MINUTES OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ORISSA HELD ON 24th May, 2010

The meeting of State Level Expert Appraisal Committee, Orissa was held on 24th May, 2010 in the Conference Hall of Orissa State Pollution Control Board, Bhubaneswar at 11.00 AM. Sri Sasanka Sekhar Patnaik, Member SEAC, Orissa chaired the meeting. The following members were present in the meeting.

1.	Sri Sasanka Sekhar Patnaik	-	Member
2.	Prof. Swoyam Prakash Rout	-	Member
3.	Dr. Moheshwar Patra	-	Member
4.	Prof. R. C. Mohanty	-	Member
5.	Prof. Kumar Das	-	Member
6.	Dr. Harekrishna Nayak	-	Member
7.	Dr. Surendra nath Das	-	Member

A total of 6 project proponents were invited for scoping followed by discussion. The agenda-wise proceedings and deliberations of the meeting of the committee are detailed below :

ITEM NO – 1

EXPANSION OF POWER PLANT OF M/S FACOR POWER LTD, BHADRAK, ORISSA

The proposal was considered by the SEAC 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. The project proponent had submitted information in the prescribed format (Form-I) along with pre-feasibility report. According to the Form-I and presentations made by the proponent, the proposal is for expansion of power plant of M/s Facor Power Ltd, Bhadrak**.** The proponent received EC for their earlier application for 45MW from MoEF, Govt. of India in 2009. In addition, they already have EC for expanding their existing ferro-alloy production. The present application is related to expansion and reconfiguration of their CPP production capacity to 2X50MW. They clarified that they will put up two units of 50MW capacity each instead of 45 MW for which EC has already been obtained. Civil works have been completed to a large extent for the power plant of 50 MW . The Committee felt that the proponents have revised their earlier proposal of CPP capacity from 45 MW to 50MW and so the earlier EC issued by MoEF can't be held valid. Consequently, they may be issued with TOR for a fresh EC in respect of (2X50), i.e., 100 MW CPP. However, the base level environmental data being collected by them since March 2010 in their own admission can be used for the fresh EIA/EMP studies. But the future pollution level envisaged along with their management plan

may take the expansion of their ferro-alloys unit and the initial 45MW CPP under implementation into consideration together with the expansion of capacity of the CPP. Considering the information furnished and presentation made by the consultant Sri S.N. Sarangi, **M/s Geomin Consultants (P) Ltd. 267, Kharavel Nagar, Bhubaneswar** of the project proponent, the SEAC prescribed the following TORs for undertaking detailed EIA study:

1. The proponent has informed to use washery coal rejects with adequate GCV, i.e, 2600 kCal/kg to supplement their raw coal supplies from MCL. The unit shall furnish detail analysis of washery rejects.
2. Copy of permission to draw water to an extent of 500 m3/hr, i.e., 12,000 m3/day from Salandi river from the competent authority shall be obtained.
3. 100% use of fly ash is required as per MoEF norms. The proponent may produce MOUs with end-users executed for the purpose.
4. Stacking and use of bottom ash should be specified. Their contention of screening and reusing the un-burnt carbon content of bottom ash should also be included.
5. The height at which monitoring of stack emission parameters including is proposed to be undertaken may be clarified.
6. The proponent should produce a technical certificate from the plant designers that the stack height of 120 m is adequate to effectively carry and disperse emissions and arrest fine particles generated during combustion in both the coal burning facilities.
7. The study area should cover an area of 10 km radius around the proposed site. Land use of the study and project area shall be given.
8. Location of National Parks, Sanctuaries, Biosphere Reserves, wildlife corridors, Tiger/Elephant reserves (existing as well as proposed), and existence of rare and endangered flora and fauna if any, within 10 km of the project site should be clearly indicated. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above under the Wildlife (Protection) Act, 1972 with copy may be furnished.
9. A detailed biological study of the study area (core zone & buffer zone - 10 km radius) shall be carried out. Details of flora & fauna, duly authenticated separately for core & buffer zones should be furnished based on field survey indicating the schedule of the fauna present. In case of any schedule-I fauna found in the study area, necessary plan for their conservation should be prepared in consultation with the State Forest & Wildlife Department and details furnished. Necessary cost details for executing the conservation measures should be furnished & incorporated as part of the project cost.
10. Land requirement for the project to be optimized. Item-wise break up of land requirement and its availability to be furnished as per the norms prescribed by Central Electricity Authority (CEA).

11. Fuel analysis may be provided (sulphur, ash content and mercury) with grade of coal. Details of auxiliary fuel, if any including its quantity, quality, storage etc should also be given.

12. Details regarding ash pond impermeability and whether it would be lined, if so details of the lining etc. may be provided. The steps to ensure long-term storage of ashes, if warranted, should also be indicated.

13. One season (other than monsoon) site-specific meteorological data shall be provided. The AAQ data for the period may be given along with the dates of monitoring. The parameters to be covered shall include PM10, RSPM, SO_2 NOx and Ozone (ground level). The location of the monitoring stations should be so decided as to take into consideration the predominant downwind direction, population zone and sensitive receptors including reserved forests. There should be at least one monitoring station in the upwind direction.

14. Details of fugitive emission from Coal Handling Plant (CHP), ash handling and ash disposal area and its control system may be specified.

15. Adequate space shall be earmarked for installation of Flue Gas Desulphurisation (FGD) system in future if required. This should also include for management and disposal of solid waste to be generated from FGD system. Details of flue gas management system may also be provided.

16. Details of rainwater harvesting and how it will be used in the plant shall be provided. Water conservation measures proposed in different units of operation of the project should also be given. Quantity of water requirement for the project should be optimized. Details of water balance taking into account reuse and re-circulation of effluents may be provided.

17. Detail run off management of coal stockyard and ash disposal area to be specified.

18. Details of green belt, i.e. the land with not less than 1600 trees per ha giving details of species, width of plantation, planning schedule etc. should be furnished.

19. Detail precaution measures for handling chlorine, one of the raw materials, needs inclusion.

20. Points raised/likely to be raised during public hearing and commitment of the project proponent on the same may be included.

21. Risk assessment should be carried out. It should take into account the maximum inventory of storage at site at any point in time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided.

22. Occupational health impact and remedial measures of the project may be studied.

23. Socio-economic impacts due to project activity are to be assessed and based on the study. Developmental activities proposed to be undertaken by the project proponent to be specified. As far as possible, quantitative dimension to be given. Study should include Corporate Social Responsibility (CSR) and it should be carried out as the entry point activity as trust building measures.

24. This Terms of References (TORs) is valid for a period of two years from the date of issue of TORs for submission of the EIA/EMP report after public consultation.(This is in conformity with the MoEF, Govt. of India office memorandum No. J-11013/41/2006-IAII(I) dt. 22.3.10).

ITEM NO .2

PROPOSAL PATMUNDA MANGANESE MINES OF M/S SUN ALLOYS & MINERALS LTD. FOR PRODUCTION OF MANGANESE ORE 5,086TPA OVER AN AREA OF 43.568HA HA. VILLAGE- PATMUNDA DIST – SUNDARGARH, ORISSA

The proposal was considered by the SEAC to determine the Terms of Reference (TOR) for taking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA notification, 2006. The project proponent had submitted information in the prescribed format (Form-I) along with pre-feasibility report. According to the Form-I and presentations made by the proponent, the proposal is for production of manganese ore 5,086TPA . The mining lease area is 43.568ha ha and total lease area is non forest land. The mining lease of Patmunda 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 43.568ha 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 . The mine working will 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^3 solid waste is likely to be generated in 5yrs. The present pit area is 2.04ha. It is to be expanded to 10.96 ha. The water requirement is 25 KLD and source of water is ground water. Considering the information furnished and presentation made by the consultant Sri S.N.Sarangi , M/s Geomin Consultant Pvt Ltd. Bhubaneswar of the project proponent, the SEAC prescribed the following TORs for undertaking detailed EIA study:

1. Profile of the project proponent and his background to establish the financial and entrepreneurial competency to undertake the project may be included.
2. Duly attested & certified Mining Plan approved by concerned authority may be submitted along with the copy of the current lease deed in the name of the proponent. Present status of mining lease may be given.

3. The EIA study area shall encompass 10 km radius from the mine lease boundary as buffer zone.

4. The existing pits should be economically exhausted and present dumps be back filled and the reclaimed with plantation before further pits are opened up.

5. Collection of one season (non-monsoon) primary baseline data on ambient air quality, water quality, noise level, soil and flora and fauna and site-specific meteorological data should also be collected. The location of the monitoring stations should be justified.

6. Air quality modeling should be carried out for prediction of impact of the project and the existing mines in the vicinity on the air quality of the area focusing more in the villages within 3 kms from the mine. It should also take into account the impact of movement of vehicles for transportation and handling of minerals, OB including mining activity through volume source modeling. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction and speed may also be indicated on the map. The modeling should take into consideration the existing mines in the study area as regards their polluting potential rather the existing level. Since the consultant is already working in the area for other proponents, the baseline data and air sampling stations proposed in the buffer zone are likely to overlap. This would make the EIA estimation erratic. The present core zone may have additional air sampling stations at different heights since the wind speed/direction is likely to be different and thus prediction modeling would be erratic.

7. Availability of requisite quantity of surface, sub-surface and ground water and their source to be furnished along with water balance. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.

8. Details of water bodies and drainage pattern of the ML area may be specified**.**

9. Progressive reclamation plan, post-mining land use, progressive mine closure and greenbelt development plan should be prepared in tabular form and be submitted. Milestones for the above activities may be specified in the table.

10. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife corridors, Tiger/Elephant reserves (existing as well as proposed), and existence of rare and endangered flora and fauna if any, within 10 km of the mine lease should be clearly indicated. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above under the Wildlife (Protection) Act, 1972 and copy thereof, may be furnished.

11. A detailed biological study of the core zone and buffer zone (10 km radius of the mining lease area) should be carried out. Details of flora and fauna duly authenticated separately for core and buffer zones should be furnished based on field survey indicating the schedule of the fauna present. In case of any schedule-I fauna found in the study area, necessary plan for their conservation should be prepared in consultation with the State Forest & Wildlife Department and details may be furnished. Necessary cost details for executing the conservation measures should be furnished and incorporated as part of the project cost.

12. Occupational health impact and remedial measures thereof for the project may be studied.

13. Baseline data for health status survey for all the employees including labourers and the residents of the nearby villages within 5 km distance may be carried out. Welfare of mine workers is the prime responsibility of the project proponent. Various activities such as regular health check up, first-aid, shelter for rest and meals, drinking water etc. are to be taken up at the project cost. Nearby mine owners may form a society and a common fund for the welfare of mineworkers may be created. Besides various Govt. schemes and other sources may be explored. This aspect has to be covered in the EMP.

14. Socio-economic impact due to project activity may be assessed and based on the study, developmental activity proposed to be undertaken by the project proponent to be specified and as far as possible, quantitative dimension to be given. Study should include Corporate Social Responsibility (CSR) and it should be carried out as the entry point activity as trust building measures.

15. Points raised/likely to be raised during public hearing and commitment of the project proponent on the same may be included.

16. The depth of the ground water table in the area vis-a-vis minable depth of the bodies may be clarified with either primary or authentic secondary data in the EIA report. Rainwater harvesting and treatment system for pumped out quarry water if any may be submitted.

17. Management of OB dumps and other solid wastes generated during mining may be addressed through incorporation of a concrete plan for the same. Proper care should be taken for treating the effluents along with rainwater harvesting and wash offs from OB dumps to adequately recharge the ground water resources.

18. Colored maps depicting land use/change of the region showing sensitive / fragile features and detailed lay-out of the site clearly showing green-belt (existing & planned) should be furnished.

19. Satellite imagery of the location of mine should be submitted with demarcation of other proposed/in-operation mines in nearby area. Location is also to be shown in Tehsil map procured from the Revenue Department. This should be used as baseline information to compare the impact of mining in the area in future.

20. Risk assessment and disaster management plan should be given.

21. EMP taking into account the pre- and post-project environment impacts may be included.

22. Any litigation/ court case pending against the proposal should also be included.

23. The EIA report should includes the specified methodology to be adopted for collection and analysis of 12 air quality parameters as per the Central Pollution Control Board Notification No. B-29016/20/90/PCI-L dated 18th November 2009 published in the Gazette of India Part III-Section 4 No 217 Extraordinary. The analytical methods to be followed is specified in the above notification is to be maintain the New National Ambient Air Quality Standards

24. This Terms of References (TORs) is valid for a period of two years from the date of issue of TORs for submission of the EIA/EMP report after public consultation.(This is in conformity with the MoEF, Govt. of India office memorandum No. J-11013/41/2006-IAII(I) dt. 22.3.10).

ITEM - 3

M/S. SHREE MINERALS & METALS FOR CHROME ORE BENEFICIATION PLANT THROUGHPUT 44,000 TPA TO PRDUCE CHROME CONCENTRATE 24,000 TPA AT JAMINIBANDHA ,BHANDARIPOKHARI, DISTRICT – BHADRAK.

The project proponent submitted prescribed Form -1 and pre-feasibility report along with the draft TORs. It's a proposed project for **CHROME ORE BENEFICIATION PLANT OF THROUGHPUT 44,000 TPA TO PRDUCE CHROME CONCENTRATE 24,000 TPA AT JAMINIBANDHA ,BHANDARIPOKHARI, DISTRICT – BHADRAK.** The Applicant aided by the consultant Sri Debasis Biswal, M/s Kalyani Laboratories, Bhubaneswar gave a presentation on the salient features of the project and the draft Terms of Reference for undertaking detailed EIA study.

The proponent proposes to use low grade chromite ore from Sukinda area , possibly from M/s. B.C. Mohanty Mines. They are to use 44,000 TPA low grade fragile ores containing <33% Cr_2O_3 to get 24,000 TPA of beneficiated product with ~80% Cr_2O_3. The solid waste to be generated is around 8,000 TPA with 0.3% Cr_2O_3. Ground water makeup water 112 m^3/day) is proposed to be used for the purpose of beneficiation since the nearby river Baitaranee is ~8 kms away. The Tailing pond would store all the effluents generated over an area of 1.77 acres to a depth of 7m. The supernatant water to the tune of 490m^3/day containing 3-10% Cr, i.e., 35-45 mg/kg di-chromite is to be treated by ferrous sulphate dosing for removal of soluble Cr(VI) before reuse in the process. The land to be used for the COB plant is agricultural land and the proposed plots are surrounded by low-lying agricultural land and villages.

During the discussion, the following points emerged.

1. Since the area in consideration is largely being used and surrounded by agriculture fields, it should not be exposed to Cr(VI) contamination, which is harmful to plants and animals. The environmental hazards of Cr(VI) is very well known and the Committee members are sincerely convinced that no virgin area should be exposed to Cr(VI) contamination. The proponent is free to use any area in the Kaliapani (Sukinda) or Boula valleys or close by since the low grade raw materials are easily available there, the area is already contaminated. The proponent can also economise the process by saving on cost of transportation making the process profitable.
2. The $FeSO_4$ dosing process of reduction of Cr(VI) would call for acidification of waste water from external sources for the reduction process to proceed. This would further contaminate the nearby surface water and fields damaging crops and severely affecting sources of irrigation and drinking water of the region. Further, the process efficiency and economics are in question since years, which have not been solved as yet.
3. The proponent further clarified that he is open-minded as regards the source of raw material to be used. The entire process flow-sheet including water intake, flow rate of slurry to be beneficiated, wastes to be generated and dosing of $FeSO_4$ and all other associated process design as well as operational parameters would depend on the

nature and analysis of the raw material, the process becomes uncertain and fluid. The Committee could not deliberate on the nature and quantum of wastes and effluents to be generated nor the mass balance of the entire process because of this open-ended view of the proponent.

In view of the above over-powering reasons and unsolved environmental questions, the Committee was of the view that the application for TOR may be rejected in its present form. The proponent is free to select some of the suggested areas and bring in modifications in their process flow-sheet and effluent treatment while applying for fresh EC, if they so desire.

Item – 4

M/S FAKIR ROHI DAS FOR BRAHMANIPALI QUARTZ & QUARTZITE MINE OVER AN MINE LEASE AREA 25.046 HA AT: BRAHMANIPALI, PS- KATARBAGA , DIST: SAMBALPUR

The proposal was considered by the SEAC 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. The project proponent had submitted information in the prescribed format (Form-I) along with feasibility report. According to the Form-I and presentations made by the proponent, the proposal is for production of 5115. 8 TPA quartzite. The mining lease area is 25.046 ha, and total lease area is non forest land**.**Government of Odisha has conditionally granted Brahmanipali Quartz & Quartzite Mine lease at village Brahmanipali (over an area of 25.046 ha) vide letter no. 11271/SM on dated 19.09.2000 for a period of 20 years subject to approval of mining plan. The Mining Plan was approved by Director of Mines, Govt. of Odisha, Bhubaneswar vide letter no. M-XV-(b)-12/06-2247/DM dt-6-3-2007. Department of Steel and Mines , Govt. of Odisha granted final order vide letter no-3584/III(D)SM.11/95/SM. Bhubaneswar on 10.04.07. The lease deed was executed by The Collector, Sambalpur on 3rd October 2007**.** . The mine working will be opencast manual. The water requirement is 14 KLD and source of water is ground water.

Considering the information furnished and presentation made by the consultant Sri Patra , **For Envotech & Management Consultancy Pvt. Ltd.**, Bhubaneswar of the project proponent, the SEAC prescribed the following TORs for undertaking detailed EIA study:

1. Profile of the project proponent and his background to establish the financial and entrepreneurial competency to undertake the project may be included.
2. Duly attested & certified Mining Plan approved by concerned authority may be submitted along with the copy of the current lease deed in the name of the proponent. Present status of mining lease may be given.
3. The EIA study area shall encompass 10 km radius from the mine lease boundary as buffer zone.

4. Collection of one season (non-monsoon) primary baseline data on ambient air quality, water quality, noise level, soil and flora and fauna and site-specific meteorological data should also be collected. The location of the monitoring stations should be justified.

5. Air quality modeling should be carried out for prediction of impact of the project and the existing mines in the vicinity on the air quality of the area focusing more in the villages within 3 kms from the mine. It should also take into account the impact of movement of vehicles for transportation and handling of minerals, OB including mining activity through volume source modeling. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction and speed may also be indicated on the map. The modeling should take into consideration the existing mines in the study area as regards their polluting potential rather the existing level. Since the consultant is already working in the area for other proponents, the baseline data and air sampling stations proposed in the buffer zone are likely to overlap. This would make the EIA estimation erratic. The present core zone may have additional air sampling stations at different heights since the wind speed/direction is likely to be different and thus prediction modeling would be erratic.

6. Availability of requisite quantity of surface, sub-surface and ground water and their source to be furnished along with water balance. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.

7. Details of water bodies and drainage pattern of the ML area may be specified.

8. Progressive reclamation plan, post-mining land use, progressive mine closure and greenbelt development plan should be prepared in tabular form and be submitted. Milestones for the above activities may be specified in the table.

9. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife corridors, Tiger/Elephant reserves (existing as well as proposed), and existence of rare and endangered flora and fauna if any, within 10 km of the mine lease should be clearly indicated. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above under the Wildlife (Protection) Act, 1972 and copy thereof, may be furnished.

10. A detailed biological study of the core zone and buffer zone (10 km radius of the mining lease area) should be carried out. Details of flora and fauna duly authenticated separately for core and buffer zones should be furnished based on field survey indicating the schedule of the fauna present. In case of any schedule-I fauna found in the study area, necessary plan for their conservation should be prepared in consultation with the State Forest & Wildlife Department and details may be furnished. Necessary cost details for executing the conservation measures should be furnished and incorporated as part of the project cost.

11. Occupational health impact and remedial measures thereof for the project may be studied.

12. Baseline data for health status survey for all the employees including labourers and the residents of the nearby villages within 5 km distance may be carried out. Welfare of mine workers is the prime responsibility of the project proponent. Various activities such as regular health checkup, first-aid, shelter for rest and meals, drinking water etc. are to be taken up at the project cost. Nearby mine owners may form a society and a common fund for the welfare of mineworkers may be created. Besides various

Govt. schemes and other sources may be explored. This aspect has to be covered in the EMP.

13. Socio-economic impact due to project activity may be assessed and based on the study, developmental activity proposed to be undertaken by the project proponent to be specified and as far as possible, quantitative dimension to be given. Study should include Corporate Social Responsibility (CSR) and it should be carried out as the entry point activity as trust building measures.

14. Points raised/likely to be raised during public hearing and commitment of the project proponent on the same may be included.

15. The depth of the ground water table in the area vis-a-vis minable depth of the bodies may be clarified with either primary or authentic secondary data in the EIA report. Rainwater harvesting and treatment system for pumped out quarry water if any may be submitted.

16. Management of OB dumps and other solid wastes generated during mining may be addressed through incorporation of a concrete plan for the same. Proper care should be taken for treating the effluents along with rainwater harvesting and wash offs from OB dumps to adequately recharge the ground water resources.

17. Colored maps depicting land use/change of the region showing sensitive / fragile features and detailed lay-out of the site clearly showing green-belt (existing & planned) should be furnished.

18. Satellite imagery of the location of mine should be submitted with demarcation of other proposed/in-operation mines in nearby area. Location is also to be shown in Tehsil map procured from the Revenue Department. This should be used as baseline information to compare the impact of mining in the area in future.

19. Risk assessment and disaster management plan should be given.

20. EMP taking into account the pre- and post-project environment impacts may be included.

21. Any litigation/ court case pending against the proposal should also be included.

22. The EIA report should includes the specified methodology to be adopted for collection and analysis of 12 air quality parameters as per the Central Pollution Control Board Notification No. B-29016/20/90/PCI-L dated 18th November 2009 published in the Gazette of India Part III-Section 4 No 217 Extraordinary. The analytical methods to be followed is specified in the above notification is to be maintain the New National Ambient Air Quality Standards

23. **This Terms of References (TORs) is valid for a period of two years from the date of issue of TORs for submission of the EIA/EMP report after public consultation.(This is in conformity with the MoEF, Govt. of India office memorandum No. J-11013/41/2006-IAII(I) dt. 22.3.10).**

ITEM - 5

EXPANSION PROPOSAL OF CEMENT GRINDING MILL AND 27MW CPP OF KAPILASH CEMENT WORKS OF M/S. OCL INDIA LTD, AT – BISWALI, TANGI, DIST – CUTTACK

M/s OCL India Ltd., have proposed to enhance the Cement Grinding capacity of Kapilas Cement Works from existing 0.9 MTPA to 2.7 MTPA and 27 MW CPP in existing Grinding Unit at village Biswali, P.O: Barunia, Dist- Cuttack, Orissa. . The Company's present

application is related to the second phase enhancement of cement production capacity from 1.35 MTPA to 2.7 MTPA with a captive power plant of 27MW to meet their internal needs. The proponent questioned the appropriateness of their application pending for more than 60 days in a letter to the SEIAA, which was duly forwarded to SEAC for explanation. On verification of records, it was found that the Form I deposited by the proponent was incomplete and should have been rejected by the SEIAA. However, the proponent requested for withdrawing the application admitting their mistake.so the Committee went ahead with the presentation. The Committee had issued TOR for the first phase expansion of cement production capacity 0.9 MTPA to 1.35 MTPA .The proponent has applied for further expansion of their cement production to 2.7 MTPA in the second phase. They have also applied for a 27MW CPP to meet their power demands. The unit proposes to draw 900m^3 of additional water from Birupa River in the upstream of the embankment with the help of ~ 16km long pipeline and their application for water withdrawal is under process by the Competent Authority. They propose to use 10% coal washery rejects to supplement their coal feed from Talcher. The present TOR would be for the combined capacity cement production from 0.9. MTPA to 2.7 MTPA since the earlier TOR stands null and void in view of the non-submission of final EIA report before applying for fresh for second phase expansion along with CPP..

Based on the information furnished and presentation made by the consultant M/S S.S.Environics ,Patrapada Bhubaneswar , the SEAC prescribed the following TORs for undertaking detailed EIA study

1 Present land use of study area for 10 Km radius should be included.

2 One season (other than monsoon) site-specific meteorological data shall be provided. The AAQ data for the period may be given along with the dates of monitoring. The parameters to be covered shall include PM10, RSPM, SO_2 NOx and Ozone (ground level). The location of the monitoring stations should be so decided as to take into consideration the predominant downwind direction, population zone and sensitive receptors including reserved forests. There should be at least one monitoring station in the upwind direction.

3 Collection of baseline data on air, water, soil, noise, flora, fauna etc. for one season other than monsoon.

4 Ambient air quality monitoring modelling data of the existing unit and projected data for the proposed expansion.

5 Sources of secondary emissions, its control and monitoring as per the CPCB guidelines.

6 A write up on use of wastes including BF slag and fly ash and commitment regarding supply of the wastes by the various companies.

7 Incorporation of RSPM data. Location of one AAQM Station in downwind direction.

8 Water balance cycle data including quantity of effluent to be generated, recycled and reused and discharged.

9 Efforts made to minimize use of ground water. An action plan should be provided. Ground water monitoring minimum at 8 locations.

10 Action plan for surface as well as roof top rainwater harvesting and ground water recharge.

11 Scheme of proper storage of slag, gypsum, clinker, coal.

12 The scheme of mode of transport.

13 Fugitive emissions and control technologies should be provided.

14 Impact of transportation of raw materials and the details of mitigation measures should be included.

15 The proponent proposes to use washery coal rejects to supplement their raw coal supplies from Talcher. The ash and sulphur content of such rejects are to be properly analyzed by a reputed and accredited organisation. The exact source of such wastes to be used should be specified since the analysis of wastes would vary in a wide range if the source changes. The resultant solid waste generated and SO_2 emitted may be specified.

16 Permission to draw water to an extent of 900 m^3 per day in addition to their already granted withdrawal from river Birupa may be produced from the competent authority to be submitted.

17 The proponent may specify number existing bore-wells with diameter depth and extent of water withdrawl.

18 The proponent proposes to use 100% of their fly ash as fillers . The proponent shakk clarify the extent of production of OPC/PPC/PSC grade cement in their works and in which grade the fly ash is proposed to be used and to what extent.

19 Stacking and use of bottom ash should be specified.

20 The efficiency of ESP (99.94%) is to be substantiated by an independent competent body as well as the manufacturers.

21 Land requirement for the project to be optimized. Item-wise break up of land requirement and its availability to be furnished as per the norms prescribed by Central Electricity Authority (CEA).

22 Fuel analysis may be provided (sulphur, ash content and mercury) with grade of coal. Details of auxiliary fuel, if any including its quantity, quality, storage etc should also be given.

23 The steps to ensure long-term storage of ash should be indicated.

24 Details of fugitive emission from Coal Handling Plant (CHP), ash handling and ash disposal area and its control system may be specified.

25 Adequate space shall be earmarked for installation of Flue Gas Desulphurisation (FGD) system in future if required. This should also include for management and disposal of solid waste to be generated from FGD system. Details of flue gas management system may also be provided.

26 Details of rainwater harvesting and how it will be used in the plant shall be provided. Water conservation measures proposed in different units of operation of the project should also be given. Quantity of water requirement for the project should be optimized. Details of water balance taking into account reuse and re-circulation of effluents may be provided.

27 Detail run off management of coal stockyard and ash disposal area to be specified.

28 Detail precaution measures for handling chlorine, one of the raw materials, needs inclusion.

29 Risk assessment should be carried out. It should take into account the maximum inventory of storage at site at any point in time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided.

30 Occupational health impact and remedial measures of the project may be studied.

31 Socio-economic impacts due to project activity are to be assessed and based on the study. Developmental activities proposed to be undertaken by the project proponent to be specified. As far as possible, quantitative dimension to be given. Study should include Corporate Social Responsibility (CSR) and it should be carried out as the entry point activity as trust building measures.

32 Green belt (33%) development plan as per CPCB guidelines. EMP should include a clear map for plantation/green belt.

33 Scheme for compliance to the recommendations mentioned in the CREP guidelines.

34 Details of location of wildlife sanctuary and national parks within 10 km radius of the plant and plan for conservation and protection of the same should be included.

35 Detailed Environment management Plan (EMP) with specific reference to details of air pollution control system, water & wastewater management, monitoring frequency, responsibility and time bound implementation plan for mitigation measure should be provided.

36 EMP should include the concept of waste-minimisation, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

37 Any litigation pending against the project and /or any direction /order passed by any Court of Law against the project, if so, details thereof should be provided.

38 This Terms of References (TORs) is valid for a period of two years from the date of issue of TORs for submission of the EIA/EMP report after public consultation.(This is in conformity with the MoEF, Govt. of India office memorandum No. J-11013/41/2006-IAII(I) dt. 22.3.10).

ITEM NO :6

M/S TARINI MINERALS FOR NUAGAON MANGANESE MINE OVER MINE LEASE AREA 7.85 HA AT: NUAGAON, DIST: SUNDERGARH

The proposal was considered by the SEAC 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. The project proponent had submitted information in the prescribed format (Form-I) alongwith feasibility report. According to the Form-I and presentations made by the proponent, 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 under process of approval. 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. Considering the information furnished and presentation made by the consultant Sri S.Sarangi Geomin Consultant, Bhubaneswar of the project proponent, the SEAC prescribed the following TORs for undertaking detailed EIA study:

1. Profile of the project proponent and his background to establish the financial and entrepreneurial competency to undertake the project may be included.
2. Duly attested & certified Mining Plan approved by concerned authority may be submitted along with the copy of the current lease deed in the name of the proponent. Present status of mining lease may be given.
3. The EIA study area shall encompass 10 km radius from the mine lease boundary as buffer zone.
4. The OB dump proposed is 27m high, which will be quite unstable and difficult to manage the effluents or stabilise. Reasons for such a proposition may be given.
5. Collection of one season (non-monsoon) primary baseline data on ambient air quality, water quality, noise level, soil and flora and fauna and site-specific meteorological data should also be collected. The location of the monitoring stations should be justified.
6. Air quality modeling should be carried out for prediction of impact of the project and the existing mines in the vicinity on the air quality of the area focusing more in the villages within 3 kms from the mine. It should also take into account the impact of movement of vehicles for transportation and handling of minerals, OB including mining activity through volume source modeling. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction and speed may also be indicated on the map. The modeling should take into consideration the existing mines in the study area as regards their polluting potential rather the existing level. Since the consultant is already working in the area for other proponents, the baseline data and air sampling stations proposed in the buffer zone are likely to overlap. This would make the EIA estimation erratic. The present core zone may have additional air sampling stations at different heights since the wind speed/direction is likely to be different and thus prediction modeling would be erratic.
7. Availability of requisite quantity of surface, sub-surface and ground water and their source to be furnished along with water balance. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the project should be provided.
8. Details of water bodies and drainage pattern of the ML area may be specified.
9. Progressive reclamation plan, post-mining land use, progressive mine closure and greenbelt development plan should be prepared in tabular form and be submitted. Milestones for the above activities may be specified in the table.

10. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife corridors, Tiger/Elephant reserves (existing as well as proposed), and existence of rare and endangered flora and fauna if any, within 10 km of the mine lease should be clearly indicated. Necessary clearance, if any, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above under the Wildlife (Protection) Act, 1972 and copy thereof, may be furnished.

11. A detailed biological study of the core zone and buffer zone (10 km radius of the mining lease area) should be carried out. Details of flora and fauna duly authenticated separately for core and buffer zones should be furnished based on field survey indicating the schedule of the fauna present. In case of any schedule-I fauna found in the study area, necessary plan for their conservation should be prepared in consultation with the State Forest & Wildlife Department and details may be furnished. Necessary cost details for executing the conservation measures should be furnished and incorporated as part of the project cost.

12. Occupational health impact and remedial measures thereof for the project may be studied.

13. Baseline data for health status survey for all the employees including labourers and the residents of the nearby villages within 5 km distance may be carried out. Welfare of mine workers is the prime responsibility of the project proponent. Various activities such as regular health check up, first-aid, shelter for rest and meals, drinking water etc. are to be taken up at the project cost. Nearby mine owners may form a society and a common fund for the welfare of mineworkers may be created. Besides various Govt. schemes and other sources may be explored. This aspect has to be covered in the EMP.

14. Socio-economic impact due to project activity may be assessed and based on the study, developmental activity proposed to be undertaken by the project proponent to be specified and as far as possible, quantitative dimension to be given. Study should include Corporate Social Responsibility (CSR) and it should be carried out as the entry point activity as trust building measures.

15. Points raised/likely to be raised during public hearing and commitment of the project proponent on the same may be included.

16. The depth of the ground water table in the area vis-a-vis minable depth of the bodies may be clarified with either primary or authentic secondary data in the EIA report. Rainwater harvesting and treatment system for pumped out quarry water if any may be submitted.

17. Management of OB dumps and other solid wastes generated during mining may be addressed through incorporation of a concrete plan for the same. Proper care should be taken for treating the effluents along with rainwater harvesting and wash offs from OB dumps to adequately recharge the ground water resources.

18. Colored maps depicting land use/change of the region showing sensitive / fragile features and detailed lay-out of the site clearly showing green-belt (existing & planned) should be furnished.

19. Satellite imagery of the location of mine should be submitted with demarcation of other proposed/in-operation mines in nearby area. Location is also to be shown in Tehsil map procured from the Revenue Department. This should be used as baseline information to compare the impact of mining in the area in future.

20. Risk assessment and disaster management plan should be given.

21. EMP taking into account the pre- and post-project environment impacts may be included.

22. Any litigation/ court case pending against the proposal should also be included.

23. The EIA report should includes the specified methodology to be adopted for collection and analysis of 12 air quality parameters as per the Central Pollution Control Board Notification No. B-29016/20/90/PCI-L dated 18th November 2009 published in the Gazette of India Part III-Section 4 No 217 Extraordinary. The analytical methods to be followed is specified in the above notification is to be maintain the New National Ambient Air Quality Standards.

24. **This Terms of References (TORs) is valid for a period of two years from the date of issue of TORs for submission of the EIA/EMP report after public consultation.(This is in conformity with the MoEF, Govt. of India office memorandum No. J-11013/41/2006-IAII(I) dt. 22.3.10).**

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