

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL  
COMMITTEE, ODISHA HELD ON 17<sup>TH</sup>, 18<sup>TH</sup> AND 19<sup>TH</sup> OCTOBER, 2012**

The SEAC met on 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> October, 2012 at 11.00 AM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the chairmanship of Dr. G. K. Roy. The following members were present in the meeting.

1.	Dr. G. K. Roy	-	Chairman (working)
2.	Dr. D. K. Rout	-	Member
3.	Dr. S. K. Biswal	-	Member
4.	Shri Sridhar Behera	-	Member
5.	Dr. Moheswar Patra	-	Member
6.	Dr. C. R. Mohanty	-	Member

The following proposals were appraised and decision taken.

**DAY ONE – 17<sup>TH</sup> OCTOBER, 2012**

**ITEM NO. 01**

**BOTTAVA SAND QUARRYING OVER AN AREA OF 16.75 HA FOR EXCAVATION OF 45450 M<sup>3</sup>/ANNUM OF SAND AT VILLAGE BOTTAVA, KASHINAGAR TAHASIL IN THE DISTRICT OF GAJAPATI (TOR).**

The proponent alongwith consultant **M/s. Geomin Consultants Pvt. Limited Bhubaneswar** made a detailed presentation on the proposal before the Committee. The Committee observed that the location of the sand quarry is within 10 km of interstate boundary of states of Odisha and Andhra Pradesh. The EIA notification, 2006 and amendment thereof stipulates that any project or activity specified in category-B will be treated as category-A if located in whole or in part within 10 km from interstate boundaries. After detailed deliberations, the SEAC recommended to consider the proposal as **category-A** for the above reason and decided to return the proposal to SEIAA, Odisha to ask the proponent to apply to MoEF, Govt. of India for grant of environmental clearance.

**ITEM NO. 02**

**ENVIRONMENTAL CLEARANCE FOR STONE QUARRY UNIT-III OVER AN AREA 9,109 HA AT UPALADA VILLAGE PARELAKHEMUNDI IN THE DISTRICT OF GAJAPATI OF M/S. ARSS INFRASTRUCTURE PROJECTS LTD. (TOR).**

The Committee decided to defer the presentation since the proponent did not attend the meeting.

**ITEM NO. 03**

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**ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF SHAMUKA BEACH PROJECT AT VILLAGE SIPASARUBALI IN THE DISTRICT OF PURI OVER AN AREA OF 372.32 HA BY DEPTT. OF TOURISM & CULTURE (TOURISM), GOVT. OF ODISHA – EC (CONSULTANT - M/S. RAMKY ENVIRO ENGINEERS LTD., HYDERABAD).**

M/s. OTDC has proposed to establish Shamuka Beach Project with an area of 920.04 acre (372.32 ha) at Sipasurubali, Puri Sadar, Puri, Odisha. OTDC has proposed to provide facilities such as 5/4 Star Hotels, Resorts, Spa, Convention Centre, Golf Course, Exhibition Complex, Eco Parks etc. at Shamuka Beach and unlocking the immense tourism potential of the state and the site. The Shamuka Beach site is proposed on the sea to the South of Puri, between Puri town and Chilika Lake alongside the Bay of Bengal. The Mangala River which separates Puri town from Shamuka Beach adjoins one side of the project site. They have proposed to develop Shamuka Beach Project in three distinct phases as under : Phase I will include Convention center, hotels, heritage town with main street, golf course, water sports, Phase II will include Health & wellness tourism focus and Phase III with High end villas & second homes. Site can be accessed through Puri- Brahamagiri road which is 3 km away. Water requirement for Shamuka beach area is 14 MLD (14000 KLD) and source of intake water is from Mangala River. The water to be drawn, treated and supplied to the site by PHD (Public Health Division), Puri. Initially, 2 MLD (2000 KLD) of ground water will be drawn for Constructional activities and applied for permission for with drawl. Power demand is 45 MW. 132 KV power line will be supplied by CESCO to a substation proposed at north-east corner of the project. Emergency back-up as DG sets will be provided during power failure. Cost of the project is 141.64 crores. Around 11690 KLD of waste water to be generated from different sources, STPs have been proposed for treatment of waste water. 8.40 TPD of solid waste to be generated from Hotels, Institutions, Commercial Centre and Residential Houses. STP sludge will be used as manure. **The consultant M/s. Ramky Enviro Engineers Limited., Hyderabad** made a detailed presentation before the SEAC.

The Committee decided to defer the proposal and call the project proponent once again for a detailed presentation after receipt of following information/documents.

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1. The land is falling under CRZ. Necessary permission shall be obtained under CRZ Notification and a copy of same is to be submitted.
2. The land use details presented were very sketchy and only spot levels were presented instead of a contour plan, which was specifically required to be submitted. Submit details of land use physical features, slopes and drainage pattern of the site and surrounding area. Examine and submit details of storm water drainage and disposal during the rainy season.
3. Undertaking with respect to natural sand dune shall not be disturbed due to project activity.
4. Details of other infrastructure at site and surrounding area.
5. PKDA plan approval letter alongwith approved drawings.
6. Technical details of the STPs proposed for treatment of domestic sewage are not furnished with flow paths, residence time etc. The inlet and outlet qualities, especially from microbial angle are not given.
7. Solid waste collection, segregation and disposal are not addressed properly. Detailed solid waste management plan is to be submitted.
8. Green area in terms of percentage shall be submitted. A complete green belt development plan may be drawn in consultation with a qualified and competent expert keeping aesthetics and pollution control requirements in view. Landscape plan, green belts and open spaces may be described.
9. Proposal for the use of renewable energy/alternate energy such as solar and wind energy is to be submitted.
10. Explore possibility of generating biogas from decomposable wastes. A detailed proposal to this effect is to be submitted.
11. Proposal for Hazardous Waste Management including e-waste is to be submitted.
12. No. of DG sets with capacity to be installed for back up power is to be submitted. Location and height of stack of DG sets and fuel safe storage area are to be earmarked.

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13. Traffic management plan including parking of all type of vehicles may be described.
14. Source of water with permission status for drawl of water is to be submitted. Re-examine and submit details of water balance chart indicating utilization of treated waste water.
15. Study the socio-economic situation of the project area and its surroundings and their impact on the project design and operation.

#### **ITEM NO. 04**

#### **ENHANCEMENT IN PRODUCTION OF GRAPHITE ORE 1047 MT TO 15162 TPA AND PRODUCTION OF 4466 TPA SUB GRADE ORE. INSTALLATION OF BENEFICIATION PLANT OF 20,000TPA CAPACITY OVER AN AREA OF 26.228 HA AT MENKAMUNDA IN DISTRICT BARGARH BY SRI PRABHAS CHANDRA AGRAWAL - TOR (CONSULTANT - KALYANI LABORATORIES (P) LTD, BHUBANESWAR)**

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. For this purpose, the proponent had submitted information in the prescribed format (Form-I) alongwith pre-feasibility report.

The proposal is for enhancement in graphite ore production capacity from 1047 TPA to 15162 TPA, production of 4466 TPA sub-grade graphite ore and installation of beneficiation plant of 20,000 TPA over an area of 26.228 hectare at Menkamunda in the district of Bargarh. Menkamunda graphite ore mines over an area of 26.228 Ha of Baragarh district was granted in favour of Sri Prabhas Chandra Agrawal, Sambalpur originally for 20 years with effect from 11.10.1979. The lease expired on 10.10.1999. The lessee has applied for renewal before one year of the lease expiry dated on 16.9.1998 which is under deemed extension under Rule-24(A) of M.C. Rule-1960. Again the Lessee has submitted application for surrender 19.024 ha retaining 26.228 ha for renewal for which mining plan has been approved vide letter no. MP/OTFM/ 18-ORI/BHU/2011-12 dated 18.01.2012. The project is a semi-mechanized open cast mine. The project area is located in Village -Menkamunda, P.S. Paikmal, District-Bargarh, Odisha. The area of ML is located in the Survey of India, Toposheet no. 64 L/10. The latitude of the area is 20° 43' 42" to 20° 44' 11"N and longitude 82° 43' 50" to 82° 44' 15"

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E. The nearest railway station is at Lathore at a distance of 20 Km from the ML area. Gandhamardan R.F and the Chandili R.F are present within the buffer zone of the lease area. The major drainage pattern of this area is the ONG river. As per the recent estimation the geological and mineable reserve are 233,375.000 MT and 221706.000 MT respectively. For the present plan period the mining will be done by semi-mechanised method. The average height and width of the benches are 4.00m & 5.00m respectively each. The sorting and sizing in selective quarries will be done manually by using simple mining implements like pick axe, spade, chisel, hammer etc. Excavator of 0.9m<sup>3</sup> capacity will be deployed for loosening of rock for some times. Rear dump trucks of 10 MT pay load capacity will be used for transport of ore and overburden. With the rate of production of 10,000 TPA, the life of the mine will be 16 years. The grade of ore is 5-8 % of FC. Presently three existing dumps covering an area of 0.461 ha exists in the lease area. A total volume of 163456 m<sup>3</sup> swell waste will be generated in the ensuing plan period which will be increased up to 178660m<sup>3</sup> at the end of the conceptual period. Retaining wall and garland drain are provided around the to prevent surface run off. By the end of the life 3.969 ha will be under excavation from which 4.5 ha will be backfilled and the rest of 5.0 ha will be used as water reservoir. At the conceptual period the total dump will be planted by using 770nos. of saplings for rehabilitation. Total number of 40 people will get employment by this project. The cost of the project has been estimated to approx. 200 lakhs.

Considering the information / documents furnished and presentation made by the **Consultant M/s. Kalyani Laboratories (P) Ltd., Bhubaneswar** on behalf of the proponent, the SEAC prescribed the “**Terms of Reference (TOR)**” for undertaking detailed EIA study as applicable to mining project in general.

**ITEM NO. 05**

**ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF B+G+6 FLOORS COMMERCIAL-CUM-MULTIPLEX COMPLEX AND G+7 FLOOR COMMERCIAL BUILDING (OFFICE) AT MOUZA RUPATOLA IN IDCO COMMERCIAL ESTATE, ROURKELA BY FORUM PROJECTS PVT. LTD WITH TOTAL BUILT UP AREA 39460.793 SQM – EC (CONSULTANT – HUBERT ENVIRO CARE SYSTEMS (P) LTD., CHENNAI)**

This is a proposal to construct one B+G+ 6 Storied commercial cum multiplex unit & one G+7 office unit at IDCO Commercial Estate, Rourkela, Mouza – Rupertola, R.T.U – 42, Dist-Sundargarh, Odisha. Project is located in the vicinity of Rourkela City, surrounding

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area is a developed area. The proposed site comes under Rourkela Development Authority and land use of the proposed site is Commercial as per IDCO allotment. Site is located in Civil Township of Rourkela adjacent to NH-23, connecting Talcher and Rourkela. Nearest Railway station is Rourkela which is at about 4.5 km from the project site. Total built-up area including basement & substation comes to **39172.497** sqm and total built-up area for F.A.R. is **25123.164** sqm (excluding basement), proposed FAR is 1.990. Maximum height of the building is 27m. Total ground coverage is about **6312.848 sqm. 5946.879 sqm** parking area is provided where **265 nos** of cars can be parked against requirement of 235nos. Exclusive green area is **2243.644** sqm. Total project cost is about Rs. **81.0 crores**. No national Park/wild life sanctuary is located within 10 km radius of the project site. Rs. 2.13Crores and Rs. 0.325 Crores have been earmarked towards capital cost and recurring cost for environmental pollution control measures.

The daily power requirement for the proposed project is assessed as 3920 KW. The power will be entirely supplied through WESCO. Also, in case of power cut, power backup generators will be provided. For this purpose, 2 nos. 2000 KVA and 1 no. 1500 KVA DG sets will be provided. Separate generator yard will be constructed for housing DG sets. During construction stage daily requirement of water will vary from 32.9 m<sup>3</sup> (average) & 53 m<sup>3</sup> (peak demand) per day which will be sourced from surface water (from river) through water tankers or PHED. During operation stage total fresh water requirement will be about 176 KLD which will be sourced from PHED, Rourkela. One STP (FAB Technology) of 90KLD capacity will be provided for treatment of waste water generated from the complex. 88KLD treated water from STP will be used for HVAC (Heating Ventilation and Air Conditioning) cooling purpose. Zero discharge norms will be followed. 8nos. (Capacity 48cum each) of recharge pits will be provided for rainwater water harvesting. Solid waste generation will be approximately 1053.75kg/d (@ 0.15 Kgpcd – Commercial Refuge & @0.10 Kgpcd - Street sweeping). During the operational stage operation of Standby DG Sets and Vehicular Movements are main source for air pollution. It is assessed that height of the stack for DG set shall be 34 m. Low sulfur diesel oil (LDO or HSD) will be used in DG sets. Water will be sprinkled to suppress dust, while cleaning and sweeping the roads and pavements. Proper traffic management and DG sets of silent type & provided with acoustic enclosure to control noise. Plantation along the peripheral boundary walls will also act as acoustic screen or vegetative barrier against the propagation of noise and pollutants.

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Considering the information furnished and presentation made by **the consultant M/s. Hubert Enviro Care Systems (P) Limited, Chennai** on behalf of the proponent, the SEAC decided to consider the environmental clearance for the proposal after receipt of following information / documents from the proponent.

1. Details of land use physical features, slopes and drainage pattern of the site and surrounding area, details of storm water drainage and disposal during the rainy season.
2. Rourkela Development Authority (RDA) plan approval letter along with approved drawings.
3. Green area in terms of percentage shall be submitted. A complete green belt development plan may be drawn in consultation with a qualified and competent expert keeping aesthetics and pollution control requirements in view.
4. Proposal for the use of renewable energy/alternate energy such as solar and wind energy.
5. Proposal for hazardous Waste Management including e-waste.
6. Location, height of stack of DG sets, fuel consumption and area earmarked for safe storage of the fuel.
7. Study the socio-economic situation of the project area and its surroundings and their impact on the project design and operation.
8. Technical details of the STPs proposed for treatment of domestic sewage are not furnished with flow paths, residence time etc. The inlet and outlet qualities, especially from microbial angle are not given. Write up on the STPs proposed for treatment of domestic sewage is to be submitted. A proposal to adopt zero discharge concept is to be submitted.
9. Solid waste collection, segregation and disposal are not addressed properly. Details solid waste management plan is to be submitted. Copy of agreement if made with Rourkela Municipality for disposal of solid waste may be submitted.
10. An affidavit declaring that construction work has not been started should be submitted.
11. Collection and management of rain water, storm water and STP treated water is not clear. It should be calculated realistically to reduce the fresh water intake.
12. The total water requirement to be recalculated at peak consumption level of 200 lpcd and accordingly the entire water balance is to be recalculated and submitted.
13. Location and capacity of water reservoir is to be submitted.
14. Source and water requirement during construction phase is to be submitted.
15. Quantity of waste water to be discharged and its discharge point is to be submitted.
16. Traffic management plan including parking of all type of vehicles may be described.
17. Details of fire detection and alarm system is to be submitted.

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#### **ITEM NO. 06**

**ENVIRONMENTAL CLEARANCE FOR VENKATAPURAM-V STONE QUARRY OVER AN AREA OF 10.394 HA AT VILLAGE VENKATAPURAM, KASHINAGAR IN THE DISTRICT OF GAJAPATI OF SHRI BARRI KRISHNA MURTY FOR PRODUCTION CAPACITY 16980 M<sup>3</sup>/ANNUM – TOR - (CONSULTANT M/S. GEOMIN CONSULTANTS PVT. LIMITED, BHUBANESWAR).**

The proponent alongwith consultant **M/s. Geomin Consultants Pvt. Limited, Bhubaneswar** made a detailed presentation on the proposal before the committee. The committee observed that the location of the stone quarry is within 10 km inter-state boundary of the state of Odisha and Andhra Pradesh. The EIA notification, 2006 and amendment thereof stipulates any project or activity specified in category-B will be treated as category-A if located in whole or in part within 10 km from the inter-state boundaries. After detailed deliberations, the SEAC recommended to consider the proposal as **category-A** for the above reason and decided to return the proposal to SEIAA, Odisha to ask the proponent to apply to the MoEF, Govt. of India for consideration of environmental clearance.

#### **ITEM NO. 07**

**ENVIRONMENTAL CLEARANCE FOR EXPANSION OF NISCHINATA QUARTZ AND QUARTZITE MINES OVER AN AREA 5.419 HA(4.99 HA) AT VILLAGE NISCHINTA IN THE DISTRICT OF MAYURBHANJ OF SRI S. K. BEHERA (TOR).**

The proponent submitted a letter dt. 12.10.2012 requesting for postponement of the presentation of the proposal. The committee recommends the request for postponement

#### **DAY TWO – 18<sup>TH</sup> OCTOBER, 2012**

#### **ITEM NO. 08**

**ENVIRONMENTAL CLEARANCE FOR FACILITIES AUGMENTATION PROJECT AT PARADEEP TERMINAL OF HINDUSTAN PETROLEUM CORPORATION LIMITED – EC (CONSULTANT – SEE-TECH SOLUTIONS (P) LTD, NAGPUR)**

The proposed project activity is the Augmentation in the storage capacity from 49395 Kilo Liters (KL) to 72827 KL at Paradeep Terminal of HPCL by providing 2 x 5000 KL above ground tank of Petrol or Motor Spirit (MS) and 2 x 6716 KL above ground tank of Diesel (HSD). New Tanks and associate facilities will be constructed inside the existing

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Petroleum Terminal of HPCL. The land area of the Terminal i.e. 49.8 acres is leased to HPCL by Paradeep Port Trust.

At HPCL, Paradeep, Petrol, Kerosene, & Diesel are received at the Terminal through Jetty Pipeline from Ships berthed at New Oil Jetty in Paradeep Port. These Petroleum Products are then stored in the respective storage tanks in the Terminal. The stored petroleum products are then distributed to retail outlets, industrial customers and to other depots of HPCL through Tank Trucks and Tank Wagons inside / outside the State.

In Eastern Zone, Haldia, Visakhapatnam & Paradeep are strategic coastal terminals which can receive and load Oil tankers i. e Ships for transfer of petroleum products in the sea route which is most economical. Haldia Port is not deep, having draft limitations & draft is reducing day by day to alarming level and cannot handle large size vessels. Visakhapatnam is congested and saturated in oil traffic. Paradeep Port has deep draft, can handle large size oil vessels.

Hence, there is an urgent need to put up additional storage tanks and upgrade the Tank Wagon loading facility at Paradeep to augment Oil handling facilities at Paradeep. This will debottleneck Vizag and Haldia. Paradeep facility is also expected to play strategic role in smooth availability of petroleum products basically in the state of Odisha and also in neighboring States. The cost of project is Rs. 65 cr. Total area is 49.8 acre of the plant & 15.49 acre land under greenbelt. Water required for construction will be arranged from outside sources. Approximate consumption per day will be 4 KL per day. There is no process waste water The run off water generated will be treated in oil water separator from where the Separated water will be used for gardening purpose. Sludge recovered in 5 years cycle from product storage tanks will be disposed through approved agencies of SPCB.TOR was issued by the SEAC, Odisha on 8.11.2010 for conducting detailed EIA study. Public hearing was conducted on 16<sup>th</sup> March, 2012.

Considering the information / documents furnished and presentation made by the **consultant M/s. SEE-Tech Solutions (P) Limited, Nagpur** on behalf of the proponent, the SEAC, Odisha recommended for grant of environmental clearance in favour of the project proponent with following conditions.

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A. **Specific Conditions** :

1. Adequate buffer zone around the Petroleum Oil Terminal shall be provided, as may be required as per OISD or other statutory requirements.
2. Regular ambient air quality monitoring of PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOCs and HC (Methane and Non –Methane) shall be monitored and displayed at a convenient location near the main gate of the company and at important public places. The location and results of existing monitoring stations shall be reviewed in consultation with the concerned State Pollution Control Board based on the occurrence of maximum ground level concentration and downwind direction of wind. If required, additional stations shall be set up. It shall be ensured that at least one monitoring station is set up in up-wind and in down wind direction along with those in other directions.
3. Regular monitoring of VOC and HC in work zone area in the plant premises shall be carried out and data be submitted to Ministry's Regional Office at Bhubaneswar. SEIAA, Odisha, CPCB and State Pollution Control Board. Quarterly monitoring for fugitive emissions shall be carried out as per the guidelines of CPCB and reports submitted to Ministry's Regional Office at Bhubaneswar and SEIAA, Odisha.
4. Vapor recovery system shall be installed to prevent leakage of vapor from tank / vessels / processing and filling areas to ensure no hydrocarbon vapor is released unchecked.
5. Prior permission shall be obtained from the concerned Authority for drawl of water.
6. The company shall construct the garland drain all around the project site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non – oil contaminated streams. During rainy season, the storm water drains shall be connected to oil water separator and passed through guard pond. Water quality monitoring of guard pond shall be conducted and ensured that monitoring parameters shall not exceed the prescribed standards.
7. Effluent from washing of storage tanks in Depot shall be properly treated in ETP/ oil water separator and treated wastewater shall conform to CPCB standards. No effluent shall be discharged outside the premises. Sewage shall be disposed off through septic tank followed by soak pit.
8. Oil Industry Safety Directorate guidelines regarding safety against fire, spillage, pollution control etc. should be followed. Company should ensure no oil spillage occur during loading/ unloading of petroleum products.
9. The project authorities shall strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in 2000 and the Public Liability Insurance Act for handling of hazardous chemicals etc. All the hazardous waste shall be properly treated and disposed off

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- in accordance with the Hazardous Waste (Management, Handling and Transboundary Movement), Rules, 2008.
10. Necessary approvals from Chief Controller of Explosives must be obtained before commission of the project. Requisite on site and off site disaster management plans will be prepared and implemented.
  11. The company shall obtain all requisite clearances for fire safety and explosive and shall comply with the stipulation made by the respective authorities.
  12. All storage tanks shall be provided with design features based on applicable OISD standards.
  13. No change in the storage capacity and other facilities shall be made without getting proper approval from the SEIAA, Odisha.
  14. Fully automated Tank Farm Management System (TFMS) will be provided for accounting of products and reconciliation.
  15. Emergency Response Plan shall be based on the guidelines prepared by OISD, DGMS and Govt. of India. Mock drill shall be conducted once in a month.
  16. Bottom oil sludge shall be handled, stored and disposed as per CPCB/MoEF guidelines. An action plan in this regard including bioremediation shall be submitted to the Ministry and its Regional Office at Bhubaneswar and also to SEIAA, Odisha within 3 months of issue of the letter.
  17. Occupational health surveillance of worker shall be done on a regular basis and records maintained as per the factory act.
  18. Green belt shall be developed in 33% of the plot area to mitigate the effect of fugitive emission all around the plant in consultation with DFO as per CPCB guidelines. Thick green belt around POL depot should be ensured.
  19. The company shall harvest surface as well as rainwater from the rooftops of the buildings proposed in the project and storm water drains to recharge the ground water and use the same water from the various activities of the project to conserve fresh water.
  20. Comprehensive Risk Assessment shall be carried out to assess the fire and explosion risk due to POL Depot and report submitted to the ministry and its Regional Office at Bhubaneswar within six months.
  21. All the recommendation mentioned in the EMP/DMP shall be implemented.
  22. Dedicated parking facility for loading and unloading of material should be provided in the POL Depot. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
  23. All the commitment made regarding issues raised during the public hearing / consultation meeting held on 16.3.2012 shall be satisfactorily implemented. Adequate budgetary provision to be kept for implementation.
  24. Company shall adopt Corporate Environment Policy as per the Ministry's O.M. No. J-110.13/41/2006-I.A.II(I) dated 26<sup>th</sup> April, 2011 and implemented.
  25. Under corporate social Responsibility (CSR), sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc. in and around the project area.

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26. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

**B. General Conditions :**

- 1) The project authorities shall strictly adhere to the stipulations made by the Odisha State Pollution control Board.
- 2) No further expansion or modifications in the plant shall be carried out without prior approval of SEIAA, Odisha. In case of deviations or alternations in the project proposal from those submitted to this SEIAA, Odisha for clearance, a fresh reference shall be made to the SEIAA, Odisha to assess the adequacy of conditions imposed and to add additional environmental protection measures required if any.
- 3) The location of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- 4) The overall noise level in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75dB(A) (day time) and 70 dBA (night time).
- 5) Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
- 6) The company shall also comply with all the environmental protection measures and safeguard proposed in the documents submitted to the SEIAA, Odisha. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall be implemented.
- 7) The company shall undertake all relevant measures for improving the socio economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.
- 8) The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- 9) A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- 10) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the SEIAA, Odisha as

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- well as the State Government along with the implementation schedule for all the conditions stipulated therein. The funds so earmarked for environment management / pollution control measures shall not be diverted for any other purpose.
- 11) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any were received while processing the proposal.
  - 12) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB, SEIAA, Odisha and OSPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
  - 13) The environmental statement for each financial year ending 31<sup>st</sup> March, in Form –V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (protection) Rules, 1986 as amended subsequently, shall be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.
  - 14) The project proponent shall inform the public that the project has been accorded environmental clearance by the SEIAA, Odisha and copies of the clearance letter are available with the OSPCB/ SEIAA, Odisha and may also be seen at Website of the SEIAA, Odisha. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
  - 15) The project authorities shall inform the Regional Office as well as the Ministry and SEIAA, Odisha the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.

**ITEM NO. 09**

**ENV. CLEARANCE FOR PROPOSED (B+G+4) STORIED RESIDENTIAL APARTMENT AT PATHARAGADIA, BHUBANESWAR IN THE DISTICT OF KHURDA WITH TOTAL BUILT UP AREA 27942 SQ.M BY M/S. VERSATILE CONSTRUCTIONS (P) LTD – EC (CONSULTANT - M/S. CENTRE FOR ENVOTECH & MANAGEMENT CONSULTANCY PVT. LIMITED, BHUBANESWAR)**

The proposal is a B+G+4 storied residential apartment by M/s. Versatile Constructions Pvt. Ltd at Patharagadia, Bhubaneswar in the district of Khurda. Project site is located at 20<sup>o</sup> 21'58.97" N Latitude and 85<sup>o</sup> 48' 34.7" E Longitude. Nearest Railway station is at Barang, of about 7 km from the project site. The nearest airport at Bhubaneswar, is

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about 18 km from the site. Total project area is 12070.4969 sqm. Built up area(FAR) is 20692.25sqm. Basement Area (Parking+service) is 6471.4sqm. Total Built up area is 27163.65 sqm. Total Parking area is 6638.9 sqm. Total Green area is 2972.76 sqm. Maximum height of the building is 14.75 m. For this project 12070.49 sqm of land is required, which has already been acquired. The daily power requirement for the proposed complex is preliminarily assessed as 1194.7 KW. Source is CESU. 2x125 KVA capacity DG sets will be provided for power back up. Exhaust gas of DG set should be discharged through chimney of 30 m height. Fresh make up water of 73.15 m<sup>3</sup>/day will be required for the project which will be sourced from Ground water/PHED supply. Around 90.5 m<sup>3</sup>/day of waste water to be generated and the same will be treated in STP (FAB technology) of capacity 90.5 m<sup>3</sup>/day. 54 nos. of rain water recharge pits are being proposed. Around 385 kg/day of solid waste will be generated from domestic source. Sludge from sTP after dried in sludge drying bed will be used as manure in land scaping. BDA has approved building plan dated 12.6.2012. NOC obtained from Fire Prevention Officer dated 6.3.2012. Cost of the project is Rs. 3505 lakhs. Estimated cost for environmental management is Rs. 180 lakhs and recurring cost / annum Rs. 18.7 lakhs.

Considering the information furnished and presentation made by the **Consultant M/s. Centre for Envotech & Management Consultancy Pvt. Limited, Bhubaneswar** on behalf of the proponent, the SEAC decided to consider the environmental clearance for the proposal after receipt of following information / documents from the proponent.

1. Details of land use physical features, slopes and drainage pattern of the site and surrounding area, details of storm water drainage and disposal during the rainy season.
2. Green area in terms of percentage shall be submitted. A complete green belt development plan may be drawn in consultation with a qualified and competent expert keeping aesthetics and pollution control requirements in view.
3. Proposal for the use of renewable energy/alternate energy such as solar and wind energy.
4. Proposal for Hazardous Waste Management including e-waste.
5. Location, height of stack of DG sets, fuel consumption and area earmarked for safe storage of the fuel.
6. Study the socio-economic situation of the project area and its surroundings and their impact on the project design and operation.
7. Technical details of the STPs proposed for treatment of domestic sewage are not furnished with flow paths, residence time etc. The inlet and outlet qualities, especially from microbial angle are not given. Write up on the STPs proposed for

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- treatment of domestic sewage is to be submitted. A proposal to adopt zero discharge concept is to be submitted.
8. Solid waste collection, segregation and disposal are not addressed properly. Details solid waste management plan is to be submitted. Copy of agreement if made with BMC for disposal of solid waste may be submitted.
  9. Collection and management of rain water, storm water and STP treated water is not clear. It should be calculated realistically to reduce the fresh water intake.
  10. The total water requirement to be recalculated at peak consumption level of 200 lpcd and accordingly the entire water balance is to be recalculated and submitted.
  11. Source and water requirement during construction phase is to be submitted.
  12. Treated waste water proposed to be discharged to Jhamkanala. Analysis result of water quality of Jhamkanala is to be submitted.
  13. Traffic management plan including parking of all type of vehicles may be described.
  14. Details of fire detection and alarm system is to be submitted.

#### **ITEM NO. 10**

#### **ENVIRONMENTAL CLEARANCE FOR PRODUCTION OF 0.3 MILLION TPA OF IRON ORE AND 12000 TPA OF MANGANESE ORE OF KHAJURDIHI & BALADIHI IRON AND MANGANESE ORE MINES OVER MINING LEASE AREA OF 31.5654 HA AT VILLAGE KHAJURDIHI & BALADIHI IN THE DISTRICT OF SUNDARGARH OF MATADIN SARDA – EC (CONSULTANT - ENVIRONMENTAL RESEARCH AND SERVICES (INDIA) PVT. LIMITED, BHUBANESWAR**

This is a proposal for production of iron ore of quantity 0.3 MTPA and manganese ore of quantity 12000 TPA by M/s. Matadom Sarada, Khajurdih - Baldih Iron & Manganese Ore Mine over 31.5654 ha. of Matadin Sharda is an existing mining lease area spread over villages Khajurdih and Baldih in Bonai Sub-division of Sundergarh district of Odisha State. The lease area over 31.5654 Ha. falls in Protected Reserve Forests, DLC Forests and Kharsa Forests.. Application for diversion of Forest land has been submitted and it is under process at DFO level. The 1<sup>st</sup> mining operation was started on 01.01.1948 after the grant of lease on 31.08.1947 in favour of Mr. M. S. Deo and the lease was valid up to 30.08.1967. The lease was thereafter renewed from 31.08.1967 to 30.08.1987. On 19.08.1978 the said Lease was transferred to M/s. Mining Corporation of India, Kolkata from Mr. M. S. Deo by the approval of concerned Department of Govt. of Odisha. Towards the end of this renewal period the lease was again transferred in favour of Matadin Sharda on 24.08.1986 from Mining Corporation of India, Kolkata and application for 2<sup>nd</sup> renewal was filed for the period of 20 years from 31.08.1987 to 30.08.2007. The application for 3<sup>rd</sup> renewal of the mining lease for the period from 31.08.2007 to

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30.08.2027 has been filed on 24.08.2006. First mining scheme of the RML3 was approved vide letter no. OTF.MECH/09-ORI/BHU/2010-11 dated 30.07.2010. ToR for preparation of EIA/EMP report was issued by SEAC on 01<sup>st</sup> March 2011. Public hearing was completed on 28.03.2012. Further, the mining scheme of the said lease is approved vide letter no. SM/OTFM/09-ORI/BHU/2012-13 dated 26.04.2012. It is an open cast Iron ore-mining project. Geographically the Mining Lease is bounded by 21° 51' 50" to 21° 52' 20" North Latitude and 85° 17' 10" to 85° 17' 30" East Longitude. The terrain is hilly. The highest point of the lease area is 824 m AMSL at the SW corner in the Southern parts. The topography is very gentle, almost like a platform after which the slopes become comparatively steeper towards NE. No National park, Biosphere Reserve/Wildlife Reserves/Sanctuaries are seen within the 10 kms radius of the ML area. There are other mines in the vicinity. Total minable reserve of Iron ore is 3455213 MT and Manganese ore is 66106 MT. The life of the mine with proposed production rate is 12 years for the iron ore and 7 years for the Manganese ore from the restarting of mining activities. At present the mine is closed from 2006 due to want of EC and FC. 1 x 150 TPH Mobile Crushing Plant and 1 X 200 TPH Mobile screening plant will also be set up within the ML area. The present working will be at 756 m RL. The ultimate working depth during the scheme period is 732 MRL. No top soil will be generated during the scheme period. Height of Bench (Ore body ) will be 6 m and width will be 10 m. Height of the waste dump will be 60 meter having 4 to 5 meter terrace with 12 to 15 meter height each. The individual bench faces will be kept nearly vertical whereas the overall quarry slope angle is proposed to be kept at less than 30° with horizontal. All the excavated materials will be transported by road transport. There will be increase of 70 nos of vehicles in the vicinity due to the said project. Due to mining, ground water will not be intersected. Total 1066 m<sup>3</sup>/day of waste water will be discharged during monsoon period. However, only 1433 m<sup>3</sup>/day surface runoff during wet season will be discharged to outside through storm water drain. 3134.1 m<sup>3</sup>/month over burden will be generated. Backfilling will not be done during the proposed scheme period. 500 KVA power will be required for run of mining machinery which will be sourced from diesel generator. The requirement of fuel is 5.0 KL per day.

Considering the information / documents furnished by the proponent and presentation made by the **Consultant M/s. Environmental Research and Services (India) Pvt. Limited, Bhubaneswar** on behalf of the project proponent, the SEAC recommended for grant of environmental clearance in favour of the project proponent with following conditions **subject**

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**to submission of copy of stage-I forest clearance by the proponent as stipulated in office memorandum No. J-11013/41/2006-IA.II(I) dt. 9.09.11. of MoEF, Govt. of India.**

- 1) The applicant (Project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by him in Form-1, Final EIA reports and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.
- 2) The applicant will take necessary steps for socio-economic development of the people of the area on need based assessment for providing employment, education, health care, drinking water and sanitation, road and communication facilities etc.
- 3) The applicant will comply to the points, concerns and issues raised by the people during public hearing on 28.03.2012 in accordance with the commitments made by him thereon.
- 4) The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
- 5) For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Odisha on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.
- 6) The core zone should be monitored intensively with no. of stations as prescribed by CPCB, Delhi and unit of pollutant level should be expressed as NAAQ of CPCB, Delhi. The detailed methodology adopted for analysis of samples shall be clearly indicated.
- 7) The proponent shall submit baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA, Odisha.
- 8) Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
- 9) Zero waste mining concept shall be implemented either by putting up beneficiation and pelletisation plant or dispose of low grade ores/fines to prospective buyers. BHG/BHJ has to be stock piled separately as it is declared as lean ore.
- 10) The following shall be implemented viz. (a) dump run-off should be diverted into settling ponds (b) adequate rain water harvesting and ground water recharging facilities should be developed in the core zone; (c) attempt should be made to achieve zero water balance.
- 11) Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.

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- 12) Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools and other public amenities located nearest to sources of dust generation as applicable) and records shall be submitted to the SEIAA, Odisha.
- 13) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- 14) Efforts may be made to use surface water instead of ground water for mining and allied activities. Detail proposal of rain water harvesting and surface runoffs managements shall be furnished. These should be collected and used in dust suppression and plantation.
- 15) Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore / dust takes place.
- 16) Rain water harvesting shall be undertaken to recharge the ground water source.
- 17) Monitoring of ground and surface water quality shall be regularly conducted and records should be maintained and data shall be submitted regularly to the SEIAA, Odisha.
- 18) The proponent shall ensure that no silt originating due to mining activity is transported in the surface water course. Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.
- 19) Trenches / garland drains shall be constructed at foot of dumps to arrest silt from being carried to water bodies. Adequate number of Check Dams shall be constructed across seasonal/perennial nallahs (if any) flowing through the ML area and silts be arrested. De- silting at regular intervals shall be carried out.
- 20) Provision shall be made for the housing of the labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- 21) Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. The Proponent shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral dust on the workers shall be conducted and records maintained including health records of the workers. Awareness programme for workers as well as local people on impact of mining on their health water conservation and quality sanitation and precautionary

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measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by follow up action wherever required. Occupational Health Centre shall be established near the mine site itself.

- 22) Shelter belt i.e Wind Break of 15 m width and consisting of at least 5 tiers around lease facing the human habitation, school / agricultural fields etc. (if any in the vicinity), in the safety zone/ back-filled & reclaimed areas, around voids & roads shall be raised. Green belt development and selection of plant species shall be as per CPCB guidelines. Density of the trees has to be around 2500 plants per hectare. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Help & guidance of local DFO may be sought in the matter. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the SEIAA, Odisha within six months.
- 23) This Environmental Clearance is subject to Forest Clearance under the Forest (Conservation) Act, 1980.
- 24) The top soil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long ( not more than 3 years). The topsoil shall be used for land reclamation and plantation.
- 25) **The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and its phase-wise stabilization shall be carried out. Proper terracing of OB dump shall be carried out so that the overall slope shall not exceed 28° Backfilling shall be done as per approved mining plan. Back-filling to start from 3<sup>rd</sup> year onwards of the mining operation & the entire quantity of waste generated shall be backfilled & liquidated within five years. There shall be no external over-burden dumps after the 6<sup>th</sup> year of the mining operation. The backfilled area shall be afforested. Back-filling has to be done in a manner that it is restored to the normal ground level. Monitoring & management of rehabilitated areas should continue till the vegetation is established & becomes self-generating. Compliance status to be reported to the appropriate authorities.**
- 26) The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this funds shall be diverted for other purposes. Year-wise expenditure for this fund should be reported to the SEIAA, Orissa.
- 27) The critical parameters in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, pH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II(M) dated

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27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry [www.envfor.nic.in](http://www.envfor.nic.in) shall also be referred in this regard for its compliance.

- 28) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the SEIAA five years in advance of final mine closure for approval.
- 29) The project proponent shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and ground water) required for the project.
- 30) The project proponent shall prepare wild life conservation plan in consultation with DFO and adequate safety and mitigation measures should be incorporated to protect the wild life, flora, fauna to mitigate adverse impact.
- 31) The above mentioned stipulated conditions shall be complied in time bound manner. Failure to comply with any of the conditions mentioned above may result in withdrawal of this environmental clearance and attract action under the provisions of Environment Protection (EP) Act, 1986.

#### **ITEM NO. 11**

#### **ENVIRONMENTAL CLEARANCE FOR DHUNKAPARA DECORATIVE STONE MINES OVER AN AREA OF 14.933 HA OF M/S. ILIYAS GRANITES DHUNKAPARA, KODALA, GANJAM – TOR (CONSULTANT M/S. GLOBAL EXPERTS, BHUBANESWAR)**

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. For this purpose, the proponent had submitted information in the prescribed format (Form-I) alongwith pre-feasibility report,

The proposed project Dhunkapara Decorative Stone Mines at vllage Dhunkapara, Ganjam district, Odisha by M/s. Iliyias Granites is promoted by Mohammad Abdul Razzak. The mining lease of area 14.933 ha plans for mining of Charnockite as decorative stone with annual production capacity in the form of blocks 1193 m<sup>3</sup>, tiles 2793 m<sup>3</sup> and sub-grade ore 3192 m<sup>3</sup>. The mining plan period is of 20 years. The anticipated life of the mine at maximum rated production will be of 84 years. Therefore no mining closure plan is envisaged in the mining plan. The area under reference represents a hill slope tending in SE-NW direction. The peak is located outside the lease area and the highest altitude of the lease area at RL 222.365 m from MSL and lowest altitude is 108.750 m RL from MSL. The rock occurring in this area is mostly charnockite.

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So far as the physical properties are concerned the rock is suitable for decorative stone. The lease area is situated at village Dhunkapara at a distance of 1.5 km towards south-western side of the main road connecting between Buguda and Purushottampur. Semi-mechanized open cast mining method shall be adopted using machineries such as hydraulic excavator, winch, compressor, jack hammer, offset, wire ropes and drill rods etc. The drilling shall be done in a regular pattern with a maximum depth of 3m and a spacing of 0.25 m in a rectangular pattern and thereafter the offset shall be inserted and clamped at each hole. The offset shall be hammered manually by labourers to get rough block. The blocks will be transferred to the processing site by trailers. No blasting will be adopted. The water requirement will be 5 KLD and power requirement will be 20 KW. The expected project cost will be about 15 million INR. The sub grade ore will be stacked in 0.228 ha area inside the ML area. There will be minimum air and water pollution problem. While emphasis will be for the maximum reuse of the rock waste overburden in the local area, a dedicated 0.220 ha land will be provided for the stacking of solid waste.

The **Consultant M/s. Global Experts, Bhubaneswar** made a detailed presentation on behalf of the project proponent. During presentation, the proponent appealed to the committee for waiver of public hearing for the proposal due to less pollution potential of this type of mining activity.

The committee noted that the size of the mine, production rate, the mineral mined and the eco-sensitivity of the area are such that the operation of the mine will have negligible impact on the surroundings.

Considering the information / documents furnished by the proponent and presentation made by the consultant on behalf of the project proponent, the SEAC, Odisha recommended for **waiver of public hearing for the proposal** and prescribed TORs for undertaking detailed EIA study as applicable to mining project in general.

#### **ITEM NO. 12**

**ENVIRONMENTAL CLEARANCE FOR PRODUCTION OF MANGANESE ORE 5086 TPA OVER AN AREA 43.568 HA OF M/S. SUN ALLOYS & MINERALS LTD AT VILLAGE PATAMUNDA IN THE DISTRICT OF SUNDARGARH –EC (CONSULTANT - M/S. GEOMIN CONSULTANTS (P) LTD., BHUBANESWAR) .**

The proposal is for production of manganese ore of 5,086 TPA . The mining lease area is 43.568 ha, out of which 0.036 ha is DLC forest land. The mining lease of Patmunda

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Manganese mine was granted in favour of M/s. Sun Alloys & Minerals Ltd. on 23.10.1991 and executed on 12.02.1996 for a period of 10 years which ended on 11.02.2006. The renewal application for the ML area of 43.568 ha has been filed on 04.02.2005 for further 20 years which is under process. Mining plan for enhancement of production for a period 2006-07 to 2010-11 has already been prepared and approved by IBM. Subsequently, scheme of mining from 2011-2012 to 2015-2016 has been approved by IBM, dated 15.6.2012. The mine working will be opencast semimechanized-cum-manual mining. The present application is for enhancement of production from 5,000 TPA to 5,086 TPA. 0.15 million m<sup>3</sup> solid waste is likely to be generated in 5yrs. The present pit area is 2.04 ha. It is to be expanded to 10.96 ha. The water requirement is 25 KLD and source of water is ground water.

The ML area is situated in Toposheet no. 73 G/5 and bounded by latitude 21<sup>0</sup>51'00" - 21<sup>0</sup>52'14" N and longitude 85<sup>0</sup>18'25" 85<sup>0</sup>19'05" E. The area is directly approached from Koida. The nearest railway head is situated at Barsuan of South eastern railway connecting to Rourkela. Paradeep is the nearest port situated at 400 Kms and the nearest air port is situated at Bhubaneswar at a distance of 350 Kms. The Karo and Suna nadi are the nearest water course. The drainage of the area is controlled by Karo and Suna rivers. The ML area has 312,079 tonnes of geological reserve out of which 228,433 tonnes are mineable. With the production of 5,086 TPA the life of the mine will be 60 years. The life may vary depending upto the production rate. The mining operation will be carried out in one shift basis with generation of 70 employment. About 100 persons will get indirect employment. Out of lease area of 43.568 ha, 23.509 ha. will be planted with plant species and 20.059 ha. will not be disturbed. The cost of the project is 1.63 crores. To maintain the environment an amount of Rs. 13 lakhs shall be incurred as capital expenditure and Rs. 2 lakhs as recurring expenditure. The expenditure incurred for peripheral development will be Rs.13 lakhs as capital and Rs. 2 lakhs per annum as recurring per annum. The development activity includes health, employment, education, transportation sector. TOR was issued by the SEAC, Odisha on 21.7.2010 for undertaking detailed EIA study. Public hearing for the proposal was conducted on 10.4.2012.

Considering the information/documents furnished by the proponent and presentation made by the **Consultant M/s. Geomin Consultants (P) Ltd., Bhubaneswar** on behalf of the

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proponent, the SEAC recommended for the grant of environmental clearance in favour of the project proponent with following the conditions **subject to submission of copy of stage-I forest clearance by the proponent as stipulated in office memorandum No. J-11013/41/2006-IA.III(I), dt. 9.9.2011 of MoEF, Govt. of India.**

1. The applicant (Project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by him in Form-1, Final EIA reports and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.
2. The applicant will take necessary steps for socio-economic development of the people of the area on need based assessment for providing employment, education, health care, drinking water and sanitation, road and communication facilities etc.
3. The applicant will comply to the points, concerns and issues raised by the people during public hearing on 10.04.2012 in accordance with the commitments made by him thereon.
4. The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
5. For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Odisha on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.
6. The core zone should be monitored intensively with no. of stations as prescribed by CPCB, Delhi and unit of pollutant level should be expressed as NAAQ of CPCB, Delhi. The detailed methodology adopted for analysis of samples shall be clearly indicated.
7. The proponent shall submit baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA, Odisha.
8. Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
9. Zero waste mineral concept shall be implemented either by putting up beneficiation and pelletisation plant or dispose of low grade ores/fines ( above 5% )to prospective buyers. BHG/BHJ iron ore mineral should be stock piled separately on sell to prospective buyers.
10. The following shall be implemented viz. (a) dump run-off should be diverted into settling ponds (b) adequate rain water harvesting and ground water recharging facilities should be developed in the core zone; (c) attempt should be made to achieve zero water balance.

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11. Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.
12. Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools and other public amenities located nearest to sources of dust generation as applicable) and records shall be submitted to the SEIAA, Odisha.
13. Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
14. Efforts may be made to use surface water instead of ground water for mining and allied activities. Detail proposal of rain water harvesting and surface runoffs managements shall be furnished. These should be collected and used in dust suppression and plantation.
15. Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore / dust takes place.
16. Rain water harvesting shall be undertaken to recharge the ground water source.
17. Monitoring of ground and surface water quality shall be regularly conducted and records should be maintained and data shall be submitted regularly to the SEIAA, Odisha.
18. The proponent shall ensure that no silt originating due to mining activity is transported in the surface water course. Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.
19. Trenches / garland drains shall be constructed at foot of dumps to arrest silt from being carried to water bodies. Adequate number of Check Dams shall be constructed across seasonal/perennial nallahs (if any) flowing through the ML area and silts be arrested. De- silting at regular intervals shall be carried out.
20. Provision shall be made for the housing of the labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
21. Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. The Proponent shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral dust on the workers shall be

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- conducted and records maintained including health records of the workers. Awareness programme for workers as well as local people on impact of mining on their health water conservation and quality sanitation and precautionary measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by follow up action wherever required. Occupational Health Centre shall be established near the mine site itself.
22. Shelter belt i.e Wind Break of 15 m width and consisting of at least 5 tiers around lease facing the human habitation, school / agricultural fields etc. (if any in the vicinity), in the safety zone/ back-filled & reclaimed areas, around voids & roads shall be raised. Green belt development and selection of plant species shall be as per CPCB guidelines. Density of the trees has to be around 2500 plants per hectare. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Help & guidance of local DFO may be sought in the matter. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the SEIAA, Odisha within six months.
  23. This Environmental Clearance is subject to Forest Clearance under the Forest (Conservation) Act, 1980.
  24. **The top soil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long ( not more than 3 years). The topsoil shall be used for land reclamation and plantation.**
  25. The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and its phase-wise stabilization shall be carried out. Proper terracing of OB dump shall be carried out so that the overall slope shall not exceed 28<sup>o</sup> Backfilling shall be done as per approved mining plan. Back-filling to start from 3<sup>rd</sup> year onwards of the mining operation & the entire quantity of waste generated shall be backfilled & liquidated within five years. There shall be no external over-burden dumps after the 6<sup>th</sup> year of the mining operation. The backfilled area shall be afforested. Back-filling has to be done in a manner that it is restored to the normal ground level. Monitoring & management of rehabilitated areas should continue till the vegetation is established & becomes self-generating. Compliance status to be reported to the appropriate authorities.
  26. The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this funds shall be diverted for other purposes. Year-wise expenditure for this fund should be reported to the SEIAA, Odisha.
  27. The critical parameters in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, pH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a

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- display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry [www.envfor.nic.in](http://www.envfor.nic.in) shall also be referred in this regard for its compliance.
28. A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the SEIAA 5 years in advance of final mine closure for approval.
  29. The project proponent shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and ground water) required for the project.
  30. The project proponent shall prepare wild life conservation plan in consultation with DFO and adequate safety and mitigation measures should be incorporated to protect the wild life, flora, fauna to mitigate adverse impact.
  31. The above mentioned stipulated conditions shall be complied in time bound manner. Failure to comply with any of the conditions mentioned above may result in withdrawal of this environmental clearance and attract action under the provisions of Environment Protection (EP) Act, 1986.

**ITEM NO. 13**

**ENVIRONMENTAL CLEARANCE FOR PROPOSED 8 BLOCKS OF G+2 STORIED INSTITUTIONAL BUILDING PROJECT AT VILLAGE BIDYADHARPUR WARD NO. 1, GODISAH, TEHSIL CUTTACK SADAR IN THE DISTRICT OF CUTTACK OF SRI SRI UNIVERSITY (EC).**

The proponent intimated vide letter No. SSU/FIN/12-13/07/56 dt. 18.10.2012 that earlier they had applied for environmental clearance for phase-I project. Now, they have obtained approval from CDA for Phase-I and Phase-II project for which they want to submit the revised application for environmental clearance. They have also requested to defer their presentation. The committee decided to defer the proposal and return the proposal to SEIAA, Odisha to ask the proponent to apply afresh for both Phase-I and Phase-II project for consideration.

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**DAY THREE – 19<sup>TH</sup> OCTOBER, 2012**

**ITEM NO. 14**

**ENVIRONMENTAL CLEARANCE FOR ENHANCEMENT OF PRODUCTION OF MANGANESE ORE UPTO 12500 TPA OVER AN AREA 7.35 HA OF NUAGAON MANGANESE ORE MINES OF M/S. TARINI MINERALS – EC (CONSULTANT M/S. GEOMIN CONSULTANTS (P) LTD., BHUBANESWAR) .**

The proposal is for enhancement of production upto 12.000 TPA. The mining lease area is 7.85, and total lease area is non forest land. **Mining lease of** Nuagaon Manganese Mines over an area of 7.85 ha was granted and executed on 26.2.80 in favour of Sri G.P. Behera. Subsequently it was transferred to M/s. Tarini Minerals in 1992. The mining scheme for 2009-10 to 2013- 2014 is approved by IBM on 19.1.2011. The lease period expired on 25.2.2000 and renewal application for the same area has been filed on 27.1.99 . The mine working will be opencast manual. The water requirement is 27 KLD and source of water is ground water.

The proposed area is Featured in Toposheet No. 73 G/1 and bounded by Latitude 21<sup>0</sup>54'04" to 21<sup>0</sup>54'20" E and Longitude 85<sup>0</sup>13'20" to 85<sup>0</sup>13'42" N. The area is at 565 meter to 585 meter above mean sea level. The area is connected with Koira. The nearest railway station is at Barbil of the Sourth-eastern railway. Baitarani and Karo are the main rivers. The drainage of the area is controlled by these rivers. The area has 5,80,725 tones of geological and 4,39,785 tones of mineable Manganese reserve. With the production target of 12,500 tonnes per annum the life of the mine will be 35 years. The project will operate in single shift basis with 136 direct employment and 300 indirect employment. Dump will be of 20 meter height. For environment protection, capital expenses of 15 lakhs and recurring 5 lakhs per annum is earmarked. The total project cost will be 1.57 crores. TOR was issued by the SEAC, Odisha on 21.7.2010 for undertaking detailed EIA study. Public hearing was conducted on 23.5.2012.

Considering the information/documents furnished by the proponent and presentation made by the **Consultant M/s. Geomin Consultants (P) Ltd., Bhubaneswar** on behalf of the proponent, the SEAC recommended for the grant of environmental clearance in favour of the project proponent with the following conditions.

1. The applicant (Project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by him in Form-1,

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- Final EIA reports and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.
2. The applicant will take necessary steps for socio-economic development of the people of the area on need based assessment for providing employment, education, health care, drinking water and sanitation, road and communication facilities etc.
  3. The applicant will comply to the points, concerns and issues raised by the people during public hearing on 23.05.2012 in accordance with the commitments made by him thereon.
  4. The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
  5. For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Odisha on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.
  6. The core zone should be monitored intensively with no. of stations as prescribed by CPCB, Delhi and unit of pollutant level should be expressed as NAAQ of CPCB, Delhi. The detailed methodology adopted for analysis of samples shall be clearly indicated.
  7. The proponent shall submit baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA, Odisha.
  8. Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
  9. Zero waste mining concept shall be implemented either by putting up pelletisation plant or dispose of low grade ores/fines to prospective buyers.
  10. The following shall be implemented viz. (a) dump run-off should be diverted into settling ponds (b) adequate rain water harvesting and ground water recharging facilities should be developed in the core zone; (c) attempt should be made to achieve zero water balance.
  11. Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.
  12. Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools and other public amenities located nearest to sources of dust generation as applicable) and records shall be submitted to the SEIAA, Odisha.
  13. Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.

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14. Efforts may be made to use surface water instead of ground water for mining and allied activities. Detail proposal of rain water harvesting and surface runoffs managements shall be furnished. These should be collected and used in dust suppression and plantation.
15. Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore / dust takes place.
16. Rain water harvesting shall be undertaken to recharge the ground water source.
17. Monitoring of ground and surface water quality shall be regularly conducted and records should be maintained and data shall be submitted regularly to the SEIAA, Odisha.
18. The proponent shall ensure that no silt originating due to mining activity is transported in the surface water course. Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.
19. Trenches / garland drains shall be constructed at foot of dumps to arrest silt from being carried to water bodies. Adequate number of Check Dams shall be constructed across seasonal/perennial nallahs (if any) flowing through the ML area and silts be arrested. De- silting at regular intervals shall be carried out.
20. Provision shall be made for the housing of the labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
21. Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. The Proponent shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral dust on the workers shall be conducted and records maintained including health records of the workers. Awareness programme for workers as well as local people on impact of mining on their health water conservation and quality sanitation and precautionary measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by follow up action wherever required. Occupational Health Centre shall be established near the mine site itself.
22. Shelter belt i.e Wind Break of 15 m width and consisting of at least 5 tiers around lease facing the human habitation, school / agricultural fields etc. (if any in the vicinity), in the safety zone/ back-filled & reclaimed areas, around voids & roads shall be raised. Green belt development and selection of plant species shall be

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- as per CPCB guidelines. Density of the trees has to be around 2500 plants per hectare. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Help & guidance of local DFO may be sought in the matter. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the SEIAA, Odisha within six months.
23. **The top soil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long ( not more than 3 years). The topsoil shall be used for land reclamation and plantation.**
  24. The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and its phase-wise stabilization shall be carried out. Proper terracing of OB dump shall be carried out so that the overall slope shall not exceed 28<sup>o</sup>. Backfilling shall be done as per approved mining plan. Back-filling to start from 3<sup>rd</sup> year onwards of the mining operation & the entire quantity of waste generated shall be backfilled & liquidated within five years. There shall be no external over-burden dumps after the 6<sup>th</sup> year of the mining operation. The backfilled area shall be afforested. Back-filling has to be done in a manner that it is restored to the normal ground level. Monitoring & management of rehabilitated areas should continue till the vegetation is established & becomes self-generating. Compliance status to be reported to the appropriate authorities.
  25. The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this funds shall be diverted for other purposes. Year-wise expenditure for this fund should be reported to the SEIAA, Odisha.
  26. The critical parameters in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, pH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry [www.envfor.nic.in](http://www.envfor.nic.in) shall also be referred in this regard for its compliance.
  27. A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the SEIAA five years in advance of final mine closure for approval.
  28. The project proponent shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and ground water) required for the project.

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29. The above mentioned stipulated conditions shall be complied in time bound manner. Failure to comply with any of the conditions mentioned above may result in withdrawal of this environmental clearance and attract action under the provisions of Environment Protection (EP) Act, 1986.

**ITEM NO. 15**

**ENVIRONMENTAL CLEARANCE FOR 2,40,000 TPA COAL BENEFICIATION PLANT AT DEULI IN THE DISTRICT OF SUNDARGARH BY M/S. GANGPUR UDYOG PVT. LIMITED (EC).**

The project proponent intimated that they will not be available for the presentation on 19.10.2012. The committee decided to defer the proposal to a next meeting.

**ITEM NO. 16**

**ENVIRONMENTAL CLEARANCE FOR 3X150 MW COAL-CUM-BY PRODUCT GAS FIRED CAPTIVE POWER PLANT AT VILLAGE GADAPUR KHURUNTI AND CHANDIA, DIST – JAJPUR BY M/S. INDUSTRIAL ENERGY LIMITED - EC (CONSULTANT S. S. ENVIRONICS, BHUBANESWAR).**

M/s. Industrial Energy Ltd (IEL) is a joint venture company formed by M/s. Tata Power Company Ltd and M/s. Tata Steel Ltd. M/s. Tata Steel Ltd is in the process of setting a 6 MTPA integrated iron & steel plant at Kalinga Nagar Industrial Complex with a bi-product gas based captive power plant of 175 MW. However, in the pretext of excess power demand by the steel plant and to ensure uninterrupted power supply for stability of the steel plant, the Joint venture company has proposed a coal-cum-by-product gas based power plant of capacity 3x150 MW in two phases. In phase-I, 2x150 MW Power plant will be installed and another 1x150 MW unit will be installed in phase-II. Estimated project cost of the proposed 3x150 MW CPP is Rs. 2745 crores.

Proposed power plant will be installed over 298 acres of land out of which 12.90 acres is forest land. Forest land has already been diverted by IDCO. Coal requirement of @ 2.52 MTPA (Say 2.6 MTPA) will be sourced from PT Arutmin, Indonesia & Middlings from collieries of TSL located in Jharkhand. Water requirement for the plant @ 41280m<sup>3</sup>/day will be met from water draw permission of Tata Steel.

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TOR was issued for the project by the State Level Expert Appraisal Committee (SEAC), Odisha and accordingly the project proponent has carried out EIA/EMP and presented before the SEAC with TOR compliance and modification made in compliance with the public consultation points.

There is no National Park/Wildlife Sanctuary/Biosphere Reserve etc. within study area. There is no endangered species of flora and fauna (schedule –I fauna) in the core and buffer zone.

Further, impact of the proposed project on the environment, considering baseline data, has been assessed and accordingly mitigation measures have been proposed. Further, environmental compliance of the project with respect to guidelines and standards will be monitored as per environment monitoring plan. Impact on air environment has been assessed by using AERMOD VIEW -ISCST3 model, which has shown the maximum incremental GLCs of 0.00597  $\mu\text{g}/\text{m}^3$  for  $\text{PM}_{10}$ , 0.00155  $\mu\text{g}/\text{m}^3$  for  $\text{PM}_{2.5}$ , 1.13  $\mu\text{g}/\text{m}^3$  for  $\text{SO}_2$  & 0.38891  $\mu\text{g}/\text{m}^3$  for  $\text{NO}_x$ . Risk assessment and other studies for assessment of hazards due the plant have been carried out and disaster management plan has been prepared.

The highlights of the mitigation measures proposed are installation of ESPs at boilers for control of air pollution and provision of bag filters at coal handling and other dust generating areas of the plant. Dry fog system will be installed at raw material transfer points. Wastewater generated from the plant process will be treated adequately and treated wastewater will be reused. Rainwater harvesting will be implemented for conservation of rainwater. Utilization of fly ash generated from power plant is proposed to be used in the cement plant by M/s Madras Cement Ltd, Chennai and bottom ash will be disposed in the ash pond constructed over 43 acres within plant premises. Green belt on 33% of plant area will be developed. Mitigation measures for noise pollution will be implemented so that noise levels within the plant and at the plant boundary will be within norms. IEL has projected capital cost of Rs. 150 Crores towards environmental protection and will also form Environmental Management Cell (EMC) for implementation of all the environmental protection and monitoring plan.

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IEL, being a joint venture by Tata Group, is committed for peripheral development of the area as a part of its Corporate Social Responsibility (CSR). TOR was issued by the SEAC, Odisha on 23.3.2011. Public hearing for the proposal was conducted on 26.8.2011.

Based on the presentation by the project proponent and the contents of the documents (EIA report & EMP) submitted, the following points emerged during deliberations.

1. The proposed area 120.6 ha (298 acres) allocated for the project is carved out of the total area allotted to M/s. Tata Steel Ltd. at Kalinga Nagar.
2. The item-wise break up of land for total project suggested that an area of 17.40 ha has been earmarked for ash disposal.
3. The proposed unit will generate an estimated 0.85 MTPA fly ash and 0.21 MTPA bottom ash.
4. While the unit will make arrangement, like collaborating with a cement plant to be located within plant boundary to utilize its total fly ash, the bottom ash will be disposed in the earmarked area (17.40 ha) for ash disposal.
5. **As per fly ash notification dated 3.11.2009 issued by the MoEF, Govt. of India an area of 5 ha is required for 500 MW power plant for emergency ash pond or storage of ash. The project proponent has earmarked 17.40 ha for emergency ash pond or ash storage area which is inadequate as per above fly ash notification. In the event of the establishment of a cement plant of capacity 1 MTPA by Sept. 2014 the fly ash lifting from M/s. Industrial Energy Ltd (IEL) will be limited to 0.35 MTPA. Such quantity of fly ash will be generated by only one unit (i.e. 1x150 MW) of M/s IEL.**
6. For complete utilization of fly ash, the proposed unit has submitted a MOU with M/s. Madras Cement Ltd. M/s. Madras Cement Ltd has committed that it will establish a 2 MTPA cement plant in two phases i.e. 1 MTPA at one go and lift 0.35 MTPA fly ash during 1<sup>st</sup> phase of 1 MTPA by Sept. 2014 and 0.7 MTPA with its full capacity utilization in next 18 month. But the MOU is silent about the land requirement and there is no exclusive commitment by M/s. Industrial Energy Ltd. to provide land to the Cement Plant. In case M/s. Industrial Energy Ltd is required to provide land to the Cement manufacturer the source of such land is not clear. Such commitment

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from both sides is very much required since the proposed Power Plant does not have any space for its fly ash disposal.

Further, excepting in the name of the project i.e. "3x150 MW Coal-cum-Byproduct gas fired captive power plant" M/s. Industrial Energy Ltd has not taken any attempt to justify that the proposed project will use byproduct gas as fuel. During presentation the proponent agreed that the proposed project will actually be a thermal power plant. In view of such facts, the committee further opined that the project proponent should modify the name by dropping "**-cum-byproduct gas**" so that there would not be any confusion about the nature of the project.

Taking the above into consideration, the SEAC recommended for grant of environmental clearance in favour of the project for a period of five years with following conditions.

1. **M/s. Industrial Energy Ltd shall arrange land for the establishment of the cement plant within its premises by getting the equivalent amount from its parent company i.e. Tata Steel Ltd and submit supporting documents to that effect to the SEIAA, Odisha.**
2. **M/s. Industrial Energy Ltd shall be allowed to establish 1x150 MW in the 1<sup>st</sup> phase and ensure compliance of all the stipulated norms and conditions including the establishment of cement plant prior to its operation and basing on such compliance be allowed to establish the rest 2x150 MW unit in 2<sup>nd</sup> phase.**
3. The project proponent shall modify the name by dropping "**-cum-byproduct gas**" so that there would not be any confusion about the nature of the project.
4. The applicant (Project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by him in Form-1, Final EIA reports and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.
5. The applicant will take necessary steps for socio-economic development of the people of the area on need based assessment for providing employment, education, health care, drinking water and sanitation, road and communication facilities etc.
6. In case source of fuel supply is to be changed at a later stage (now proposed to use imported coal from Indonesia) the project proponent shall intimate to the SEIAA, Odisha well in advance along with necessary requisite documents for its concurrence for allowing the change. In such a case the necessity for re-

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- conducting public hearing may be decided by the SEIAA, Odisha in consultation with the State Level Expert Appraisal Committee (SEAC), Odisha.
7. The applicant will comply to the points, concerns and issues raised by the people during public hearing on 26.08.2011 in accordance with the commitments made by him thereon.
  8. The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
  9. For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Odisha on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.
  10. Land acquisition and transfer to M/s. IEL should be complete in all respects before start of construction
  11. High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm<sup>3</sup>.
  12. A stack of 220m height shall be installed and provided with continuous online monitoring equipments for SO<sub>2</sub>, NO<sub>x</sub> and PM<sub>2.5</sub> & PM<sub>10</sub>. Mercury emissions from stack may also monitored on periodic basis.
  13. Excess water along with storm water during monsoon should not be discharged into the surrounding low lying area. The storm water shall be stored in reservoir and after treatment shall be used for dust suppression.
  14. The storm water during monsoon will be collected in a pond and after appropriate treatment shall be stored in a reservoir for use in plantation, dust suppression etc At no point of time the water will be discharged to surrounding areas.
  15. Under no circumstances the process water shall be discharged to outside premises or to any water body. It should be properly treated, stored and 100% recycled in the process.
  16. The Department of Water Resources (DOWR), Govt. of Odisha may be appraised of the allocation of required amount of water from Steel Plant of Tata Steel Ltd. to M/s. IEL and the purpose of use other than already approved. A clearance to this effect may be produced before start of construction activity.
  17. No ground water shall be extracted for the project work at any stage.
  18. Storing of unutilized ash in a pond, filling up of low lying areas, use in road construction etc. should be as per Notification issued by MoEF for fly ash utilization in 03.11.2009.
  19. Coal transportation to plant site shall be undertaken by rail and no road transportation shall be permitted.
  20. The proponent shall treat the flue gas through Flue Gas De-sulfurisation (FGD), if SO<sub>2</sub> emission level exceed the prescribed norm.
  21. Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5 % and 34 % respectively at any given time. In case of variation of coal quality at any point of time fresh reference shall be made to the SEIAA, Odisha for suitable amendments to environmental clearance condition wherever necessary.

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22. Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.
23. The ash pond should be constructed with impervious lining and ash pond embankment should be stone pitched. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached. Ash pond water shall be re-circulated and utilized.
24. Hydrogeology of the area shall be reviewed annually from an institute/ organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case any deterioration is observed specific mitigation measures shall be undertaken and reports/ data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry and SEIAA, Odisha.
25. No water bodies (including natural drainage system) in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.
26. The treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary. Arrangements shall be made so that effluents and storm water do not get mixed.
27. A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.
28. Land and Water requirement shall be restricted as per latest CEA norms issued.
29. COC of 5.0 shall be adopted.
30. Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished to the SEIAA, Odisha.
31. Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Details of these measures to be taken along with location plant layout shall be submitted to the SEIAA, Odisha.
32. Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area where risk is minimum. On site and off site Disaster Management Plans shall be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on the same, modifications required, if any shall be incorporated in the Disaster Management Plan (DMP). Sulfur content in the liquid fuel will not exceed 0.5%.
33. Regular monitoring of ground water in and around the ash pond area shall be carried out, records maintained and half yearly reports shall be furnished to the SEIAA, Odisha.
34. A green belt of adequate width and density preferably with local species along the periphery of the plant & alongside roads etc shall be raised so as to provide protection against particulates and noise. It must be ensured that at least 33% of the total land area shall be under permanent green cover. The project proponent

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- shall ensure proper maintenance of green belt throughout the year & for this purpose they may engage professionals in this field for creation and maintenance of the green belt. An action plan for this purpose shall be prepared accordingly and submitted to the SEIAA, Odisha.
35. First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
  36. Noise levels emanating from turbines and air compressors shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipments like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.
  37. Regular monitoring of ground level concentration of SO<sub>2</sub>, NO<sub>x</sub>, RSPM (PM<sub>10</sub> & PM<sub>2.5</sub>) etc. shall be carried out in the impact zone and records to be maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB, Odisha.
  38. Provision shall be made for housing of construction labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
  39. A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
  40. Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported.
  41. The need of the local people should be appropriately addressed in the CSR activities to be undertaken by the project proponent in the area. An action plan in this regard should be prepared and submitted to SEIAA, Orissa.
  42. The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board, Odisha and may also be seen at Website of the SEIAA, Odisha.
  43. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
  44. The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their

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- website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, SEIAA, Odisha, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM (PM2.5 & PM10), SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.
45. The environment statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.
  46. The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, SEIAA, Odisha Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests and SEIAA, Odisha.
  47. The above mentioned stipulated conditions shall be complied in time bound manner. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment Protection (EP) Act, 1986.

#### **ITEM NO. 17**

#### **ENVIRONMENTAL CLEARANCE FOR ENHANCEMENT IN PRODUCTION OF IRON ORE FROM 0.378 MTPA TO 1.080 MTPA OVER AN AREA 49.372 HA OF RAIKELA & TANTRA IRON ORE MINES OF M/S. PENGUIN TRADING & AGENCIES LTD AT RAIKELA & TANTRA IN SUNDARGARH DISTRICT – EC (CONSULTANT M/S. S. S. ENVIRONICS, BHUBANESWAR).**

The proposal is for the enhancement of production capacity of iron ore mine from 0.378 MTPA to 1.080 MTPA over mining lease area of 49.372 ha. lease in Raikela and Tantra area over 49.372 hectares was granted by the state Govt. on 23.06.1991. The tenure of the lease period has expired since 03.12.2006. The application was filed on 22.2.2005 to the State Govt. for renewal of mining lease vide RML No. 148. Now the mine is under 'deemed lease' having all statutory clearances. Scheme of Mining along with Progressive Mine Closure Plan is prepared for the period of 2012-13 to 2015-16 (4 years) and approved by IBM vide letter no. MS/OTF.MECH/60-ORI/BHU/2010-11, dated 17.03.2011. Forest Clearance (Stage-II) has been granted vide MoEF Letter No. 8/23/2007-FC, dt- 13-05-2009 for diversion of forest land (45.585 ha. excluding safety zone of 3.047 Ha. from the total forest land of 48.632). Estimated mineable reserve is

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33973835 T (As on 01.04.2012 Ha). Expected life of the mine is 31 years. Ultimate working depth of mine is 70m.

In this proposition, increase of production in Iron Ore is from 0.378 MTPA to 1.08 MTPA over the ML area of 49.372 ha. The total crushing plant capacity and screening plant capacity will be 250 TPH and 500 TPH, respectively. The mine will be operated by fully mechanized method. Water requirement for the mine after expansion will be 300 KLD, which will be sourced from Karo Nala. The power requirement of the proposed mining project is estimated to be 0.5 MW which will be sourced from State Grid (WESCO). Estimated capital cost of the project is Rs. 9.2 Crores.

Due to presence of elephants in Buffer Zone, a site specific conservation plan was approved by PCCF & CWLW. Impact on air environment has been assessed by using AERMOD VIEW -ISCST3 model, which has shown the maximum incremental GLCs of SPM 13.58062  $\mu\text{g}/\text{m}^3$ , for  $\text{PM}_{10}$  9.68713  $\mu\text{g}/\text{m}^3$ , for  $\text{PM}_{2.5}$  4.81236  $\mu\text{g}/\text{m}^3$ , for  $\text{SO}_2$  2.74238  $\mu\text{g}/\text{m}^3$ , for  $\text{NO}_x$  4.85859  $\mu\text{g}/\text{m}^3$ , for  $\text{CO}$  1.96472  $\mu\text{g}/\text{m}^3$ . Risk assessment and other studies for assessment of hazards due to mining activities have been carried out and accordingly the disaster management plan has been prepared.

The highlights of the mitigation measures proposed are dust suppression in the mine by water sprinkling by mobile water tankers and water sprinklers, transportation of material will be done through covered tippers. There is no wastewater generation from the mining activity. Rainwater harvesting will be implemented for conservation of rainwater. Green belt will be developed within and along the periphery of mine as per the EMP. Capital cost of Rs.40 Lakhs has been dedicated towards environmental protection and implementation of environmental management plan. The mine has separate Environmental Management Cell (EMC) for implementation of all the environmental protection and monitoring plan. The mine has done peripheral developmental activities in the area and spent about Rs. 340 Lacs and will also continue the same for the proposed expansion. For the proposed expansion, Rs. 200 Lakhs has been planned to be spent over 5 years towards implementation of CSR activities. TOR was issued by the SEAC, Odisha on 13.9.2011 for conducting detailed EIA study. Public hearing was conducted on 26.6.2012.

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Considering the information/documents furnished by the proponent and presentation made by the **consultant M/s. S. S. Environics, Bhubaneswar** on behalf of the proponent, the SEAC recommended for the grant of environmental clearance in favour of the project proponent with the following conditions

1. The applicant (Project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by him in Form-1, Final EIA reports and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.
2. The applicant will take necessary steps for socio-economic development of the people of the area on need based assessment for providing employment, education, health care, drinking water and sanitation, road and communication facilities etc.
3. The applicant will comply to the points, concerns and issues raised by the people during public hearing on 26.06.2012 in accordance with the commitments made by him thereon.
4. The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
5. For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Orissa on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.
6. The core zone should be monitored intensively with no. of stations as prescribed by CPCB, Delhi and unit of pollutant level should be expressed as NAAQ of CPCB, Delhi. The detailed methodology adopted for analysis of samples shall be clearly indicated.
7. The proponent shall submit baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA, Odisha.
8. Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
9. Zero waste mineral concept shall be implemented either by putting up beneficiation and pelletisation plant or dispose of low grade ores/fines ( 45% above) to prospective buyers. BHG/BAJ should be kept in separate stock piling and may sale to prospective buyers.
10. The following shall be implemented viz. (a) dump run-off should be diverted into settling ponds (b) adequate rain water harvesting and ground water recharging facilities should be developed in the core zone; (c) attempt should be made to achieve zero water balance.

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11. Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.
12. Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools and other public amenities located nearest to sources of dust generation as applicable) and records shall be submitted to the SEIAA, Odisha.
13. Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
14. Efforts may be made to use surface water instead of ground water for mining and allied activities. Detail proposal of rain water harvesting and surface runoffs managements shall be furnished. These should be collected and used in dust suppression and plantation.
15. Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore / dust takes place.
16. Rain water harvesting shall be undertaken to recharge the ground water source.
17. Monitoring of ground and surface water quality shall be regularly conducted and records should be maintained and data shall be submitted regularly to the SEIAA, Odisha.
18. The proponent shall ensure that no silt originating due to mining activity is transported in the surface water course. Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.
19. Trenches / garland drains shall be constructed at foot of dumps to arrest silt from being carried to water bodies. Adequate number of Check Dams shall be constructed across seasonal/perennial nallahs (if any) flowing through the ML area and silts be arrested. De- silting at regular intervals shall be carried out.
20. Provision shall be made for the housing of the labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
21. Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. The Proponent shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral dust on the workers shall be

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- conducted and records maintained including health records of the workers. Awareness programme for workers as well as local people on impact of mining on their health water conservation and quality sanitation and precautionary measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by follow up action wherever required. Occupational Health Centre shall be established near the mine site itself.
22. Shelter belt i.e Wind Break of 15 m width and consisting of at least 5 tiers around lease facing the human habitation, school / agricultural fields etc. (if any in the vicinity), in the safety zone/ back-filled & reclaimed areas, around voids & roads shall be raised. Green belt development and selection of plant species shall be as per CPCB guidelines. Density of the trees has to be around 2500 plants per hectare. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Help & guidance of local DFO may be sought in the matter. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the SEIAA, Odisha within six months.
  23. The proponent shall comply to the conditions imposed forest clearance.
  24. **The top soil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long ( not more than 3 years). The topsoil shall be used for land reclamation and plantation.**
  25. The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and its phase-wise stabilization shall be carried out. Proper terracing of OB dump shall be carried out so that the overall slope shall not exceed 28<sup>o</sup> Backfilling shall be done as per approved mining plan. Back-filling to start from 3<sup>rd</sup> year onwards of the mining operation & the entire quantity of waste generated shall be backfilled & liquidated within five years. There shall be no external over-burden dumps after the 6<sup>th</sup> year of the mining operation. The backfilled area shall be afforested. Back-filling has to be done in a manner that it is restored to the normal ground level. Monitoring & management of rehabilitated areas should continue till the vegetation is established & becomes self-generating. Compliance status to be reported to the appropriate authorities.
  26. The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this funds shall be diverted for other purposes. Year-wise expenditure for this fund should be reported to the SEIAA, Odisha.
  27. The critical parameters in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, pH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the

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- Company in public domain. The circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry [www.envfor.nic.in](http://www.envfor.nic.in) shall also be referred in this regard for its compliance.
28. A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the SEIAA five years in advance of final mine closure for approval.
  29. The project proponent shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and ground water) required for the project.
  30. The project proponent shall prepare wild life conservation plan in consultation with DFO and adequate safety and mitigation measures should be incorporated to protect the wild life, flora, fauna to mitigate adverse impact.
  31. The above mentioned stipulated conditions shall be complied in time bound manner. Failure to comply with any of the conditions mentioned above may result in withdrawal of this environmental clearance and attract action under the provisions of Environment Protection (EP) Act, 1986.

#### **ITEM NO. 18**

#### **ENVIRONMENTAL CLEARANCE FOR ENHANCEMENT IN PRODUCTION OF GRAPHITE ORE FROM 4204 MTPA TO 11520 MTPA AND INSTALLATION OF 50 TPH CAPACITY BENEFICIATION PLANT OVER AN AREA 20.234 HA AT VILLAGE GANDABHALI IN THE DISTRICT OF NUAPADA BY M/S. GANDABHALI GRAPHITE MINES OF SRI PRABIR GHOSE - (EC - CONSULTANT M/S. KALYANI LABORATORIES (P) LIMITED, BHUBANESWAR)**

Gandabahali Graphite ore mine over an area of 20.234 ha of Nuapara district was granted in favour of Sri Pramod Ku. Agrawal on 04.10.1997 for 20 years. The mining operation commenced in the ML area from 11.10.1997. The area under surface right is 17.770 Ha. The lease will expire on 03.10.2017. The lessee has proposed the enhancement in production from 4204 TPA to 11520 TPA of graphite ore along with installation of 50 TPH (72,000 TPA) single beneficiation plant. The mineable reserve under proved and probable category is around 137013 MT. Considering the average annual production of 11520 MT, anticipated life of the mine will be 16 years.

The Mining lease area of 20.234Ha falls on the Survey of India Topo-Sheet No.-64L/12 with Latitude 20°08'14" to 20° 08' 34" N and Longitude 82° 42' 11" to 82° 42' 32" E .This is located in Gandabahali village of Nuapada district. The highest altitude of the area is 258m AMSL and the lowest altitude is 244m AMSL. The principal drainage system of the area is Udanti Nadi which is at a distance of 3 km to south of the project area.

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It is an opencast semi mechanized mine operated in single shift basis. The height and width of the benches have been maintained with 5.00m and 6.00m respectively. The face angle of the bench will be not more than 60° from the horizontal and overall slope of the quarry will be 37 ½° from the horizontal. During the previous mining activity, 4.75 ha has been degraded and an area of 1.96 ha is under waste dump Waste generated during the scheme period will be 110785 cum and the waste generated during the conceptual period will be 137530 Cu.m. The dumping area during the conceptual period will be 0.55 ha. By the end of the life, 6.83 ha will be degraded and 1.8 ha will be backfilled by using the generated waste. The backfilled area will be rehabilitated with plantation of 2800 saplings and rest of the area i.e. 5.0 ha will be converted into water reservoir .Top soil generated during the plan period will be used for road making and plantation purpose. The sub grade generated during the plan period is 1740 cu.m which will be stored separately over an area of 0.174 ha for future use. Graphite ore available in the mine contains low grade fixed carbon of 3% to 14% with a average fixed carbon of about 9%. The cut off grade graphite for the mine is 3% of fixed carbon. The raw ore will be upgraded by the existing beneficiation plant within the lease hold area of capacity of 72,000 TPA i.e., 50 TPH. 10t capacity tipper will be used for transportation of crude ore and 3nos of truck will be deployed for the removal of the waste material. The water requirement for domestic as well as non domestic use will be 3500 liters per day which will be sourced from the dug well. Daily make up water requirement for the beneficiation plant will be 80 m<sup>3</sup> which will be made available through the pit water as the mine activity will go beyond the ground water. By this mining activity a total of 14nos of people will got employed and there will be development of the social infrastructure the local area. The cost of the project will be 2 crores. TOR was issued by the SEAC, Odisha on 10.10.2011 for conducting detailed EIA study. Public hearing was conducted on 6.6.2012 for the proposal.

Considering the information/documents furnished by the proponent and presentation made by the **Consultant M/s. Kalyani Laboratories (P) Limited, Bhubaneswar** on behalf of project proponent, the SEAC recommended for the grant of environmental clearance in favour of the project proponent with the following conditions

1. The applicant (Project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned

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by him in Form-1, Final EIA reports and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.

2. The applicant will take necessary steps for socio-economic development of the people of the area on need based assessment for providing employment, education, health care, drinking water and sanitation, road and communication facilities etc.
3. The applicant will comply to the points, concerns and issues raised by the people during public hearing on 06.06.2012 in accordance with the commitments made by him thereon.
4. The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.
5. For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Orissa on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.
6. The core zone should be monitored intensively with no. of stations as prescribed by CPCB, Delhi and unit of pollutant level should be expressed as NAAQ of CPCB, Delhi. The detailed methodology adopted for analysis of samples shall be clearly indicated.
7. The proponent shall submit baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA, Odisha.
8. Zero waste mineral concept shall be implemented after installation of proposed beneficiation plant to utilize the low grade graphite from cut off (3% fixed carbon) onwards.
9. Tailings to be generated from beneficiation plant shall be disposed off properly without causing any environmental nuisance. A detailed proposal for management of tailings shall be submitted to sEIAA, Odisha within two months.
10. Waste water generated from beneficiation plant shall be treated properly and recycled. Under no circumstances there shall be any discharge of waste water from beneficiation plant to outside mining lease area..
11. The following shall be implemented viz. (a) dump run-off should be diverted into settling ponds (b) adequate rain water harvesting and ground water recharging facilities should be developed in the core zone; (c) attempt should be made to achieve zero water balance.
12. Maintenance of roads through which transportation of ores are undertaken shall be carried out by the project proponent regularly at its own cost.

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13. Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools and other public amenities located nearest to sources of dust generation as applicable) and records shall be submitted to the SEIAA, Orissa.
14. Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
15. Efforts may be made to use surface water instead of ground water for mining and allied activities. Detail proposal of rain water harvesting and surface runoffs managements shall be furnished. These should be collected and used in dust suppression and plantation.
16. Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore / dust takes place.
17. Rain water harvesting shall be undertaken to recharge the ground water source.
18. Monitoring of ground and surface water quality shall be regularly conducted and records should be maintained and data shall be submitted regularly to the SEIAA, Odisha.
19. The proponent shall ensure that no silt originating due to mining activity is transported in the surface water course. Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.
20. Trenches / garland drains shall be constructed at foot of dumps to arrest silt from being carried to water bodies. Adequate number of Check Dams shall be constructed across seasonal/perennial nallahs (if any) flowing through the ML area and silts be arrested. De- silting at regular intervals shall be carried out.
21. Provision shall be made for the housing of the labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
22. Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. The Proponent shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral

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dust on the workers shall be conducted and records maintained including health records of the workers. Awareness programme for workers as well as local people on impact of mining on their health water conservation and quality sanitation and precautionary measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by follow up action wherever required. Occupational Health Centre shall be established near the mine site itself.

23. Shelter belt i.e Wind Break of 15 m width and consisting of at least 5 tiers around lease facing the human habitation, school / agricultural fields etc. (if any in the vicinity), in the safety zone/ back-filled & reclaimed areas, around voids & roads shall be raised. Green belt development and selection of plant species shall be as per CPCB guidelines. Density of the trees has to be around 2500 plants per hectare. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Help & guidance of local DFO may be sought in the matter. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the SEIAA, Odisha within six months.
24. **The top soil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long ( not more than 3 years). The topsoil shall be used for land reclamation and plantation.**
25. The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and its phase-wise stabilization shall be carried out. Proper terracing of OB dump shall be carried out so that the overall slope shall not exceed 28<sup>o</sup> Backfilling shall be done as per approved mining plan. Back-filling to start from 3<sup>rd</sup> year onwards of the mining operation & the entire quantity of waste generated shall be backfilled & liquidated within five years. There shall be no external over-burden dumps after the 6<sup>th</sup> year of the mining operation. The backfilled area shall be afforested. Back-filling has to be done in a manner that it is restored to the normal ground level. Monitoring & management of rehabilitated areas should continue till the vegetation is established & becomes self-generating. Compliance status to be reported to the appropriate authorities.
26. The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this funds shall be diverted for other purposes. Year-wise expenditure for this fund should be reported to the SEIAA, Orissa.
27. The critical parameters in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, pH and Total Suspended Solids (TSS)].

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The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry [www.envfor.nic.in](http://www.envfor.nic.in) shall also be referred in this regard for its compliance.

28. A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the SEIAA 5 years in advance of final mine closure for approval.
29. The project proponent shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and ground water) required for the project.
30. The above mentioned stipulated conditions shall be complied in time bound manner. Failure to comply with any of the conditions mentioned above may result in withdrawal of this environmental clearance and attract action under the provisions of Environment Protection (EP) Act, 1986.

**(DR. G. K. ROY)**  
**CHAIRMAN, (WORKING), SEAC**

**(DR. D. K. ROUT)**  
**MEMBER, SEAC**

**(SRI SRIDHAR BEHERA)**  
**MEMBER, SEAC**

**(DR. S. K. BISWAL)**  
**EMBER, SEAC**

**(DR. MOHESHWAR PATRA)**  
**MEMBER, SEAC**

**(DR. C. R. MOHANTY)**  
**MEMBER, SEAC**

**(SRI. S. DAS)**  
**SECRETARY, SEAC**

**APPROVED**

**CHAIRMAN, SEAC**

***SECRETARY, SEAC***