# PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ODISHA HELD ON 10<sup>TH</sup> OCTOBER, 2018

The SEAC met on 10<sup>th</sup> October, 2018 at 11:00 AM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the Chairmanship of Dr. B.K. Patnaik. The following members were present in the meeting.

1.	Dr. B. K. Patnaik	-	Chairman
2.	Dr. D. K. Rout	-	Member
3.	Sri B.C. Prusty	-	Member
4.	Dr. S. C. Nayak	-	Member
5.	Dr. R.C Mohanty	-	Member
6.	Sri A. C. Mohanty	-	Member
7.	Dr. S.K. Biswal	-	Member
8.	Sri S. Behera	<u> -</u>	Member
9.	Dr. D. Swain	_	Member

The agenda-wise proceedings and recommendations of the committee are detailed below:

# ITEM NO. 01

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR KARLASODA DECORATIVE STONE DEPOSIT OVER AN AREA OF 33.27 ACRES OR 13.464 HA AT VILLAGE – KARLASODA, TAHASIL – KALAHANDI, DIST – KALAHANDI OF SMT P. RAMADEVI (EC).

- This is a proposal for Karlasoda Decorative Stone deposit over an area of 33.27 acres or 13.464 ha for production of decorative stone of quantity 2787 m<sup>3</sup>/Annum (Saleable Blocks) of Decorative Stone.
- The lessee, M/s Karlasoda Decorative Stone Deposit has been granted lease of Decorative Stone for mining, over an extent of 33.27 Acres located at Villages-Karlasoda, Tahasil- Kalahandi, District- Kalahandi for the lease period. The mining plan is approved by Joint Director of Mines, O/o. Directorate vide letter no. 3513/DM, dated. 8.05.2018.
- 3. The Mine Lease area is featured in Survey of India, Topo Sheet No-F 44 X 4 (64 p/4) and is bounded by Latitude: N 20° 11' 11.6" N 20° 11' 30.4" and Longitude: E 83° 03' 41.5" E 83° 04' 07.5". The lease area is about 1 k.m from Karlasoda and 2.5 k.m from Borbhata village. The lease area can be easily approachable from Titlagarh, which is about 18 k.m from the applied area.
- 4. During the mining plan period mining will be done by open cast semi-mechanized method with the deployment of machines like jack hammers drill, compressor, hydraulic excavators & tippers, etc. Block cutting dressing, loading, transportation, and waste disposal will be carried out by systematic & scientific mining of the stone.
- 5. The water requirement for this proposed mining activity will be approx. 2000 liters/day will be required for different purposes like Domestic, Dust suppression, Plantation

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- purposes and the water will be supplied from the pre-existing ground water sources from the nearby villages.
- About 40019 cum of mineral reject/top soil will be generated during plan period from this
  mine. Therefore a total of 16007 cum will be utilized for construction and maintenance of
  road and remaining waste will be dumped in the proposed temporary waste dump in the
  earmarked site.
- Noise will be generated during at time of loading. However, all the measures will be taken to the noise within the stipulated limits. This will be achieved by implementing suitable control measures.
- 8. The quality of the air will be maintained to the required degree by controlling air pollution by means of dust suppression at source, maintenance of vehicles and adequate afforestation.
- 9. There will be provision of garland drains on edge of Dump and quarry to channelize water away from quarry to natural drains.
- 10. It is reported by the project proponent that there is no court case / litigation is pending against the project.
- 11. The cost of the Project is ₹ 3.00 crores.

Considering the information furnished and presentation made by the proponent, the SEAC decided to take decision on the proposal after receipt of the following information / documents from the proponent:

- (i) Certificate from the concerned DFO that there is no DLC land involved in lease area.
- (ii) Certificate from the concerned mining officer that there is no other mines within 500 meter of the periphery of the lease area.
- (iii) Copy of lease sanctioned letter of Steel and Mines Department, Govt. of Odisha.

# ITEM NO. 02

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR GHATAPADA GARNET MINE OVER AN AREA OF 25.127 HA AT VILLAGE – GHATAPADA, TAHASIL – KESINGA, DIST – KALAHANDI (GEMSTONE MINING) OF SRI BIJAY KUMAR BANSAL (TOR).

- 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 the EIA Notification, 2006 and amendment thereafter.
- 2. This is a proposal for gemstone mining project with production capacity of 264 kg / annum gemstone over mining lease of 25.127 ha
- The mining lease has been granted in favour of Sri Bijay Kumar Bansal in village Ghatapada, district Kalahandi, Odisha for a period of fifty (50) years vide letter No.341/SM, Bhubaneswar dated 10.01.2017 after excluding 8.405 hectares forest land as per old proposal.



- 4. The mining lease was previously over an area of 33.532 Ha. and the terms & conditions vide letter No.7543/SM, Bhubaneswar dated 13.06.2001 was issued to Sri Bijay Kumar Bansal in village Ghatapada, district Kalahandi, Odisha for a period of 20 years.
- 5. Subsequently, mining lease has been executed by the Collector, Kalahandi on 11.01.2017 over an area of 25.127 hectares. After the execution of the M.L area, survey & demarcation was undertaken in the field on 07.04.2017 as per the direction of the Director of Mines, Odisha, Bhubaneswar and surveyed & demarcated map, land schedule and boundary description has been approved by the Director of Mines, Odisha vide letter No.4980/DM dated 22.05.2017.
- 6. The lease area is located in village Ghatapada under Kesinga Tehsil of Kalahandi District. Ghatapada lease area is a part of Survey of India toposheet No. 64 P/7 on 1:50,000 scale and is bounded by the latitudes from 20°14'41.06" to 20°14'59.60" N and longitudes from 83°16'07.82" to 83°17'07.92"E as per geodetic survey.
- 7. Opencast manual method of mining will be adopted on single shift basis with the use of pick axe, crowbar, hand shovel, chisel etc. for loosening & excavation of rock mass and transportation by 10t capacity tippers/trucks. The production plan will be maximum of 264 kg of garnet per annum. With this rate of production the life of mines will be 10 years including the present plan period.
- 8. Tube well is the source of water for drinking purpose in nearby villages. Total water requirement for both domestic and non-domestic will be 14 KLD.
- 9. During the plan period, 66,600 m³ OB / waste will be generated. These wastes will be dumped on the earned mark barren area (no gem bearing area). These waste materials will be dumped over an area of 10,124 m² or 1.013Ha at 7m average height in one terrace of 10m height. Construction of retaining wall and plantation around proposed dump will be carried out.
- 10. The manpower requirement for the project will be 138 persons.
- 11. The cost of the project is ₹ 45 Lakhs.
- 12. The project proponent along with their consultant M/s Kalyani Laboratories Pvt. Ltd. Plot no.-78/944, Pahala, Bhubaneswar -752101 made a detailed presentation on the proposal before the SEAC. The consultant informed to the Committee that they have already collected baseline data during the period March' 2018 to May' 2018.

Considering the information / documents furnished by the proponent and presentation made by the consultant M/s Kalyani Laboratories Pvt. Ltd. Plot no.-78/944, Pahala, Bhubaneswar -752101, the SEAC prescribed the ToR as per Annexure -I for conducting detailed EIA study

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# ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PAIKADAKULGUDA SEMI – PRECIOUS STONE (CAT'S EYE) MINES OVER AN AREA OF 40.946 HA AT VILLAGE – PAIKADAKULGUDA AND KANDHADAKULUGUDA, TAHASIL – BISAM CUTTACK, DIST-RAYAGADA OF SRI BIJAY KUMAR BANSAL (TOR).

- 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 the EIA Notification, 2006 and amendment thereafter.
- 2. This is a proposal for gemstone mining project with production capacity of 41 kg / annum gemstone over mining lease of 40.946 ha.
- The grant of mining lease for semi-precious stone (Cat's Eye) in favour of Sri Bijay Kumar Bansal in villages Paikadakulguda and Kandhadakulguda for a period of fifty (50) years vide letter No.250/SM, Bhubaneswar dated 07.01.2017. Subsequently, executed mining lease has been registered on 11.01.2017.
- 4. Previously, the mining lease area over 41.485 hectares was granted in favour of Sri Bijay Kumar Bansal vide grant proceeding No.9245 / SM dated 12.11.2007 for 20 years after receipt of approved mining plan on 03.05.2007 and Collector Rayagada requested the department of Steel & Mines, Govt. of Odisha for execution of M.L area over 40.946 hectares after final survey and demarcation vide his letter No.2108 dated 29.05.2008.
- 5. Previous mining plan for Paikadakuluguda Cat's Eye Deposit in the M.L area over 41.485 hectares prepared under Rule 22 of MCR, 1960 was approved by the Indian Bureau of Mines, Govt. of India for a period of five (5) years vide letter No.BBS/RGD/Cat's Eye/MP-298 dated 03.05.2007. Since extent of the M.L area over 41.485 hectares as per terms & condition letter dated 15.10.2001 has been reduced to 40.946 hectares dated 07.10.2017. Modification of Mining Plan has been prepared for 40.946 hectares under Rule 17(3) of MCR, 2016 for 5 years and approved vide letter no. MPM/OTFM/18-ORI/BHU/2018-19 dated 27.07.2018.
- 6. The lease area in favour of Lessee Sri Bijay Kumar Bansal for excavation of Chrysoberyl cat's Eye Gem Stone is located in village Paikadakuluguda under Bissamcuttack Tehsil of Rayagada District. Lease area is a part of Survey of India toposheet No 65 M/10 on 1:50,000 scale and is bounded by the latitudes from 19°34'37.09" to 19°35'05.51"N and longitudes from 83°32'05.35" to 83°32'31.17"E as per geodetic survey.
- 7. Opencast method of mining will be adopted in the M.L area manually on single shift basis with deployment of equipments like hand shovels, pick axe, crow bar, baskets etc. overburden will be excavated & loaded manually and transported through 10 t capacity truck / tippers to the dumping site. The maximum production of cat's eye from the lease area will be 41 Kg/ Annum. With this rate of production the life of mine will be 18 years which include the present plan period of five years.
- 8. A total of 75 workers (Skilled-17nos., Semi-skilled-25nos. and Un-skilled-33nos.) will be employed during mining operation.



- Tube well is the source of water for drinking purpose in nearby villages. Vasundhara & Kani Jorhi River and tanks provide water for non-domestic use. Total water requirement for both domestic and non-domestic will be 18KLD.
- 10. During the plan period, 95,100 m³ OB / waste will be generated. These wastes will be dumped inside the lease area over an area of 13,127 m² or 1.313 Ha. at 8m average height in one terrace of 10m height. Construction of retaining wall and plantation around proposed dump will be carried out.
- 11. The cost of the project is ₹ 40 Lakhs.
- 12. The project proponent along with their consultant M/s Kalyani Laboratories Pvt. Ltd. Plot no.-78/944, Pahala, Bhubaneswar -752101 made a detailed presentation on the proposal before the SEAC. The consultant informed to the Committee that they have already collected baseline data during the period March' 2018 to May' 2018.

Considering the information / documents furnished by the proponent and presentation made by the consultant M/s Kalyani Laboratories Pvt. Ltd. Plot no.-78/944, Pahala, Bhubaneswar -752101, the SEAC prescribed the ToR as per Annexure -II for conducting detailed EIA study.

#### ITEM NO. 04

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR GHATAPADA GARNET MINE OVER AN AREA OF 30.683 HECTARES IN VILLAGE GHATAPADA, PS - KESINGA, DISTRICT - KALAHANDI, ODISHA (GEMSTONE MINING) OF SRI OMPRAKASH JAIN (TOR).

- 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 the EIA Notification, 2006 and amendment thereafter.
- 2. This is a proposal for gemstone mining project with production capacity of 148 kg / annum gemstone over mining lease of 30.683 ha.
- The mining lease at village Ghatapada, P.O. Kesinga, Dist. Kalahandi, Odisha was granted in favour of Sri Om Prakash Jain for a period of 50 years by Directorate of Mines, Govt. Of Odisha on 17.01.2017.
- 4. Previously Terms & conditions vide letter No.7546/SM, Bhubaneswar dated 13.06.2001 was issued to Sri Omprakash Jain for grant of lease for mining of garnet over an area of 33.532 hectares in village Ghatapada, district Kalahandi, Odisha for a period of 20 years. Based on this the mining plan has been prepared and approved vide letter No.BBS/KLN/Grn/MP-128 dated 14.11.2002. Since extent of the M.L area over 33.532 hectares as per terms & condition letter dated 13.06.2001 has been reduced from 33.532 to 30.683 hectares dated 11.01.2017, a modified mining plan has been prepared and approved vide letter no: MPN/OTFM/21-ORI/BHU/2018-19/964 dated 30.07.2018
- Ghatapada lease area is a part of Survey of India topo sheet No 64P/9 on 1:50,000 scale and is bounded by the latitudes from 20°14'41.99" to 20°15'02.68" N 20°14'59.60" N and longitudes from 83°16'12.43" E to 83°16'33.53" E as per geodetic survey. M.L area

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- under reference is predominantly with gentle sloping agricultural fields which slope towards north. Highest and lowest altitudes located in the M.L area are at RL 186 m and RL 174 m respectively. Thus, maximum difference in altitude in the M.L area is 12 m.
- The land schedule of the lease area is Road (Rasta): 0.643 Ha, Waste land (Patita & Dungari / Pathar chatan): 0.692 Ha, Agricultural field (Atta & Mala / Atta, Mala, Berna, bahal): 25.147 Ha. and Grazing land (Gochar): 4.201 Ha.
- 7. The mining activity will be through opencast semi mechanized method on single shift basis. The proposed rate of production of garnet will be 148 Kg/ annum.
- 8. Total available resource in the lease area will be 1,411 Kg and with the rate of production of 148 Kg/ annum the life of mines will be 10 Years
- During the plan period, 44,920 m³ OB / waste will be generated. These waste materials will be dumped over an area of 7,754 m² or 0.775Ha at 7m average height in one terrace of 10m height.
- 10. The manpower requirement for the project will be 80 nos.
- 11. The cost of the project is ₹ 34 Lakhs.
- 12. The project proponent along with their consultant M/s Kalyani Laboratories Pvt. Ltd. Plot no.-78/944, Pahala, Bhubaneswar -752101 made a detailed presentation on the proposal before the SEAC. The consultant informed to the Committee that they have already collected baseline data during the period March' 2018 to May' 2018.

Considering the information / documents furnished by the proponent and presentation made by the consultant M/s Kalyani Laboratories Pvt. Ltd. Plot no.-78/944, Pahala, Bhubaneswar -752101, the SEAC prescribed the ToR as per Annexure -III for conducting detailed EIA study.

#### ITEM NO. 05

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF INTERSTATE BUS TERMINAL (ISBT) AT BARAMUNDA, BHUBANESWAR, ODISHA OF BHUBANESWAR DEVELOPMENT AUTHORITY WITH A TOTAL BUILT UP AREA 28,  $124 \, \text{M}^2$  (EC).

- 1. The Bhubaneswar Development Authority had proposed for construction of Inter-State Bus Terminal (ISBT) at Baramunda, Bhubaneswar with total built-up area 31,491 m<sup>2</sup>.
- The proposal was discussed in the SEAC meeting held on 06.07.2018. The SEAC observed that Airport Authority of India has issued the NoC for the said ISBT project with height restriction upto 15.17 meter as against their proposal of 28.75 meter.
- The SEAC in its meeting held on 06.07.2018 decided to take decision on the proposal after the proponent submits the modified proposals along with filled in application and drawings of the proposed project as per the height restriction approved by Airport Authority of India.
- 4. The proponent has submitted a modified proposal as per the height restriction approved by Airport Authority of India.



# 5. Brief project details of the modified proposal are given below:

S. No.	Description	Details	Unit
ENERAL			<b>经验证证明的</b>
1.	Total Plot Area	62726.27	Sq. mtr.
2.	Proposed Built Up Area	28,124	Sq mtr.
3.	Number of Building Blocks	Two (Terminal & Commercial block)	-
4.	Max Height of Building upto Terrace	Terminal block (G + 2) : 15	mtr
		Commercial block (B + C + 3) + 15	
		Commercial block (B + G + 2) : 15	
5.	Max No of Floors	Terminal block : G + 2	
		Commercial block : B + G + 2	
6.	Cost of Project	Approx. 127	crores
7.	Expected Population ( All floating)	78000	2-
AREAS			
8.	Permissible Ground Coverage Area	15%	·
9.	Proposed Ground Coverage Area	9.6%	
10.	Permissible FAR Area	1	FAR
11.	Total Basement Area	5130 (in commercial block)	Sq mtr.
12.	Total Parking Area	30 % of FAR	
13.	Terminal & Commercial Area	Terminal area : 15883	Sq mtr.
WATER		Commercial area : 12241	
	Total Water Requirement	1200	VI.S.
14.	Total Water Requirement	1288	KLD
15.	Fresh water requirement	772	KLD
16.	Waste water Generation	979	KLD
17.	Proposed STP Capacity	1000	KLD
18.	Treated Water Available for Reuse	930	KLD
19.	Recycled Water used	535	KLD
20.	Surplus treated water	395	KLD
PARKING			
21.	Total Parking Required as / Building Bye Laws	3738 (30 % of FAR)	Sq mtr.
22.	Proposed Total Parking : Terminal	4359	Sq mtr.
23.	Required parking for commercial facilities	3672 (30 % of Built up area)	Sq mtr.
25.	The state of the s	2012 (30 100 2011 2010)	34
24.	Proposed Parking in Basement : Commercial	5130	Sq mtr.
GREEN AREA	S S		
25.	Required Green Area	15 %	
26.	Proposed Green Area	18 %	
		10 70	
WASTE GEN		0000	V-/-
27.	Municipal Solid Waste Generation	9000	Kg/day
28.	Quantity of Hazardous waste Generation	2	Ltr/day
29.	Quantity of Sludge Generated from STP	10	Kg/day
POWER			
30.	Total Power Requirement	3000	KVA
31.	DG set backup	3 × 750	KVA
CONNECTIVI			
32.	Rail	Bhubaneswar railway station at 5 Km SE	KM
33.	Air	Biju Pattnaik International Airport at a	KM
33.		distance of 1.5 Km SE	
24	Pond	Road Density :11.82	Sq. Km
34.	Road		KM
	Forest	Chandaka Forest & Elephant Reserve at a	VIVI
		distance of 9 Km NW	

- Bhubaneswar Development Authority (BDA) vide their RFP no. 17938/BDA dated 26.07.2018 and Agreement with DIMTS dated 18.09.2017 propose to develop Inter-state Bus Terminal (ISBT) at Baramunda.
- 7. The proposed "Inter State Bus Terminal (ISBT)" will be located at Baramunda, Bhubaneswar. Environmental Clearance will be applied for total plot area of 15.5 Acre out of which ISBT area will be on plot size of 11.48 Acre and commercial/office area will be on plot of 4.02 Acre. The total built-up area of the proposed project is 28,124 sqm, hence the project comes under category 8 (a) of EIA notification, 2006.
- Demand forecasting for ISBT was done considering past trend in growth and analysing future prospects of project influence area. Elasticity approach of growth rate estimation was used for long term demand forecasting for the prescribed Horizon Year of FY2048.
- 9. The overall target is a 'state-of-the-art' terminal, for which we list key design objectives:
  - · Attractive, modern, iconic architecture with civic dignity.
  - · Comfort and convenience of the users by providing user-friendly facilities
  - Special amenities for the physically challenged and special needs passengers
  - · Circulation to have adequate space and routes which are direct and obvious
  - Planning to have good lines of sight, visually open, avoiding cross-flows and congestion
  - Entrances to be well coordinated with other forms of transport
  - Retail and service areas to be modern, successful, and well-coordinated within the design
  - Utilize leading edge technologies and innovative services
  - Service access and emergency vehicle access to be coordinated within the design
  - Master plan to improve urban design and transport links in the entire area of terminal environs
  - Sustainable considerations in the development
  - Commercial Property Development to be optimized and integrated with the overall design
- 10. The concept plan for the bus terminal is explained as follows:
  - (i) Approximately 4 acre of land has been demarcated on the front towards National highway side for commercial purpose and this area is not included in ISBT land
  - (ii) The terminal and its related facilities are planned at the rear side (existing depot) of the site having the bus entry from the existing exit side, i.e., southern side access road.
  - (iii) The bus depot facilities, i.e. bus parking and workshop facilities are planned at the rear area, open to sky.
  - (iv) The private vehicle entry/ exit for the terminal is kept from the northern access road, thus integrating the terminal and non-terminal activities.



- (v) The terminal building has the minimum mandatory facilities on the ground floor and the remaining administrative facilities for terminal have been proposed on the first and the second floor, i.e., Driver's rest room, Administrative offices, Cloak rooms, etc.
- (vi) Portion of the First floor are reserved for some amount of commercial activities like food court, restaurants and Retail spaces.
- (vii) Portion of the second floor is reserved for Retail or office space (commercial space for revenue generation).
- (viii) This commercial area within the terminal building has been provisioned with retail spaces, restaurants (fine dining), and offices.
- (ix) Dedicated space for repair bays, bus wash and service pits have been at the rear area.
- (x) Ample space for private parking as per requirement is planned near the private vehicle drop off @ 42.5 m LVL
- (xi) Dedicated auto lanes and taxi lanes near the drop off @ 45.65 m LVL have been planned for smooth movement of these modes of transport.
- (xii) Dedicated access is kept for the commercial area from the northern access road.
- (xiii) The services that have been taken into consideration and are proposed to be provided at the ISBT are :-
  - Provision of Independent Electrical sub-station/ power back up DG set provision
  - Common Area Lighting with LED Lights/ UPS & Emergency Lighting
  - Passenger Information Displays System/ Entertainment such as Televisions/ Signage
  - Provision for Elevators/ escalators as per requirement
  - Fire Detection and Alarm System/ Fire-Fighting System
  - Solar electric power system for harvesting Solar Energy
  - CCTV System/ Public Address System/ Access Control System
  - Parking Management System as per requirement
  - Telephone Networking System
  - Provision for drinking water
  - Underground/ Overhead Water Storage Tanks/ Rain Water Harvesting System
  - Sewage Treatment Plant [STP]/ Effluent Treatment Plant [ETP] for Bus Wash
  - Provision for waste generation, collection, transportation and disposal.
  - E-waste management and disposal
  - Air-Conditioning of Passenger Lounge
  - GPS based Digital Clock.

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- (xiv) The existing terminal area shall be temporarily in operation and shall be barricaded during the execution phase.
- The total project cost including Interest during construction (IDC) component is estimated at ₹ 154.24 crores.
- 12. Baseline environmental data generation for air, water, noise and soil quality monitoring around the project site was conducted from March 2018 to April 2018 for Proposed Inter State Bus Terminal (ISBT) at Baramunda, Bhubaneswar as per EIA Notification 2006 & its amendments, which is approx. 2.27 kms from our project site.
- 13. Apart from field monitoring, additional data was also collected from secondary sources like irrigation department, India Meteorological Department (IMD), Central Ground Water Board, Geological Survey of India, State Ground Water Department, State Pollution.
- 14. Air temperature and wind speed were recorded at hourly intervals continuously during the monitoring period. Ambient air quality monitoring was carried out twice a week with a frequency of 24 hours for 12 weeks. The water quality at the site and other locations within the 10 km impact zone was monitored during March 2018 – April 2018.
- 15. It has been proposed to use environment friendly construction materials for the project that are locally available to reduce concerns related to transportation of materials as well as achieve cost effectiveness.
- 16. Fly ash mixed cement and bricks shall be used for the construction of the project. The use of timber is minimal, with the provision of aluminum frames for windows. Paints with low VOC and no ammonia have been proposed to be used.
- The consultant M/s Paramarsh (Servicing Environment and Development), 4/97,
   Viram Khand, Gomti Nagar, Lucknow 226010, Uttar Pradesh along with the proponent made a detailed presentation.

Considering the information furnished and presentation made by the consultant, the SEAC decided to take decision on the proposal after receipt of the following information / documents from the proponent:

- (i) The proponent has intimated during the presentation that the EIA report has been prepared by the QCI Accredited consultant M/s Paramarsh (Servicing Environment and Development), 4/97, Viram Khand, Gomti Nagar, Lucknow 226010, Uttar Pradesh. But in the cover page of the document name of the consultant has been mentioned as DIMTS. Modified document incorporating the name of the consultant has to be submitted.
- (ii) Details of rainwater harvesting.
- (iii) Details of drainage system along with drainage map.
- (iv) Water balance including waste water management.
- (v) Detailed traffic survey and traffic analysis including residence time and level of congestion using an appropriate scientific model for the prescribed Horizon year of FY 2048 and a comprehensive study to be carried out by the proponent. The report



- thereof to be submitted. Further, based on the said report a sound traffic management plan to be submitted.
- (vi) Detailed proposal shall be submitted by the proponent to ensure that no long route bus shall be parked outside the terminals in road side leading to road congestion in the locality.
- (vii) Detailed Solid Waste Management Plan.

### CONSIDERATION OF OLD PROPOSAL

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR KALA BARRAGE PROJECT AT VILLAGE KALIAPAL, BLOCK-BARKOTE, TEHSIL-BARKOTE IN THE DISTRICT OF DEOGARH WITH CULTURABLE COMMAND AREA (CCA) - 4050 HA OF DEPARTMENT OF WATER RESOURCES, GOVT. OF ODISHA, (TOR).

- 1. Proposal of Kala Barrage Project at village Kaliapal, Block-Barkote, Tehsil-Barkote in the district of Deogarh with Culturable Command Area (CCA) - 4050 ha of Department of Water Resources, Govt. of Odisha was discussed in the SEAC meeting held on 29.09.2018. The SEAC had recommended for issue of ToRs for conducting detailed EIA study.
- 2. The proponent has requested to consider the project as category B2 as per MoEF&CC, Govt. of India notification vide S.O. (E) 3181, dated 14.08.2018.

The SEAC decided to take decision on the proposal after receipt of the following information/ documents from the proponent:

- Detailed EMP as stipulated in MoEF&CC, Govt. of India notification vide S.O. (E) 3181, dated 14.08.2018...
- (ii) Status of forest clearance for forest land involved in the barrage project.

DR. B. K. PATNAIK CHAIRMAN

DR. D. SWAIN MEMBER, SEAC SRI B.C. PRUSTY MEMBER, SEAC

SHRI A. C. MOHANTY MEMBER, SEAC

DR. D'K. ROUT MEMBER, SEAC

DR. R.C. MOHANTY MEMBER, SEAC

MEMBER, SEAC

DR. S.K. BISWAL

DR. S. C. NAYAK MEMBER, SEAC

SRI S. BEHERA

MEMBER, SEAC

APPROVED

RMAN, SEAC

SECRETARY, SEAC

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TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR GHATAPADA GARNET MINE FOR PRODUCTION OF GEMSTONE OF QUANTITY 264 KG / ANNUM OVER AN AREA OF 25.127 HA AT VILLAGE – GHATAPADA, TAHASIL – KESINGA, DIST – KALAHANDI (GEMSTONE MINING) OF SRI BIJAY KUMAR BANSAL

- The TOR will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- Department of Mining & Geology, State Government shall ensure that mining operation shall not commence till the entire compensation levied, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- 3. Year-wise production details since 1993-94 should be given, clearly stating the highest production achieved in any one year prior to 1993-94. 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. The production details need to submit since inception of mine duly authenticated by Department of Mines & Geology, State Government.
- 4. A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 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.
- 6. Certificate from Mining Officer that mining pits which are existing within lease area have been done illegally prior to sanction of lease in favour of lessee.
- 7. All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the area 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).
- 8. 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.
- 9. 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.
- 10. 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 proposed safeguard measures in each case should also be provided.

- 11. 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.
- 12. 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.
- 13. 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.
- 14. 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.
- 15. 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.
- 16. 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.
- 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.
- The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 19. 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.
- 20. 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.
- 21. 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.

- 22. 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.
- 23. 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).
- 24. 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.
- 25. 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 PMIO, particularly for free silica, should be given.
- 26. 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.
- 27. 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.
- 28. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.

- 29. 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.
- 30. 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.
- 31. 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.
- 32. 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.
- 33. 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.
- 34. 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.
- 35. 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.
- 36. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 37. 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.
- 38. 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.
- 39. 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.



- 40. 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.
- 41. 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.
- 42. 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/EM P Report of the Project.
- 43. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 44. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 45. A Disaster Management Plan shall be prepared and included in the EIA/EMP Report.
- 46. 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.
- 47. The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 and the action plan on the activities proposed under CER shall be submitted at the time of appraisal of the project included in the EIA/EMP Report.
- 48. The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M), dated 25.10.2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.
- 49. Compliance of the Ministry's Office Memorandum No. F: 3-50/2017-IA.III (Pt.), dated 30.05.2018 on the judgment of Hon'ble Supreme Court, dated the 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India needs to be submitted and included in the EIA/EMP Report.
- 50. Mitigation measures as per the Ministry's OM no Z-11013/57/2014-IA.II(M) dated 29.10.2014-Impact of mining activities on Habitations-Issues related to the mining projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area.
- 51. 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.

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- 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.
- g) The consultants involved in the preparation of EIA/EMP report should be an accredited with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) and a certificate in this regard should be annexed in the EIA/EMP reports. Data provided by other organization/Laboratories including their status of approvals etc. should be specified. The consultant, while presenting the project should be equipped with relevant data and information relating to the project and make a qualitative presentation.
- h) 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.
- i) 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.
- j) 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
- The prescribed TOR would be valid for a period of three years for submission of the EIA/EMP report, as per the O.M. No. J-11013/41/2006-IA.II (I) (Part) dated 29.08.2017.

TERMS OF REFERENCE (Tor) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR PAIKADAKULGUDA SEMI -PRECIOUS STONE (CAT'S EYE) MINES FOR PRODUCTION OF GEMSTONE OF QUANTITY 41 KG / ANNUM OVER AN AREA OF 40.946 HA AT VILLAGE - PAIKADAKULGUDA AND KANDHADAKULUGUDA, TAHASIL - BISAM CUTTACK, DIST- RAYAGADA OF SRI BIJAY KUMAR BANSAL.

- The TOR will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- Department of Mining & Geology, State Government shall ensure that mining operation shall not commence till the entire compensation levied, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- Year-wise production details since 1993-94 should be given, clearly stating the highest production achieved in any one year prior to 1993-94. 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. The production details need to submit since inception of mine duly authenticated by Department of Mines & Geology, State Government.
- 4. A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 5. 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.
- 6. Certificate from Mining Officer that mining pits which are existing within lease area have been done illegally prior to sanction of lease in favour of lessee.
- All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the area 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).
- 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.
- 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.
- 10. 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 proposed safeguard measures in each case should also be provided.

- 11. 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.
- 12. 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.
- 13. 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.
- 14. 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.
- 15. 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.
- 16. 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.
- 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.
- 18. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 19. 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.
- 20. 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.



- 21. 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.
- 22. 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.
- 23. 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).
- 24. 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.
- 25. 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 PMIO, particularly for free silica, should be given.
- 26. 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.
- 27. 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.

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- 28. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 29. 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.
- 30. 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.
- 31. 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.
- 32. 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.
- 33. 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.
- 34. 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.
- 35. 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.
- 36. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 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.
- 38. 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.
- 39. 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.

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- 41. 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.
- 42. 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/EM P Report of the Project.
- 43. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 44. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 45. A Disaster Management Plan shall be prepared and included in the EIA/EMP Report.
- 46. 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.
- 47. The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 and the action plan on the activities proposed under CER shall be submitted at the time of appraisal of the project included in the EIA/EMP Report.
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  - 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.
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  - 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&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.
- g) The consultants involved in the preparation of EIA/EMP report should be an accredited with Quality Council of India (QCI) / National Accreditation Board of Education and Training (NABET) and a certificate in this regard should be annexed in the EIA/EMP reports. Data provided by other organization/Laboratories including their status of approvals etc. should be specified. The consultant, while presenting the project should be equipped with relevant data and information relating to the project and make a qualitative presentation.
- h) 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.
- i) 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.
- j) 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
- The prescribed TOR would be valid for a period of three years for submission of the EIA/EMP report, as per the O.M. No. J-11013/41/2006-IA.II (I) (Part) dated 29.08.2017.

TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR GHATAPADA GARNET MINE OVER FOR PRODUCTION OF GEMSTONE OF QUANITY 148 KG / ANNUM OVER AN AREA OF 30.683 HECTARES IN VILLAGE GHATAPADA, PS - KESINGA, DISTRICT - KALAHANDI, ODISHA (GEMSTONE MINING) OF SRI OMPRAKASH JAIN

- The TOR will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- Department of Mining & Geology, State Government shall ensure that mining operation shall not commence till the entire compensation levied, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- 3. Year-wise production details since 1993-94 should be given, clearly stating the highest production achieved in any one year prior to 1993-94. 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. The production details need to submit since inception of mine duly authenticated by Department of Mines & Geology, State Government.
- A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 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.
- Certificate from Mining Officer that mining pits which are existing within lease area have been done illegally prior to sanction of lease in favour of lessee.
- 7. All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the area 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).
- 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.
- 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.
- 10. 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 proposed safeguard measures in each case should also be provided.
- 11. 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.
- 12. 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.
- 13. 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.
- 14. 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.
- 15. 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.
- 16. 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.
- 17. 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.
- 18. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 19. 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.
- 20. 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.
- 21. 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.
- 22. 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.
- 23. 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).
- 24. 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.
- 25. 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 PMIO, particularly for free silica, should be given.
- 26. 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.
- 27. 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.
- 28. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.

- 29. 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.
- 30. 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.
- 31. 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.
- 32. 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.
- 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.
- 34. 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.
- 35. 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.
- Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 37. 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.
- 38. 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.
- 39. 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.

- 40. 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.
- 41. 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.
- 42. 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.
- 43. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 44. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 45. A Disaster Management Plan shall be prepared and included in the EIA/EMP Report.
- 46. 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.
- 47. The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 and the action plan on the activities proposed under CER shall be submitted at the time of appraisal of the project included in the EIA/EMP Report.
- 48. The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.I (M), dated 25.10.2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.
- 49. Compliance of the Ministry's Office Memorandum No. F: 3-50/2017-IA.III (Pt.), dated 30.05.2018 on the judgment of Hon'ble Supreme Court, dated the 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India needs to be submitted and included in the EIA/EMP Report.
- 50. Mitigation measures as per the Ministry's OM no Z-11013/57/2014-IA.II(M) dated 29.10.2014-Impact of mining activities on Habitations-Issues related to the mining projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area.
- 51. 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.

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