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OFFICE OF THE STATE POLLUTION CONTROL BOARD, ODISHA

(Forest, Environment & Climate Change Department, Govt. of Odisha)
Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII
Bhubaneswar – 751012

By speed post
Through online

No. 2489 /

IND-II- CTE-6771

Date 26.02.2024

CONSENT TO ESTABLISH ORDER

In consideration of the online application No. **5269056** for obtaining Consent to Establish for **Integrated Lakhanpur-Belpahar-Lilari OCP, Lakhanpur Area 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 **Coal production of 40 MTPA over mining lease area of 4399.246 Ha including Railway Sidings, Silo & Conveyor arrangements** at villages- Chharla, Bandhabahal, Balput, Banjipali, Khuntmahul, Tingismal, Khairkuni, Ubuda, Darlipali, Kirarama, Jurabaga, Kusraloi, Karlajori, Khaliapali, Kudaloi, Lakhanpur and Soldia at **Tehsil-Lakhanpur** in the district of **Jharsuguda**, Odisha with the following conditions:

GENERAL CONDITIONS

1. This Consent to Establish is valid for the raw materials, product, manufacturing process and capacity mentioned in the application form. This order is valid for **five** years, which means the proponent shall commence construction of the project within a period of five years from the date of issue of this order. If the proponent fails to do substantial physical progress of the project within five years then a renewal of this consent to establish shall be sought by the proponent.
2. The mine shall comply to the provisions of Environment (Protection) Act, 1986 and the rules made thereunder 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.
3. The mine shall apply for grant of Consent to Operate under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 & section 21 of Air (Prevention & Control of Pollution) Act, 1981 at least 3 (three) months before the commercial production and obtain Consent to Operate from this Board. No operational activity shall commence prior to installation of all pollution control measures.
4. No change in mining technology and scope of work shall be made without prior approval of the Board.

5. This Consent to Establish is granted subject to statutory and other clearances from Govt. of Odisha and/or Govt. of India, as and when applicable.
6. This Consent to Establish supersedes the previously issued Consent to Establish orders of Lakhanpur Opencast Project (22.5MTY) vide No. 22282/IND-II-CTE-6771 Dt.29/11/2022 , Belpahar Opencast Mines (9MTY) vide No. 1520/Ind-II-NOC-5917 Dt.28/01/2015 and New Y-Curve railway siding of Lakhanpur OCP vide No. 4881/IND-II-CTE-6753 Dt.28.03.2023

SPECIAL CONDITIONS:

A. GENERAL:

1. **The proponent shall carry out mining activity as per Environmental Clearance issued vide letter No. J-11015/15/2019-IA-II(M), dated 15.01.2024 by MoEF&CC, Govt. of India and shall obtain amendments, if necessary as mentioned during Consent to Establish presentation.**
2. **Forest Clearance for 417.073 ha shall be obtained along with the status of change in land use for 171.774 ha prior to undertake mining in the abovesaid area. The mining activity in already diverted broken up forest area and non-forest area may be taken up in concurrence with Competent Authority of State Forest Department, Govt. of Odisha.**
3. The proponent shall carry out a study by a reputed institute on spontaneous heating potential of different coal seams and adopt ameliorative measures as per outcome of the study report.
4. The proponent shall develop online monitoring protocol for integrating operation of Heavy Machinery used for mining and transportation and installed CAAQMS in core and buffer zone so that the ambient air quality norms shall conform to both core and buffer area of the mine and the mining operation can be modulated as per requirement and AAQ Data.
5. The proponent shall obtain separate Environmental Clearance, if case for new R&R colony or expansion of R&R colony as applicable.
6. The CTE is granted with direction to ensure that "all requisite measures shall be adopted so as not to violate environmental norms and it has to be ensured that activities do not further add to already existing norms" in terms of order dated 29.08.2022 of the Hon'ble NGT/PB, New Delhi passed in O.A No. 1038/2018 in the matter of news item published in "The Asian age" authorized by Sanjay Kaw Titled "CPCB to rank industrial units on pollution levels with O.A. No. 469/2022-South Gujarat Textile processors Association vrs. Union of India and Others".
7. The CTE is granted without prejudice to the right of the Competent Authority of the Board to recover the environmental compensation as communicated in order No. 999, dtd. 29.01.2020 which is subject to the final result of the Writ petition (C) No. 5851/2020 pending before the Hon'ble High Court of Orissa".
8. Action shall be taken to obtain NOC from CGWA for using and dewatering of mine pit water in the name of integrated project. Till such time, the above activity be regulated under the compliance of CGWA clearances obtained project wise i.e. Belpahar OCP and Lakhanpur OCP.

9. The proponent shall obtain requisite permission from the Water Resources Department, Govt. of Odisha for drawal of water.
10. The proponent shall comply the Environment Clearance Specific condition 1.3. i.e. In addition to the existing facility for 10MTPA mechanized transportation system, PP shall install dedicated in-pit belt conveyor for 15 MTPA with silo loading system till railway siding for transportation of 100% of extracted coal through rail within six months of grant of EC. No road transportation shall be allowed by State Government. Accordingly, SPCB should grant the consent to operate
11. The proponent shall mix the fly ash generated by nearby thermal power plant with OB for back filling of the mine void as per fly ash notification of MoEF&CC, Govt. of India. Proponent shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021.
12. The construction shall be carried out with the fly ash bricks. If the fly ash bricks are not available locally the construction may carried out with other bricks with prior intimation to the concerned Regional Office of SPC Board. A statement indicating use of fly ash bricks during construction period shall be submitted to the Board quarterly for record.
13. The mine shall not store for more than seven days of coal production to avoid coal fire in stock yard as well as coal seam. The mine shall take adequate preventive measures for spontaneous fire in the coal seam as well as stock yard and an action plan regarding this shall be submitted at the time of consent to operate application.
14. The method of mining shall be open cast mining by shovel-dumper in overburden and surface mine with interlocking water sprinkling system, loader and tipper in coal. No change in mining technology and scope of working shall be made without prior approval of the Board.
15. A green belt of adequate width and density preferably with local species along the periphery of the mine, inactive dumps, backfilled area, vacant area and any other vacant area shall be raised so as to provide protection against particulates and noise to ameliorate the environment. A detailed plantation programme in this regard shall be prepared and submitted at the time of making application for consent to operate for assessment.
16. The construction and demolition wastes to be generated from the proposed project shall be disposed of in accordance with the provision under "Construction & Demolition Wastes Management Rules 2016".
17. The proponent shall comply to the provisions of E-Waste (Management) Rules, 2016 and shall handover e-waste to authorized collection centers/ register dismantlers/ recyclers for proper disposal of e-wastes / registered recyclers.
18. Adequate measures shall be taken for control of noise levels to meet the standards as per the Rule 2(1) of the Environmental (Protection)Amendment Rules, 2000 notified vide notification G.S.R. 742 (E), dated 25.09.2000 and Noise Pollution Rule, 2016.

19. Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
20. A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the organization.
21. Rain water harvesting structure shall be developed inside the plant premises and maximum effort shall be made to reuse harvested rain water, with a definite plan and programme to reduce the drawl of fresh water from water bodies.
22. The proponent shall install solar powered lighting and heating system whenever possible in township
23. The mine shall take up adequate measure for routine health checkup of its employees / workers and the people residing in the neighborhood of the plant free of cost.
24. The mine shall maintain the haul road as per the circular of DGMS issued vide Cir.36/1972.
25. The conditions as stipulated in this consent to establish order shall be enforced, inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974 the Air (Prevention & Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.
26. The Board may impose further condition or modify the conditions stipulated in this order during installation, and / or at the time of obtaining consent to operate and may revoke this clearance in case the stipulated conditions are not implemented and / or any information suppressed in the application form.
27. The unit shall abide by the provision of Environment (Protection) Act, 1986 and rules framed thereafter.

B. WATER POLLUTION:

28. The proponent shall ensure installation of ETP of adequate capacity for treatment of Waste Water to be generated from the mining and other activities.
29. The mine shall construct settling tanks in series to settle the suspended solids in the surface run-off water.
30. The domestic wastewater generated from the unit shall be treated in sewage treatment plant to meet the following standards as notified by the MoEF&CC, Govt. of India vide G.S.R. 1265 (E), dated 13.10.2017. The treated water shall be reused for gardening and plantation. Under no circumstances there shall be any discharge of treated waste water to outside the factory premises.

Sl. No.	Parameters	Standards
1.	pH	6.5-9.0
2.	BOD(mg/l)	30

Sl. No.	Parameters	Standards
3.	TSS(mg/l)	<100
4.	Fecal Coliform (MPN/100ml)	< 1000

31. Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the hourly peak rain fall and maximum discharge in the area adjoining the mine site. Sump capacity shall have adequate retention period to allow proper settling of silt material.
32. Dimension of the retaining wall at the toe of dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data. The detail specification shall be worked out and submitted to the Board.
33. Catch drains of appropriate size shall be constructed to divert the run-off from the OB dump to the siltation pond of appropriate size to arrest silt and sediment flows from soil, OB and mineral dumps. Similar arrangement shall be done around the cola stack pile area. The drains shall be regularly de-silted and maintained properly. Surface run-off from OB dump area, coal pile area, top soil storage area shall be routed through adequate settling pond (designed maximum hourly rain fall basis) to meet prescribed standard of SS-100 mg/l and Oil & Grease-10 mg/l before discharge into natural stream/water courses during monsoon.
34. Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells. The monitoring shall be done four times a year in pre-monsoon (April/May), monsoon (August), Post – monsoon (November) and winter (January) seasons. Data thus collected shall be submitted to the Board quarterly.
35. Oil and grease trap shall be installed before discharge of effluent from workshop. Wastewater from the mine pit, check dams or any other discharge leaving lease boundary of the mine shall be properly collected, treated so as to conform the following standard i.e. pH = 5.5 – 9.0, SS = 100 mg/l, COD = 250 mg/l & Oil & Grease = 10 mg/l.
36. Rain water harvesting practice shall be followed by utilizing the rain water collected from the roof of the buildings for recharging of ground water within the premises and other large structures as per the concept and practices prescribed by CPCB, New Delhi and details of which is available in the web site. The management of mine drainage water shall be efficiently done as per the directive of the Central Ground Water Board, New Delhi.
37. The Mine shall provide mechanized wheel washing system along with effluent treatment and recycling facilities at the exit point of the mine. Wheel wash facilities shall be provided to minimize transfer of mud from unpaved approach roads to main paved and/or public roads.

C. AIR POLLUTION:

38. Transportation road shall be black topped / concreted and sustainable coal transport measures shall be adopted to minimize air pollution.
39. Pipe conveyor shall be provided for transportation of coal to railway siding as proposed. The proponent shall provide adequate air pollution control measures at transfer points of pipe conveyors.
40. No village road shall be used for transportation of coal and no road transport route shall be adopted, which is passing through any sensitive location such as schools, hospitals etc.
41. The mine shall deploy higher capacity trucks/dumper to reduce fleet size till Rapid loading system and conveyor belt system is commenced as per Environment Clearance.
42. High efficiency bag filters shall be installed at crushers of the Coal Handling Plants if any. Water sprinkling systems shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points etc. Provision of movable chutes shall be made during loading at CHP to avoid free fall of coal.
43. The unit shall strictly comply the consent conditions and adequate air pollution control measures shall be installed in different potential dust emission points for control of the air pollution.
44. The proponent shall provide adequate pollution control measures in the Railway Sidings.
45. The proponent shall deployed mechanical road sweepers to control the fugitive dust emission on the road.
46. HD IP camera shall be installed at the raw material stock yard, coalface and existing point of the mines.
47. The mine shall provide dust extractor in drilling machines, Fixed sprinkler at CHP, railway siding, Mobile water tanker for quarry, haul road, transport road etc.
48. Coal stockpile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust side cladding all along the conveyor gantry shall be made to avoid air borne dust.
49. Drills shall be wet operated or fitted with dust extractors. The mine shall develop wind barrier wall of 10 meters height all around the coal stack yard to control fugitive coal dust emission.
50. The mine shall provide adequate number of trolley mounted and mobile Fog Cannons for dust suppression.
51. Water sprinkling shall be carried out on unplanted surface of OB dump to control fugitive emission.

52. Drilling shall be avoided to the maximum possible extent for coal excavation. However, drill shall be wet operated or with dust extractors and controlled blasting shall be practiced.
53. The mine shall provide water or water mixed chemicals for dust suppression at all strategic points such as coal stack yards, loading and unloading points, all transfer points, conveyors etc. to suppress dust fine atomizer nozzles arrangement shall be provided on the coal heaps and on land around the crusher / pulverizes. As far as possible conveyors and transfer points etc. shall be provided with enclosures.
54. Adequate ambient air quality monitoring stations for 24 hours operation shall be established in the core zone as well as in the buffer zone for PM₁₀, PM_{2.5}, SO₂ and NO_x monitoring. Location of the stations shall be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Data on ambient air quality (PM₁₀, PM_{2.5}, SO₂ and NO_x) shall be frequently submitted to the State Pollution Control Board once in six months.
55. Continuous ambient air quality monitoring stations (CAAQMS) with data transfer facility shall be established in the core zone as well as in the buffer zone for PM₁₀, PM_{2.5}, SO₂ and NO_x monitoring. Location of the stations shall be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.
56. The mine shall comply the following standard at the loading or unloading, haul road, coal transportation road, coal handling plant (CHP), railway siding, blasting, drilling, overburden dumps or any other dust generating external sources as per the Rule 2(1) of the Environmental Amendment Rules, 2000 notified vide notification G.S.R. 742 (E), dated 25.09.2000.

Pollutant	Time weighted average	Concentration in Ambient Air	Method of Measurement
1	2	3	4
SPM	Annual Average* 24 hours**	360µg/m ³ 500µg/m ³	High volume sampling (Average flow rate not less than 1.1m ³ /min)
RPM(size less than 10 µm)	Annual Average* 24 hours**	180µg/m ³ 250µg/m ³	Respirable Particulate matter sampling and analysis
SO ₂	Annual Average* 24 hours**	80µg/m ³ 120µg/m ³	Improved west and Gaeke method Ultraviolet fluorescence
NO ₂	Annual Average* 24 hours**	80µg/m ³ 120µg/m ³	Jacob & Hochheiser Modified (Na-Arsenic) Method Gas phase Chemiluminescence

(*Annual Arithmetic mean for the measurements taken in a year, following the guidelines for frequency of sampling laid down in clause-2.

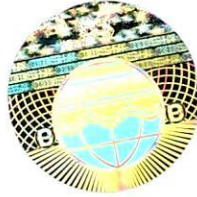
**24 hourly/ 8 hourly values shall be met 92% of the time in a year. However, 8% of the time may exceed but not on two consecutive days.)

57. The haul roads and arterial roads shall be maintained properly with avenue plantation.
58. Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.

D. SOLID AND HAZARDOUS WASTE:

59. The proponent shall comply the Environment Clearance Specific condition 1.5 i.e. PP needs to avoid further external dumping over existing OB of Lakhanpur OCP and Belpahar OCP and their re-handling too shall be avoided. Mine shall be modified accordingly.
60. The management practices for Over Burden shall be carried out as per the approved Mining Plan and subsequent amendments. The Mine shall submit compliances in this regard for any change in Mine Plan.
61. Intermediate storage area for Municipal Solid Waste (MSW) shall be developed inside the premises of proposed township, if any, before handing over the MSW to the concerned ULBs for final disposal.
62. Municipal solid waste generated from the township shall be disposed-off as per Solid Waste Management Rules, 2016.
63. The proponent shall segregate organic waste from the MSW of township and segregated organic waste shall be converted to manure through organic waste converter. The proponent shall store the organic waste in closed shed inside the proposed township, if any, before use of the same in organic waste converter.
64. All required sanitary and hygienic measures shall be in place before starting construction activities of township and to be maintained throughout the construction phase.
65. All the top soil excavated during construction activities of township shall be stored for use in horticulture / landscape development within the project site.
66. Construction spoils of township, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they shall not leach into the ground water.
67. The Project proponent shall dispose-off hazardous waste materials such as tarry products, lead containing products, paints & pigments residues, broken fluorescent and mercury lamps during construction and operational phase as per Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 as amended from time to time.

68. Hazardous waste shall be disposed off as per the provisions of Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 as amended from time to time.
69. Top soil of mining area shall be stacked separately with proper slope at earmarked site (s) with adequate measures and shall be used for reclamation and rehabilitation of mined out areas.
70. Back filling of abandoned pit and reclamation shall be carried out as per approved mining plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status in this regard shall be submitted to the Board on yearly basis.




MEMBER SECRETARY

To,

The Project Officer,
M/s Integrated Lakhapur-Belpahar-Lilari OCP
M/s Mahanadi Coal Fields Ltd.
Tehsil-Lakhanpur,
District-Jharsuguda-768217

Memo No. 2490 /Date 26.02.2024

Copy forwarded to:

1. The Director, Directorate of Mines, Govt. of Odisha, Bhubaneswar
2. The Collector and District Magistrate, **Jharsuguda**.
3. The DFO, **Jharsuguda**.
4. Consent to Operate Cell, S.P.C. Board, BBSR.
5. Hazardous Waste Management Cell, S.P.C. Board, BBSR.
6. The Regional Officer, S.P.C. Board, **Jharsuguda**.
7. Copy to Guard file.


ADDL.CHIEF ENV. ENGINEER

