वन मंत्रालय के नोटिफिकेशन दिनांक 01.07.2016 से हुए संशोधन अनुसार इस पर क्लस्टर लागु नहीं **होने के कारन बी–2 केटेगिरी के अंतर्गत आता है।**

29.11.24

खनि अभियन्ता, झुन्झुनूं

ANNEXURE IV

ARAVALLI CERTIFICATE

राजस्थान–सरकार

कार्यालय खनि अभियन्ता, खान एवं भू–विज्ञान विभाग, झुंझुंनू

कमांकः– खअ/झुंझुंनू/खनन पट्टा/8/82/2024/ 2461 दिनांक 29 .11.2024

अरावली प्रमाण–पत्र

यह प्रमाणित किया जाता है कि खनन पट्टा सख्या 8/82 मेसर्स अशोका मिनरल ग्राइंडिंग मिल्स के पक्ष मे खनन पट्टा वास्ते खनिज– **क्वार्ट्ज़, रेड ओकर, पायरो फाईलाइट** , क्षेत्रफल 4.96 हैक्टर, निकट ग्राम **मेहराना**, तहसील **बुहाना**, व जिला झुंझुनू , के खसरा नं 1, ग्राम सांवलोद के खसरा नं 902 व ग्राम खानपुर के खसरा नं 148 व 149 निम्न अक्षांश व देशान्तर के अन्तर्गत आता है। उक्त खनन पट्टा क्षेत्र सम्बन्धित जी.टी.शीट एवं कार्यालय रिकार्ड के अनुसार अरावली हिल्स मे व **माननीय सर्वोच्च न्यायालय में प्रेषित 261 खनन पट्टो की सूचि में आता है**। माननीय सर्वोच्च न्यायालय के रिट याचिका संख्या 202/1995 (गोदावर्मन बनाम यूनियन ऑफ इन्डिया) मे अरावली हिल्स के सन्दर्भ मे पारित आदेश दिनांक 08.04.2005 कन्टेप्ट पिटिशन (सी) 412/2004 एवं सर्वोच्च न्यायालय के आदेशो की अवहेलना में आता है।

	देशान्तर (longitude)	अक्षांश (latitude)
FRP/T.I	75-49-27.76582	28-08-58.45629
Q	75-49-9.23	28-8-50.94
F	75-49-.15	28-8-50.57
O	75-48-59.82	28-8-57.06
P	75-49-8.9	28-8-57.43

नोटः- माननीय सर्वोच्च न्यायालय के आदेश दिनांक 9.05.24 व 23.07.24 की पालना में उक्त खनन पट्टे में अरावली प्रमाण पत्र तैयार किया गया है ।

खनि अभियन्ता, झुन्झुनूं

ANNEXURE V

DCF CERTIFICATE AND APPLICATION

राजस्थान सरकार

कार्यालय खनि अभियन्ता, खान एवं भू–विज्ञान विभाग, झुन्झुनू

क्रमांक : खअ/झुन्झुनू/माचि/एम.एल. 8/82/2024/ 2473 दिनांक 3 .12.2024

प्रेषिति :

श्रीमान उपवन संरक्षक,
झुन्झुनूं।

विषयः–खनन पट्टा एम.एल. 8/82 क्षेत्र 4.96 हैक्टर, **मेसर्स अशोका मिनरल ग्राइंडिंग मिल्स** के पक्ष मे **वन सीमा से दुरी** व वन्य जीव अभ्यारण एवं राष्ट्रीय उधान से 10 किमी. की दूरी का प्रमाण पत्र देने बाबत।

महोदय,

उपरोक्त विषयान्तर्गत निवेदन है कि खनन पट्टा एम.एल. 8/82 वास्ते खनिज **क्वार्ट्ज़, रेड ओकर, पायरो फाईलाइट**, निकट ग्राम मेहराना, तहसील **बुहाना**, व जिला झुंझुनू , के खसरा नं 1, ग्राम सांवलोद के खसरा नं 902 व ग्राम खानपुर के खसरा नं 148 व 149 मे **आवंटित है** में पूर्व में श्रीमान उपवन संरक्षक झुझुंनूं द्वारा अपने पत्रांक 8986 दिनांक 18.10.03 (प्रति संलग्न) से वन अनापति दी गई है में वन्य जीव अभ्यारण एवं राष्ट्रीय उधान से 10 किमी. की दूरी का प्रमाण पत्र की आवश्यकता है।

अतः एम.एल. 8/82 के लिए FMDSS के माध्यम से **ऑनलाइन** आवेदन कर आवेदन शुल्क 1000/– जमा करवा कर उक्त प्लाट की संयुक्त मौका रिपार्ट मय पटवारी की रिपार्ट, खसरा नक्शा ,जमाबन्दी व GT SHEET MAP ऑनलाईन अपलोड कर निवेदन है कि उक्त खनन पट्टा का **वन सीमा से दुरी** व **खनन पट्टे** से वन्य जीव अभयारण्य और राष्ट्रीय उद्यान का 10 किमी. की दूरी का प्रमाण–पत्र इस कार्यालय को भिजवाने का श्रम करावें।

संलग्नः–उपरोक्तानुसार।

3.12.24

खनि अभियन्ता, झुन्झुनू

23(01)R)

राजस्थान सरकार
कार्यालय [illegible]

[illegible] ML 8/82

[illegible] 23/01(R)

[illegible] 25/9/08 [illegible] 2931

[illegible] 9/11/08 [illegible] M/s Ashoka mineral Grinding mills

[illegible] [illegible] [illegible]

[illegible] निकट ग्राम [illegible] तहसील [illegible]

जिला [illegible] क्षेत्र 4.9600 हैक्टर का हल्का पटवारी [illegible] की

उपस्थिति मे अग्रिम सीमांकन किया गया। जिसका विवरण निम्नानुसार है -

1. [illegible] उपकरण जीपी एस- प्रिजमेटिक कम्पास इत्यादि।

2. विवरण सूचना कार्यालय से प्राप्त प्लान एवं विवरण सूची अनुसार।

3. स्थाई बिन्दु - Centre of Devisi temple situated Mahrana hill top.
Long. 075°49'27.6" Lat 28°08'58.1"

कहा से	कहां को	बियरिंग	दूरी
Devisi temple situated Mahrana hill top	A	134°30'	& 350mt
A to E		357°w'	& 50mt
E to Q		267°w'	& 752mt.
Q to F		267°w'	& 248mt.
F to O		357°w'	& 200mt.
O to P		87°w'	& 248mt
P to Q		177°w'	& 200mt

TOTAL Area QFOPQ - 4.9600 hector.

Pillar Reference: Pillar Q falls near Kikar tree in [illegible] patias

① pillar Q to top of Mataji Ka temple - 63°30'
② pillar Q to top of Mataji Ka temple - 49°30'
③ pillar Q to top of hill Near Mataji Ka temple - ... land on East side of hill.

Pillar F falls on plane cultivated land on East side of hill.
① pillar F to Mataji Ka temple top - 70°30'
② pillar F to top of hill nr Siyana - 154°w'
③ pillar F to top of hill nr Khanpura - 280°w'

PTO.

[signature]
Mining Engineer
Jhunjhunu

pillar C falls on SE slope of hill near top of hill
(i) pillar C to top of hill near Singhana - 143° at
(ii) pillar C to top of hill near Khanpura - 267° at
(iii) pillar C to top of hill near Copper - 198° at

pillar D falls on East slope of hill at hill's lower [illegible]
Due to dangerous steep slope references [illegible]

मौके पर सम्पूर्ण सीमांकन कारवाई कार्यालय से प्राप्त [illegible] विवरण सूची अनुसार स्थाई बिंदु Centre of Devi's temple situated Mahrana hill top से सर्वे शुरू कर आवेदित/सीमांकित क्षेत्र के [illegible] पीलर को मौके पर चिन्हीत किया जाकर, मौके पर उपस्थित आवेदक को वास्तविक सीमांकित क्षेत्र 4.96 hectare की वास्तविक मौका स्थिति अवगत करवाया गया। Aravalli आदि से संबंधित रिपोर्ट [illegible] शासन खोलेगा जाना आवश्यक होगा। मौका वन विभाग की सहमति अनुसार सीमांकित क्षेत्र वन सीमा के 25 mt की परिधि में -[illegible] meaning के अनुसार वन क्षेत्र में [illegible] नहीं आता है मौके पर उपस्थित [illegible] पटवारी को उनके समक्ष रिपोर्ट में वर्णित विवरण सूची अनुसार सीमांकन करवाते जाके सीमांकित क्षेत्र QFOPB-4.96 hectare क्षेत्र में आने [illegible] सम्पूर्ण खसरा संख्या, रकबा, किस्म आदि की पूर्ण व स्पष्ट रिपोर्ट [illegible] हेतु तथा आवेदक द्वारा खसरा नम्बर में मार्क किया जाना आवे[illegible] क्षेत्र QFOPB-4.96 hectare मौके पर सीमाज्ञान करवाते, [illegible] सीमांकित क्षेत्र QFOPB-4.96 hectare से मिलान करता है या [illegible] के संबंध में पूर्ण व स्पष्ट रिपोर्ट भिजवाने हेतु निर्देशित किया गया।

Mining Engineer
Jhunjhunu

[illegible]

कार्यालय उप वन संरक्षक, झुंझनूं

क्रमांक 8986 दिनांक 18.10.03

निमित :- खनि अभियन्ता

सीकर

विषय :- नवीनीकरण खनन पट्टा वास्ते खनिज क्वार्ट्ज, रेड ओकर पायरोफलाइट, यलो ओकर क्षेत्र 49.50 हे० निकट ग्राम भडराना तह० खेतडी में अशोका मिनरल्स ग्राइंडिंग मिल्स नीमका थाना द्वारा।

संदर्भ :- आपका पत्रांक 1775 दिनांक 28-3-3

महोदय,

विषयान्तर्गत क्षेत्रीय वन अधिकारी खेतडी रिपोर्ट क्रमांक 576 दिनांक 16-10-03 के अनुसार वांछित क्षेत्र वन सीमा से बाहर 500 मीटर की दूरी पर स्थित है। अतः खनन कार्य की अनुमति दी जाने पर इस कार्यालय को कोई आपत्ति नही है।

भवदीय,

[signature]

उप वन संरक्षक,
मरुस्थल वनारोपण एवं चारागाह विक...
झुन्झुनू (राजस्थान)

Mining Engineer
Jhunjhunu

6384
31-10-03

Office Details

Lessee Information

Mineral Details

Fee Details

Clearance Details

Production Details

Demarcation Details

Lease No

ME/JJU/Minor(B)/ML/B/1082

Home

Closing Error :

1. FRP Detail

Export

FRP Type	FRP Description	GT Sheet No.	Longitude	Latitude	Action
Select One	FRP Description	GT Sheet No.	Longitude	Latitude	

FRP Type	FRP Description	GT Sheet No.	Longitude	Latitude	Coordinate Unit	Village
Other	CENTRE OF DEVLI TEMPLE SITUATED MAHRANA HILL TOP	45P16	75-49-27.76582	28-09-58.45629	Degree Min.Sec.	MAHRANA

2. Description Of Pillar/Area

Pillar Detail Type :

With Bearing-Distance

From *	To*	Reference	Bearing(Deg.Min.Sec)*	Distance(in meters)*	Point Type*	Sequence*	Action
From	To	Reference	Degree / Minute / Second	Distance	Select One	Sequence	

#	Block	From	To	Reference	Bearing(Deg-Min-sec)	Distance (in meters)	Point Type	Sequence	Longitude	Latitude	Action
1		Frp	A		134-30-0	350	Intermediate Pillar	1	75-49-30.86	28-9-50.43	
2		A	E		357-0-0	50	Intermediate Pillar	2	75-49-38.77	28-9-52.05	
3		E	Q		267-0-0	752	Lease Pillar	3	75-49-9.23	28-9-50.94	
4		Q	F		267-0-0	248	Lease Pillar	4	75-48-.15	28-9-50.57	
5		F	G		357-0-0	200	Lease Pillar	5	75-48-59.82	28-9-57.06	
6		G	P		87-0-0	248	Lease Pillar	6	75-49-8.9	28-9-57.43	
7		P	Q		177-0-0	200	Lease Pillar	7	75-49-9.23	28-9-50.94	

3. Location Detail

District *	Tehsil *	Near Village	Khasara No.	Plot No.	Khasara Status	Khasara Ownership	Action
District	Tehsil	Near Village	Khasara No.	Plot No.	Select One	Select One	

#	Block	District	Tehsil	Near Village	Khasara No.	Plot No.	Khasara Status	Khasara Ownership	Action
1		Jhunjhunu	Khetri	Mahrana	148		Government Land	Seway Chak(Silanisam)	

Mining Engineer
Jhunjhunu

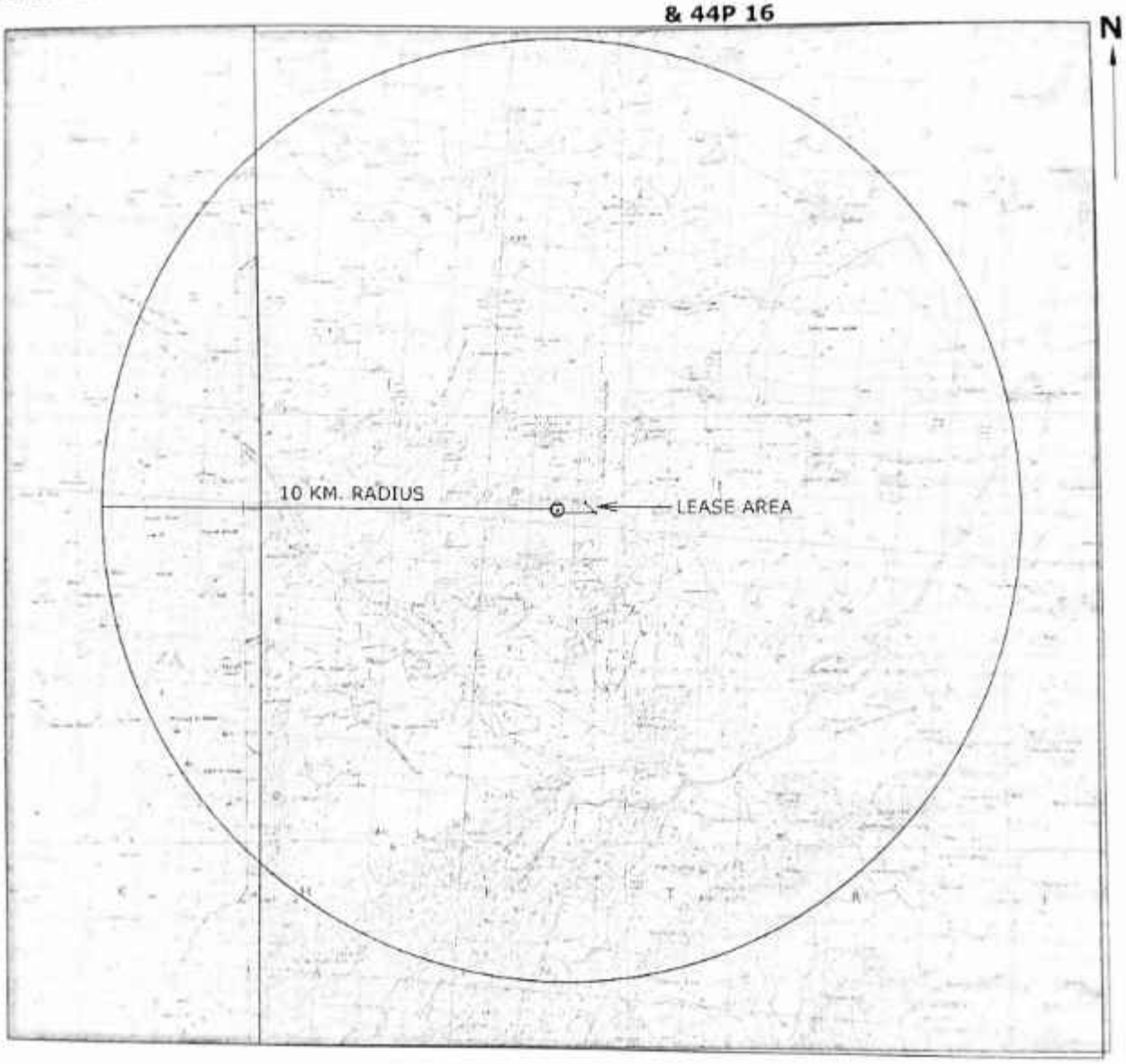
Create GIS Map | View Map

Back | Save

MAP SHOWING THE LOCATION OF ML 8/82 IN 10 KM. RADIOUS FOR MINERAL-QUARTZ, RED ORCHER AND PYROFILITE IN F/O M/S ASHOKA MINERAL GRAINDING MILLS,N/V- MAHARANA, TEHSIL-BUHANA, DISTT-JHUNJHUNU

SCALE 1CM=1400 MTR

PART OF GT SHEET NO 45P 12 & 44P 16



ML 8/82 AREA -4.96 HECT. FOR MINERAL- **QUARTZ, RED ORCHER AND PYROFILITE**

JR DM / JJN

MINING ENGINEER
JHUNJHUNU
5.12.25

ANNEXURE VI

NABET CERTIFICATE

भारतीय गुणवत्ता परिषद्
QUALITY COUNCIL® OF INDIA
QCI Creating an Ecosystem for Quality

NABET

National Accreditation Board for Education and Training

Certificate of Accreditation

Cosmos Enviro Consultancy, Jaipur

B-25-B, 10B Scheme, Riddhi Siddhi Chouraha, Gopal Pura Bypass, Jaipur, Rajasthan- 302018

*The organization is accredited as **Category-A** under the QCI-NABET **Scheme for Accreditation of EIA Consultant Organization, Version 3**: for preparing EIA/EMP reports in the following Sectors-*

S. No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1.	Mining of minerals- Opencast mining only	1	1 (a) (i)	A
2.	Building and construction projects	38	8 (a)	B
3.	Township and Area development	39	8 (b)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in IAAC minutes dated February 7, 2025, posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no QCI/NABET/ENV/ACO/25/3517 dated February 20, 2025. The accreditation needs to be renewed before the expiry date by Cosmos Enviro Consultancy, Jaipur following due process of assessment.

Valid up to
November 19, 2027

Issue Date
February 20, 2025

Certificate No.
NABET/EIA/24-27/IA 0148

Prof (Dr) Varinder S Kanwar
(CEO NABET)

For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI-NABET website.