



OFFICE OF THE REGIONAL OFFICER
STATE POLLUTION CONTROL BOARD, ODISHA
(DEPARTMENT OF FOREST & ENVIRONMENT, GOVT. OF ODISHA)
Plot No. S-3/3, Industrial Estate, Hakimpada, Angul-759143

"By Registered post"

No. 337 /MINES/ROSPCB/AGL/18/2013-14

Date: 09.02.2022

OFFICE MEMORANDUM

In consideration of the online application No.857101, dt.27.01.2022 for obtaining Consent to Establish for Kakudi Kishoripal Sand Mine of M/s. Mahanadi Coalfields Ltd., the State Pollution Control Board is pleased to convey its Consent to Establish under Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 for annual excavation of sand not more than 30,000 Cubic Meter and maximum depth up to 1.5m. during valid mining lease period (as per Environmental Clearance) over mining lease area of 103.50 acres or 41.885 Ha bearing Plot No.949, 948(P) & 947(P), Khata No.70 in Mouza-Kakudi and Plot No.927 & 928(P), Khata No.120 in Mouza - Kishoripal (Kisam-Nadi) as submitted by the applicant, at Mouza: Kakudi & Kishoripal, PS/Tahasil: Talcher in the district of Angul with the following conditions.

GENERAL CONDITIONS:

01. This Consent to Establish is valid for the product, method of mining and capacity as mentioned in the approved mining plan and Environmental Clearance. This order is valid for five years. The proponent shall do substantial mining activities for the proposal within a period of five years from the date of issue of this Consent to Establish order. If the proponent fails to do substantial mining activities for the proposal within five years then a renewal of this Consent to Establish shall be sought by the proponent.
02. The mine shall apply for grant of Consent to operate under section 25/26 of Water(Prevention & Control of Pollution) Act, 1974 & Air (Prevention & Control of Pollution) Act, 1981 at least 3 (three) months before the commencement of production and obtain Consent to Operate from this Board.
03. The mine shall comply to the provisions of Environment Protection Act, 1986 and the rules made there under with their amendments from time to time such as the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as amended from time to time, Hazardous Chemical Rules, / Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 etc. and amendments there

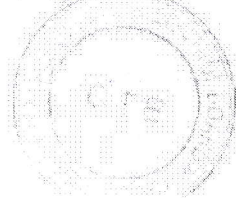
under. The industry shall also comply to the provisions of Public Liability Insurance Act, 1991, if applicable.

04. No change in mining technology and scope of working shall be made without prior approval of the Board.
05. This consent to establish is subject to statutory and other clearances from Govt. of Odisha and/or Govt. of India, as and when applicable.

SPECIAL CONDITIONS:

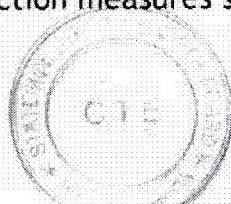
A. GENERAL CONDITONS

1. Conditions stipulated in the Environmental Clearance approved and issued by SEIAA vide letter No.2876, dtd.24.09.2021 shall be abided.
2. This Consent to Establish is granted for the production quantity granted by SEIAA i.e **'Maximum depth of quarrying to be 1.5meter, and maximum permissible quantity of sand to be extracted will be 30,000 cum per annum, pending rate of replenishment of sand at this site'**.
3. The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and groundwater), if any, required for the project.
4. The project proponent has to carry out by engaging appropriate consultant, a study of the annual replenishment rate of sand by collecting pre monsoon & post monsoon data from the field to know the quantum of volume of sand deposited/replenished & extracted in the mining lease area. The detailed comparison of both pre-monsoon and post-monsoon elevation data shall be included in the study report. The replenishment rate of sand may be calculated by using the volumetric survey method or any other methods as laid down in Enforcement & Monitoring Guidelines for Sand Mining, 2020 issued by the MoEF & CC, Govt, of India. The finding of the study shall be submitted to the Board to assess the rate of replenishment of mined out sand in the lease area. **The submission of study report of rate of annual replenishment of sand within one year is obligatory for the project proponent.**
5. For protection of the River Bank, the entire bank of about 740 meters stretch shall be stone patched to protect the river bank from erosion in consultation and on advice of the domain expert with due permission of Water Resources Department, Govt. of Odisha.
6. A Ramp with WBM materials in consultation with the Civil Engineers for plying of vehicles (to & fro) from the sand bed to the top of the river bank and vice-versa shall be constructed.
7. Besides 50 meters of sand barrier, safety zone must be left between the river bank and the mining area as per the available guideline to this effect.
8. There is a gap (inclined) of about 500 meters from the river bank to reach the public road (R&B/RD) of Govt. of Odisha for which a strong two lane WBM road shall be constructed for plying of loaded / empty sand carrying vehicles. This public single road is about 2.5 km long through which the sand vehicles will travel



to reach NH-149 that passes through Talcher town and connected to NH-55. Along this road, there exists few habitations / shops etc. All safety measures shall be taken to avoid any accidents while vehicles plying.

9. Mining activity shall be carried out as per approved mining plan prepared for this project.
10. The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, OB & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Board and other concerned department, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt, in the form to Short Term Permit (STP), Query license or any other name.
11. The project proponent shall take prior statutory and regulatory clearance as required from the concerned authorities in respect of the project, before carrying out any operation.
12. The project proponent should carry out River bed sand mining manually by engaging local laborers in force to check over exploitation of sand at the source.
13. The lease area and the actual working area shall be demarcated on the ground by erecting durable masonry /concrete pillars by the project proponent.
14. Mining is not permissible within the water channel or stream flow area. No stream shall be diverted for the purpose of mining and no natural water course shall be obstructed. The mining or any ancillary activity shall not in any way disturb the flow pattern of the river water during the non-monsoon period. There shall be no sand mining in the river during the rainy season or when there is flow of water in the river.
15. The operation of excavation as proposed shall be manual and shall be strictly as per the method laid down in the approved mining plan. No excavator machine shall be deployed/used by the project proponent for the extraction of sand from the river bed.
16. The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to the Board and concerned Regional Office of the MoEF & CC, Bhubaneswar
17. The natural sand dunes, if any, near or surrounding the lease area shall not be disturbed.
18. Environmental Management Plan (EMP) shall be implemented by PP to ensure compliance with the environmental conditions specified above. The year wise funds earmarked for environmental protection measures shall be kept in separate account



and shall be spent according to the plan proposed. Year wise progress of implementation of EMP shall be reported to the SEIAA, Odisha and OSPCB along with the compliance report.

19. The proponent shall take necessary measures to ensure that there is no adverse impact of the mining operations on the human habitation if any, existing nearby.
20. The mining lease holders shall, after ceasing mining operations, undertake re-grossing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
21. It shall be mandatory for the project management to submit six (06) monthly compliance reports on post environmental monitoring in respect of the stipulated terms and conditions in this Environmental Clearance to the State Environment Impact Assessment Authority (SEIAA), Odisha, SPCB & Regional Office of the Ministry of Environment & Forest, Odisha in hard and soft copies on 1st June and 1st December of each calendar year.
22. A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to the Board and RO, MoEF & CC, Bhubaneswar.
23. If any information furnished by the applicant is found to be incorrect or suppressed and detected on later stage, the consent to establish shall be revoked including initiation of appropriate legal action as deemed fit as per the provisions of Water (Prevention & Control of Pollution) Act, 1974 & Air (Prevention & Control of Pollution) Act, 1981 as amended thereof and rules framed thereunder.
24. The Board may impose further conditions or modify the conditions as stipulated in this order during installation and / or at the time of obtaining consent to operate and may revoke this order in case the stipulate conditions are not implemented and / or information is found to have been suppressed / wrongly furnished in the application form.

B. WATER POLLUTION

25. Sand mining operations shall not affect the existing sources for irrigation / drinking water / industrial purpose.
26. There shall be a 'no working zone' to protect the embankment on both sides, road or rail bridge in the vicinity, if any, dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure.
27. 10 % of the width of river shall be left intact along the embankments on both sides as 'no mining zone'.
28. No mining shall be allowed within 200m of any existing structures dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. In case of River Bridge, this no mining zone shall extend up to a minimum

stretch of 200 meters from the bridge and it may extend up to 500meters in sensitive locations. The lease area shall be accordingly curtailed to carve out the actual sand mining area within the leasehold.

29. Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records shall be maintained. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug well located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six- monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
30. The Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six- monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
31. The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis- a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. premonsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment; Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board clearly showing the trend analysis on six-monthly basis.
32. The Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department.

33. Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
34. The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF & CC, Bhubaneswar and State Pollution Control Board.

C. AIR POLLUTION

35. No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. Project proponent shall ensure that the road may not be damaged due to transportation of the mineral and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and traffic density and they shall maintain the road perpetually till they use as per the advice of the authority concerned.
36. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers
37. The proponent shall make plantation along both sides of the public road of about 2.5 Km in vacant patches of desired species in consultation with the local forest authority of Govt. of Odisha.
38. The haulage road must be two laned and either concrete /WBM road in consultation with the experts and plantation of required species and number shall be made on both sides of the haulage road in consultation with the local forest authority.
39. The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM₁₀, PM_{2.5}, NO₂, CO and SO₂ etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be

monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

40. Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM₁₀ and PM_{2.5} are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipment/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEF&CC, Govt, of India / Central Pollution Control Board.
41. The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system.
42. The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.
43. The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.
44. The vehicles shall not be overloaded and shall be covered with Tarpaulin. The Tahasildar may collect an appropriate road maintenance levy from the lessee as part of the lease conditions on the basis of quantum of sand transported, and utilize the proceeds of the levy for proper maintenance of the extraction paths and roads to prevent their degradation on account of plying of sand trucks.
45. The following measures are to be implemented to reduce Noise pollution:-
 - a. Proper and regular maintenance of vehicles and other equipment
 - b. Limiting time of exposure of workers to excessive noise.
 - c. The workers employed shall be provided with protection equipment and earmuffs etc.
 - d. Speed of trucks entering or leaving the mine is to be limited to moderate

speed of 25 kmph to prevent undue noise from empty trucks.

46. The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-1 species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.
47. The Project Proponent shall plant and nurse a minimum of 200 number of saplings of native species along the approach roads, safety zone of lease area and in community areas in consultation with the Gram Panchayat.

D. SOLID & HAZARDOUS WASTE

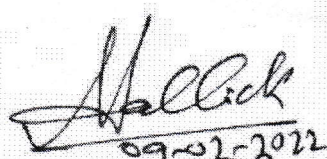
48. The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.
49. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 and its amendments thereof to the recyclers authorized by SPCB, Odisha.

To

The Project Officer, Talcher Colliery
Kakudi Kishoripal Sand Mine,
At/ PO: Dera, Talcher
Dist: Angul-759103, Odisha

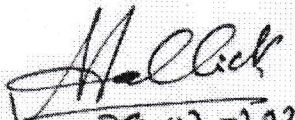
Memo No. 338 (E) /

Date 09.02.2022


09-02-2022
REGIONAL OFFICER
Regional Officer
State Pollution Control Board
ANGUL

Copy forwarded to:

1. The Member Secretary, SPC Board, Odisha, Bhubaneswar
2. The Collector & District Magistrate, Angul
3. The D.F.O., Angul
4. The Tahasildar, Talcher, Angul
5. The Deputy Director Mines, Angul
6. Guard File, Regional Office, Angul.


09-02-2022
REGIONAL OFFICER
Regional Officer
State Pollution Control Board
ANGUL

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