



सत्यमेव जयते

File No: 506076/24-MIN/11-2024

Government of India

Ministry of Environment, Forest and Climate Change

(Issued by the State Environment Impact Assessment
Authority(SEIAA), ODISHA)



Dated 13/02/2025



To,

Smt. Pranati Mishra, proprietor
Pranati Enterprises
Ranibandh, Plot No. 75/4009, New Colony, Rajgangpur, Sundargarh, Pin- 770017
pranatienterprises01@gmail.com

Subject: Grant of Terms of Reference under the provision of the EIA Notification 2006-regarding.

Sir/Madam,

This is in reference to your application for Grant of Terms of Reference under the provision of the EIA Notification 2006-regarding in respect of project Proposal for Fresh ToR for mining of quartzite from Batigurha Quartzite Mine Block Over a ML Area of 18.976 Acres or 7.68 Ha. Located in Village Batigurha, Tahasil-Koksara, District- Kalahandi of Pranati Enterprises submitted to the SEIAA, Odisha vide proposal number SIA/OR/MIN/506076/2024 dated 16/11/2024.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO24B0108OR5232470N
(ii) File No.	506076/24-MIN/11-2024
(iii) Clearance Type	TOR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals Proposal for Fresh ToR for Mining of Quartzite from Batigurha Quartzite Mine Block Over a ML Area of 18.976 Acres or 7.68 Ha. Located in Village Batigurha, Tahasil-Koksara, District- Kalahandi
(vii) Name of Project	
(viii) Name of Company/Organization	Pranati Enterprises
(ix) Location of Project (District, State)	Village Batigurha, Tahasil-Koksara, District- Kalahandi
(x) Issuing Authority	SEIAA, Odisha
(xii) Applicability of General Conditions	no
(xiii) Applicability of Specific Conditions	no

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1(Part A and B) were submitted to the SEIAA, Odisha for an appraisal by the State Level Expert Appraisal Committee (SEAC) under the provision of EIA notification 2006 and its subsequent amendments thereto.
4. The above-mentioned proposal has been considered for ToR by SEAC in its meeting held on 27.12.2024. The minutes of the meeting and all the project documents as submitted by project proponent are available in the Parivesh portal which can be accessed from the Parivesh portal by scanning the QR Code above.
5. Details of the project along with the salient features of the project as submitted by the project proponent in Form- 1 (Part A and B) and as presented before SEAC are annexed to this ToR as Annexure- 2.
6. The SEAC, after detailed deliberations made by the Project Proponent and the EIA Consultant, in its meeting held on 27.12.2024 under the provisions of EIA Notification 2006 and its subsequent amendments thereto, recommended the proposal for grant of Terms of Reference (ToR) for the project for undertaking detailed EIA study, stipulating various conditions(standard & specific).
7. The matter was examined in the State Environment Impact Assessment Authority (SEIAA), Odisha in its 189th meeting held on 07.02.2025, appraisal report of SEAC and in accordance with the EIA Notification, 2006 and further amendments thereto. After detailed deliberation, the authority approved the ToR subject to standard & specific conditions with public hearing for undertaking detailed EIA study for the project. The standard and specific ToR is attached as Annexure-1.
8. Terms of Reference (ToR) is granted to the project along with public hearing under the provisions of EIA Notification No. S.O. 1533 (E) dated the 14th September, 2006 of the Government of India in the erstwhile Ministry of Environment and Forests, as amended from time to time for proposed mining of quartzite from Batigurha Quartzite Mine Block Over a ML Area of 18.976 Acres or 7.68 Ha. Located in Village Batigurha, Tahasil-Koksara, District-Kalahandi by Pranati Enterprises, proprietor, Smt. Pranati Mishra.” for undertaking detailed EIA studies with the specific conditions as mentioned below along with standard conditions for preparation of EIA/EMP report for the project as given in Annexure- 1.
9. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.
10. This issues with the approval of the Competent Authority.

Copy To

1. Additional Chief Secretary, Forest, Environment & Climate Change Dept., Government of Odisha for information.
2. Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for information and necessary action.
3. Member Secretary, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for information.
4. Deputy D.G.Forest., Regional Office (RO), Ministry of Environment & Forests, A/3, Chandrasekharpur, Bhubaneswar for information.
5. Director of Mines & Geology, Govt.of Odisha, Bhubaneswar for information & necessary action.
6. Special Secretary to Government, Steel & Mines Department, Govt,of Odisha for information.
7. Collector & DM, Kalahandi/ DFO, Kalahandi/DDM,Bhawanipatna/for Information and necessary action.
8. Guard file for record/Website/Parivesh Portal.

Annexure 1

Specific Terms of Reference for (Mining Of Minerals)

1. For Specific Conditions

S. No	Terms of Reference
1.1	<p>i) A canal and a bridge pass through the lease area. Hence the Project Proponent shall leave safety zone for the same along with the nearest habitation before mining activity starts and submit the layout of the same indicating the mining zone and safety area.</p> <p>ii) Copy of DLC certificate and permission regarding the tree growth present within Mining lease area certified by concerned DFO be submitted.</p> <p>iii) Submit revised mining lease area showing the working area after excluding Scheduled Tribe land, forest growth, habitation, canal and road. Detail land schedule alongwith kism of land for the revised area with layout map as per approved mining plan. Also gochar kism land should be dereserved as per legal provisions applicable.</p> <p>iv) Note on Blasting management as habitation is within the ML area.</p> <p>v) The PP shall specify how they will operate the mining, as private land is included in the ML area.</p> <p>vi) Chemical analysis of the sample ore and Overburden for percentage of silica.</p> <p>vii) The concerned Deputy Director of Mines/Mining Officer shall specify the percentage of the soil cover and strip ratio and quality of quartz mine.</p> <p>viii) Approved DSR copy showing the source.</p> <p>ix) Safety measures for nearby transmission line duly consented by the concerned authorities.</p> <p>x) The KML file shall be rectified as it falls on the canal and nearest road.</p> <p>xi) The minimum distance criteria as per CPCB guidelines in its letter dated 12.05.2020 shall be maintain during drilling and blasting.</p>

Standard Terms of Reference for (Mining of minerals)

1.

S. 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
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

S. No	Terms of Reference
	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 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
1.10	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
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	The vegetation in the RF / PF areas in the study area, with necessary details, should be given
1.14	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
1.15	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
1.16	A detailed biological study of the study area [core zone and buffer zone (10 km radius of the

S. No	Terms of Reference
	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
1.17	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
1.18	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
1.19	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
1.20	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided
1.21	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
1.22	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
1.23	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
1.24	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
1.25	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

S. No	Terms of Reference
1.26	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
1.27	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
1.28	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report
1.29	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
1.30	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
1.31	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
1.32	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
1.33	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
1.34	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
1.35	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given
1.36	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out
1.37	A Disaster management Plan shall be prepared and included in the EIA/EMP Report

S. No	Terms of Reference
1.38	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
1.39	<p>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) 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. f) 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 SEIAA 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. g) 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.</p> <p>i) The EIA report should also include:-</p> <ul style="list-style-type: none"> (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) NABET accredited consultant certificate along with consent letter that he has prepared the EIA & EMP report of the proposed project.
- ii) The Project Proponent should submit the EIA/EMP report as per the generic structure prescribed in Appendix-III of the EIA Notification,2006 after incorporating the details of public hearing conducted and covering the above-mentioned issues, to take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification,2006.
- iii) Baseline data and public consultation shall not be older than 3 years, at the time of submission of the proposal, for grant of Environmental Clearance.
- iv) The prescribed TOR would be valid for a period of four years for submission of the EIA/EMP report, as per the Notification S.O.751(E) dated 17.02.2020. The instant TOR is valid up to four years from the date of issuance of TOR.

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)
Quartzite	Quartzite	27195.7	MT	Road	NA

1. Project in Brief:-

The highlights of the proposal as ascertained from the application and as revealed from proceedings/discussion held during the meeting of SEAC/SEIAA, are given as under:-

- (i) The proposal was considered by the committee to determine the “Terms of Reference (ToR)” for undertaking detailed EIA study for the purpose of obtaining Environmental Clearance in accordance with the provisions of EIA Notification, 2006 and amendment thereafter.
- (ii) This is a proposal of Pranati Enterprises for Terms of Reference(ToR) for undertaking detailed EIA study for mining of quartzite from Batigurha Quartzite Mine Block Over a ML Area of 18.976 Acres or 7.68 Ha. Located in Village Batigurha, Tahasil-Koksara, District- Kalahandi filed by Smt. Pranati Mishra, proprietor.
- (iii) Category: The proposed project falls under Category “B” Projects of activity 1(a) - Mining of Minerals as per EIA Notification dated 14th September, 2006 and its subsequent amendments.
- (iv) The Mining Lease of Batigurha Quartzite Block located at Village - Batigurha, under, Tahasil: Koksara, District: Kalahandi, Odisha has been granted by Government of Odisha in favour of Pranati Enterprises on 21.03.2024 over an area of 7.68 Ha. or 18.976 Acres for 30 Years. Proposed Lease area is a Non-Forest Govt. Land.
- (v) The mining plan was approved by Joint Director of Mines, Directorate of Mines & Geology Bhubaneswar, Odisha vide letter no.- MGXXIV(b)- 16/2024/8085/DoMG on dated 13/08/2024.
- (vi) This is a new mine and the sairat source is yet to be included in DSR.
- (vii) Location and Connectivity: The Mining Lease Area comes under Toposheet No- E44E14(65I/14) & bounded between the Latitudes: -19°41'32.25800" N to 19°41'42.74500"N& Longitudes-82°45'46.87900"E to E82°45'55.23200"E.

Village	Batigurha
Tahasil	Koksara
District	Kalahandi
Khata No. & Plot No.	Khata No.- 217,239,223,174,238,91,174, 68,27,109,1,164, & 89. Plot No- 123/P,124/P,125/P,126/P,127/P,130/P,131/P,132,133 ,134,135/P,139/P,140/P,141/P,142/P, 202/P,203/P,204/P, 205/P, 206/P, 263/P, 279/P, 293/P
Kisam	Atta, Rasta, Anyanya, Gochar, Mala, Nayanajori, Canal Adi & Gharabari
Latitude	Latitude: N19°41'32.25800"to N19°41'42.74500"
Longitude	Longitude: E82°45'46.87900"to E82°45'55.23200"
Nearest village	Batigurha village about 0.26 km

Nearest Town/City	Bhawanipatna about 47.79 km
Nearest Railway Station	Junagarh Railway Station 27.66 Km
Nearest Airport	Biju Patnaik International Airport, Bhubaneswar about 324 km
Nearest Highway	SH- 117 is 13km
Nearest NH	NH- 26 is 0.74 km
Ecology Sensitive Zone	No national parks and sanctuary within 10 km radius
Reserve Forest	Bijamara Reserve Forest about 14.95 km
Sesmic Zone	Zone – II as per IS: 1893 (Part-I): 2002
Survey of India Topo-Sheet no.	E44E14
Nearest distance of Approach Road	0.23k.m
Nearest water body	Kamal River- 12.93 km
Nearest road Bridge / Railway Bridge	Road Bridge- 0.24 km
River embankment	11.60k.m
Electric transmission Pole	0.07 k.m
Village road	village road-0. 23k.m
Nearest Habitation	Batigurha about 0.26km

(viii) Total Reserves and Proposed Production is represented in the table below given –
For Quartzite

As per Approved Mining Plan	As per Approved Mining Plan
-----------------------------	-----------------------------

Geological Reserve consists of: (Insitu Quartzite) + (Float Quartzite)	Mineable Reserve consists of: (Insitu Quartzite) + (Float Quartzite)	Total Production (5year) consists of: (Insitu Quartzite) + (Float Quartzite)	Total Saleable quantity (5year) consists of: (Insitu Quartzite) + (Float Quartzite)	Total non-saleable quantity (5year) consists of: (Insitu Quartzite) + (Float Quartzite)	Annual production consists of: (Insitu Quartzite) + (Float Quartzite)
259197.3MT	239589.5MT	187051.4MT	116907MT	70144.3MT	42882.0MT (max)
51062.9MT	32283.0MT	6357.1MT	2383.9	3973.2	1605.1
Total 3,10,260.2 T	Total 2,71,872.5 T				

Year Wise Production (Insitu Quartzite)

Financial Year	Section Considered	X-Sectional Area of Ore Body (m ³)	Length Of Influence (m)	Vol. Of Ore Body (100%) (m ³)	Vol. of Waste (20%) (m ³)	Production of Non-Saleable/Su bgrade Quartzite (+97.5%-98.5% SiO ₂ i.e. 30%) (MT)	Product ion of saleabl e quartzite (+98.5 % SiO ₂ i.e. 50%) (MT)	Excava ted Vol of Quartzite (80%) (MT)	Strip ping Ratio	UN FC
		A	B	C= AxB	D= Cx0.20	E= Cx0.30x2.64	F= Cx0.50 x2.64	G= Cx0.80 x2.64	H= D/G	I
FIR S T YEA R	A-A'	348.0	46	16008.0	3201.6	12678.3	21130.6	33808.9	0.1	122

Financial Year	Section Considered	X-Sectional Area of Ore Body (m ³)	Length Of Influence (m)	Vol. Of Ore Body (100%) (m ³)	Vol. of Waste (20%) (m ³)	Production of Non-Saleable/Su bgrade Quartzite (+97.5%-98.5% SiO ₂ i.e. 30%) (MT)	Product ion of saleabl e quartzit e (+98.5 % SiO ₂ i.e. 50%) (MT)	Excava ted Vol of Quartzite (80%) (MT)	Strip ping Ratio	UN FC
SEC OND YEA R	A-A'	381.0	46	17526.0	3505.2	13880.6	23134.3	37014.9	0.1	122
THIR D YEA R	A-A'	366.0	47	17202.0	3440.4	13624.0	22706.6	36330.6	0.1	122 & 222
FOU RTH YEA R	B-B'	381.0	46	17526.0	3505.2	13880.6	23134.3	37014.9	0.1	122
FIFT H YEA R	B-B'	432.0	47	20304.0	4060.8	16080.8	26801.3	42882.0	0.1	122 & 222
SUB-TOTAL				88566.0	17713.2	70144.3	116907.1	187051.4		

Year Wise Production(Float Quartzite)

Financial Year	Section Considered	X-Sectional Area of Ore Body (m ³)	Length Of Influence (m)	Vol. Of Ore Body (100%) (m ³)	Vol. of Waste (20%) (m ³)	Production of Non-Saleable/Subgrade Quartzite (+97.5%-98.5% SiO ₂ i.e. 30%) (MT)	Production of saleable quartzite (+98.5% SiO ₂ i.e. 50%) (MT)	Excavated Vol of Quartzite (80%) (MT)	Stripping Ratio	UN FC
		A	B	C= Ax B	D= Cx0.60	E= Cx0.25x2.64	F= Cx0.15x2.64	G= Cx0.40x2.64	H= D/G	I
FIRST YEAR	A-A'	10.0	123	1230.0	738.0	811.8	487.1	1298.9	0.6	122
SECOND YEAR	A-A'	10.0	100	1000.0	600.0	660.0	396.0	1056.0	0.6	122
THIRD YEAR	A-A'	16.0	95	1520.0	912.0	1003.2	601.9	1605.1	0.6	122
FOURTH YEAR	B-B'	14.0	91	1274.0	764.4	840.8	504.5	1345.3	0.6	122
FIFTH YEAR	B-B'	12.0	83	996.0	597.6	657.4	394.4	1051.8	0.6	122
SUB-TOTAL				6020.0	3612.0	3973.2	2383.9	6357.1		

(ix) Mining Method: The method of mining for the proposed project is Semi - Mechanized Open Cast mining with 3m X 3m benching pattern. Short hole drilling will be carried out for winning the mineral. Short hole Muffled/Controlled blasting technique will be adopted to minimize the ground vibration and to avoid flying of rocks when and where

required. No. of Holes to be done during Plan period is 19337.1 Nos. Explosives required during the Plan period is 17,867.5Kg /annum.

(x) List of Machineries:

Sl.No	Equipments	Specification	Total
i)	Hydraulic Excavator	Proclain-0.9m3 capacity	2
ii)	Backhoe Loader		1
iii)	Jack Hammer Drill	32mm drill bit	4
iv)	Rock Breaker		1
v)	Tippers	20T/10T	1/ 2Nos.
vi)	Compressor	Holman TA 13T	2
vii)	Water Tanker	5KL Capacity	1

(xi) Waste generation and management: The PP has mentioned 20% of Quartzite and 60% of Float Quartzite has been considered as Waste. Around 21235.2 Cum of Waste will be generated during the Plan period. The waste will stack over an area of 0.049 Ha. area (temporary dump) inside the lease area. Depending upon the Grade and the Silicon content, Quartzite will be sold to various industries and market.

YEAR	In situ Waste Generated @ 20% Quartzite mentioned in year wise production table of Approved Mining Plan.
1 ST YEAR	3201.6
2 ND YEAR	3505.2
3 RD YEAR	3440.4
4 TH YEAR	3505.2
5 TH YEAR	4060.8
TOTAL	17713.2

Year	Waste Generated @ 60% Float Quartzite as mentioned in year wise production table of Approved Mining Plan.
1 st Year	738
2 nd Year	600
3 rd Year	912
4 th Year	764.4
5 th Year	597.6
Total	3612.0

(xii) Water Requirement: 13 KLD of water is required for the proposed project and it will be met from nearby available water source and drinking water will be sourced from water tanker.

(xiii) Greenbelt Development: 20 nos. of trees per year is proposed to be planted in the proposed project site as per the following table.

Year	Area (In Sq.M)	Type Of Saplings	No. Of Saplings
1 st Year	508	Neem, Tamarind, Karanja, Subabul, Badam, Ficus, Etc.	20
2 nd Year	508		20
3 rd Year	508		20
4 th Year	508		20
5 th Year	508		20
Total	2540		100

(xiv) Manpower: 32 persons of manpower will be employed in the proposed project as per the following table.

Designation	Number of persons
Supervisory Personnel/ Statutory Personnel	2
Skilled laborers (Operator and Helper)	4

Semi-skilled Laborer	5
Unskilled Laborer	21
Total	32

- (xv) Project Cost & EMP cost –The estimate of the project cost is Rs. 40lakh, and EMP Cost bearing Capital Cost of Rs. 2.5 lakhs and Recurring Cost of 1.20 lakhs per annum.
- (xvi) Environment Consultant: The Environment consultant M/s Green Circle Inc., Vadodara along with the proponent made a presentation on the proposal before the Committee.
- (xvii) Any deficiencies/omission have been noticed in the above documents-DLC certificate submitted by DDM, Kalahandi instead of DFO/Tahasildar., in the KML file it appears that a nearest lift canal and road is coming inside the lease area.
2. Whether SEAC recommended the proposal – The proposal was placed in the SEAC meeting held on 27.12.2024 and considering the information / documents furnished by the proponent and presentation made by the consultant M/s Green Circle Inc. Vadodara, the SEAC prescribed the standard ToRs for conducting detailed EIA study with following specific ToRs:
- (i) A canal and a bridge pass through the lease area. Hence the Project Proponent shall leave safety zone for the same along with the nearest habitation before mining activity starts and submit the layout of the same indicating the mining zone and safety area.
 - (ii) Copy of DLC certificate and permission regarding the tree growth present within Mining lease area certified by concerned DFO be submitted.
 - (iii) Submit revise mining lease area showing the working area after excluding Scheduled Tribe land, forest growth, habitation, canal and road. Detail land schedule along with kismam of land for the revised area with layout map as per approved mining plan. Also, Gochar kismam land should be dereserved as per legal provisions applicable.
 - (iv) Note on Blasting management as habitation is within the ML area.
 - (v) The PP shall specify how they will operate the mining, as private land is included in the ML area.
 - (vi) Chemical analysis of the sample ore and Overburden for percentage of silica.
 - (vii) The concerned Deputy Director of Mines/Mining Officer shall specify the percentage of the soil cover and strip ratio and quality of quartz mine.
 - (viii) Approved DSR copy showing the source.
 - (ix) Safety measures for nearby transmission line duly consented by the concerned authorities.
3. **Decision of Authority: Approved:-** The proposal was considered for ToR in 189th meeting of SEIAA held on 07.02.2025. After detailed deliberation, the Authority approved the ToR with standard and specific conditions for conduct of EIA Study along with the Public Hearing with the following additional conditions:
- i) The KML file shall be rectified as it falls on the canal and nearest road.
 - ii) The minimum distance criteria as per CPCB in its letter dated 12.05.2020 shall be maintain during drilling blasting.