



**REGIONAL OFFICE OF  
STATE POLLUTION CONTROL BOARD, ODISHA,  
S3/3 INDUSTRIAL ESTATE, HAKIMPADA, ANGUL 759143**

**CONSENT ORDER**

**By Regd. Post with A.D.**

No...1532...../

Dt...27.04.2016

**CONSENT ORDER NO. 526**

**Sub: Consent to Operate**

Ref: - Your application no. 620653, dtd. 07.04.2016 & letter dtd. 26.04.2016.

Consent is hereby granted u/s 25/26 of Water (Prevention & Control of Pollution) Act, 1974 and u/s 21 of Air (Prevention & Control of Pollution) Act, 1981 and rules framed there under to

Name of the Industry: **M/s Mahanadi Coalfields Ltd. (Mandapal Sand Mine)**

Name of the Occupier & Designation: **Sri Kapil Chandra Sahoo, Mines Manager (Occupier)**

Address: **At/PO – Deulbera Colliery, Dist. – Angul - 759102**

**This consent order is valid for the period up to 31.03.2020.**

This consent order is valid for the product quantity, specified outlets, discharge quantity and quality, specified chimney/stack, emission quantity and quality of emissions as specified below. This consent is granted subject to the general and special conditions stipulated there in.

**A. DETAILS OF PRODUCTS MANUFACTURED**

Sl. No	Product	Quantity
1	Sand	2,50,000 Cu.m/Annum



**B. DISCHARGE PERMITTED THROUGH THE FOLLOWING OUTLET SUBJECT TO THE STANDARD**

Out-let No.	Description of the Outlet	Point of Discharge	Quantity of discharge KLD or KL/hr	Prescribed Standard			
1							
2							

**C. EMISSION IS PERMITTED THROUGH THE FOLLOWING CHIMNEYS/STACKS SUBJECT TO THE PRESCRIBED STANDARD**

Chimney stack No.	Description of Chimney/ Stack	Stack height (m)	Quantity of emission (m <sup>2</sup> /hr)	Prescribed standard			
				Particulate Matters (PM)	SO <sub>2</sub>	NO <sub>x</sub>	
1					-	-	
2					-	-	

**D. DISPOSAL OF SOLID WASTE PERMITTED IN THE FOLLOWING MANNER**

Sl. No	Type of Solid Waste	Quantity generated (CUM/M)	Quantity to be reused on site (TPD)	Quantity to be reused off site (TPD)	Quantity disposed off (TPD)	Description of disposal site.
1						



**E. GENERAL CONDITIONS FOR ALL UNITS**

1. The consent is given by the board in consideration of the particulars given in the application. Any change or alternation or deviation made in actual practice from the particulars furnished in the application will also be the ground liable for review/variation/revocation of the consent order under section 27 of the Act of Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & control of pollution) Act, 1981 and to make such variations as deemed fit for the purpose of the Acts.
2. The industry would immediately submit revised application for consent to operate to this Board in the event of any change in the quantity and quality of raw material/and products/manufacturing process or quantity/quality of the effluent rate of emission/air pollution control equipment/system etc.
3. The application shall not change or alter either the quality or quantity or the rate of discharge or temperature or the route of discharge without the previous written permission of the Board.
4. The applicant shall comply with and carry out the directives/orders issued by the Board in this consent order and at all subsequent times without any negligence on this part. In case of non compliance of any order/ directives issued at any time and/or violation of the terms and conditions of this consent order, the applicant shall be liable for legal action as per the provisions of the law/Act.
5. The applicant shall make an application for grant of fresh consent at least 90 days before the date of expiry of this consent order.
6. The issuance of this consent does not convey any property right in either real or personal property or any exclusive privileges nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of central state laws or regulation.
7. This consent does not authorize or approve the construction of any physical structure or facilities or the undertaking of any work in any natural water sources
8. The applicant shall display this consent granted to him in a prominent place for perusal of the public and inspecting officers of this Board.
9. An inspection book shall be opened and made available to Board's officers during the visit to the factory.
10. The applicant shall furnish to the visiting officer of the Board any information regarding the construction, installation or operation of the plant or of effluent treatment system air pollution control system/stack monitoring system any other particulars as may be pertinent to preventing and controlling pollution of Water/Air.
11. Meters must be affixed at the entrance of the water supply connection so that such meters are easily accessible for inspection and maintenance and for other purposes of the Act provided that the place where it is affixed shall in no case be at a point before which water has been tapped by the consumer for utilization for any purposes what so ever.
12. Separate meters with necessary pipeline for assessing the quantity of water used for each of the purposes mentioned below.



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- a) Industrial/cooling/spraying in mine pits or boiler feed
  - b) Domestic purpose
  - c) Process
13. The applicant shall display suitable caution board at the less where the effluent is entering into any water body or any other place to be indicated by the Board, indicating therein that the area into which the effluents are being discharged is not fit for the domestic use /bathing.
  14. Storm water shall not be allowed to mix with the trade and/or domestic effluent on the up stream of the terminal manholes where the flow measuring devices will be installed.
  15. The applicant shall maintain good house-keeping both within the factory and the premises. All pipes, valves, sewers and drains shall be leak proof. Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas.
  16. The applicant shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems install or used by him to achieve with the term (s) and conditions of the consent.
  17. Care should be taken to keep the anaerobic lagoons, if any biologically active and not utilized as mere stagnation ponds. The anaerobic lagoons should be fed with the required nutrients for effective digestion. Lagoons should be constructed with sides and bottom made impervious.
  18. The utilization of treated effluent on factory's own land, if any, should be completed and there should be no possibility of the effluent gaining access into any drainage channel or other water sources either directly or by overflow.
  19. The effluent disposal on land, if any, should be done without creating any nuisance to the surroundings or inundation of the lands at any time.
  20. If at any time the disposal of treated effluent on land becomes incomplete or unsatisfactory or create any problem or becomes matter of dispute, the industry must adopt alternate satisfactory treatment and disposal measures.
  21. The sludge from treatment units shall be dried in sludge drying beds and the drained liquid shall be taken to equalization tank.
  22. The effluent treatment units and disposal measures shall become operative at the time of commencement of production.
  23. The applicant shall provide port holes for sampling the emissions and access platform for carrying out stack sampling and provide electrical outlet points and other arrangements for chimneys/stacks and other sources of emissions so as to collect samples of emission by the board or the applicant at any time in accordance with the provision of the Act or Rules made therein.
  24. The applicant shall provide all facilities and render required assistance to the Board staff for collection of samples/stack monitoring/ inspection.
  25. The application shall not change or alter either the quality or quantity or rate of emission or install, replace or alter the air pollution control equipment or change the raw material or manufacturing process



resulting in any change in quality and/or quantity or emissions, without the previous written permission of the Board.

26. No control equipments or chimney shall be altered or replaced or as the case may be erected or re-erected except with the previous approval of the board.
27. The liquid effluent arising out of the operation of the air pollution control equipment shall be treated in the manner and to ion of standards prescribed by the Board in accordance with the provisions of water (prevention and Control of Pollution) Act, 1974 (as amended).
28. The stack monitoring system employed by the applicant shall be opened for inspection to this Board at any time.
29. There shall not be any fugitive or disposal discharge from the premises.
30. In case of such episodal discharge /emission the industry shall take immediate action to bring down the emission within the limit prescribed by the Board in conditions/stop the operation of the plant. Report of such accidental discharge/emission shall be brought to the notice of the Board within 24 hours of occurrence.
31. The applicant shall keep the premises of the industrial plant and air pollution control equipments clean and make all hoods, pipes, valves, stacks/chimneys leak proof. The air pollution control equipment, location, inspection chambers, sampling portholes shall be made easily accessible at all items.
32. Any upset condition in any of the plant/plants of the factory which is likely to result in increased effluent discharge/emission of air pollutants and/or result violation of the standards mentioned above shall be reported to the Head quarters and Regional Office of the Board by fax /speed post within 24 hours of its occurrence.
33. The industry has to ensure that minimum three varieties of tress are plated at the density of not less than 1000 trees per acre. The trees may be planted along boundaries of the industries of industrial premises. This plantation is stipulated over and above the bulk plantation of trees in that area.
34. The solid waste such as sweeping, wastage packages, empty containers residues, sludge including that from air pollution control equipments collected within the premises of the industrial plants shall be disposed off scientifically to the satisfaction of the Board, so as no to cause fugitive emission dust problems through leaching etc. of any kind.
35. All solid wastes arising in the premises shall be properly classified and disposed off to the satisfaction of the Board by
  - i) Land filling in case of inert material, care being taken to ensure that the material does not give rise to leachate which may percolate into ground water or carried away with storm run off.
  - ii) Controlled incineration, wherever possible in case of combustible organic material
  - iii) Composting, in case of bio-degradable material.
36. Any toxic material shall be detoxicated if possible, otherwise be sealed in steel drums and buried in protected areas after obtaining approval of this Board in writing. The detoxication or sealing and



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burying shall be carried out in the presence of Boards authorized persons only. Letter of authorization shall be obtained for handing and disposal of a hazardous wastes.

37. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any control equipment either in whole or in part) this Board shall after giving the applicant an opportunity of being heard vary all or any of such condition and there upon the applicant shall be bound to comply with the conditions so varied.
38. The applicant his/her/legal representatives of assignees shall have no claim whatsoever to the condition or renewal of this consent after the expiry period of this consent.
39. The Board reserves the right to review impose additional conditions or condition, revoke change or alter the terms and conditions of this consent.
40. Not with standing any-thing contained in this conditional letter of consent the Board hereby reserves it the right and power under section 27 (2) of the water (Prevention & control of pollution) Act 1974 to review any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Act by the Board.
41. The conditions imposed as above shall continue to be in force until revoked under section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 and section 21 A of Air (Prevention &Control of pollution) Act, 1981.
42. In case the consent fee is revised upward during this period, the industry shall pay the differential fees to the Board (For the remaining years) to keep the consent order in force. If they fail to pay the amount within the period stipulated by the Board the consent order will be revoked without prior notice.
43. The Board reserves the right to revoke/refuse consent to operate at any time during period for which consent is granted in case any violation is observed and to modify/stipulate additional conditions as deemed appropriate.

**F. SPECIAL CONDITIONS :**

1. The overloading of trucks / tippers / tractors shall be avoided to prevent spillage of materials during transportation.
2. Approach road of the mine on the river bed shall be different from the used path ways of the villagers and mining activities shall not cause any sort of problem to the villagers for their use of the river stream.
3. The nearby river bank of the mine area shall be stone pitched with plantations on the top of the bank for necessary protection of the river side.
4. The mining activities shall be carried out as per the approved mining plan and any change in mining activities / technology / scope shall not be made without approval of mining authority and MoEF & CC, Govt. of India.



5. The sand mining shall not be carried out within 200 m of any existing structure such as bridges, dams, water intake structure (s) either for irrigation or drinking water purposes or any other cross drainage structure.
6. The mining shall not be carried out in stream of Brahmani river.
7. The mining of sand shall be done on mechanized mode as per approved mining plan and it shall be ensured that mining activities should not disturb the flow pattern of the Brahmani river.
8. The sand mining should not affect the existing sources for irrigation or drinking water or industrial purposes.
9. The water sprinkling system should be provided in haul road, transportation roads, quarry areas, stocked piles areas and other dust generating areas to control the fugitive dust emission.
10. The unit shall maintain the Ambient Air Quality as per the prescribed standard of National Ambient Air Quality inside the mining lease area.
11. The rejected sands, if any, shall be disposed off on low lying areas inside the lease hold area in proper manner without causing any environmental pollution.
12. The area from which the sand has been extracted be leveled in due course and free of any foreign debris/materials after completion of mining and expiry of lease period.
13. The proponent shall take necessary measures to ensure no adverse impacts due to mining activities on the human habitations existing nearby.
14. The mining of sand shall not be done in safety zone and beyond the 3 meter depth of the lease area.
15. The domestic effluent generated from the office premises shall be discharged to a soak pit via septic tank constructed as per BIS specification.
16. The unit has to undertake that in case of consent fee is revised upward during this period they shall pay the differential fees to the Board (for the remaining years) to keep the consent order in force. If they fail to pay the amount within the period stipulated by the Board, the consent order will be revoked without prior notice.
17. The unit shall abide by provisions of the Environment (Protection) Act, 1986, amendments made thereof and rules framed there under.



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18. The Board may impose further conditions or modify the conditions as stipulated in this order during period of consent to operate and may revoke this order in case the stipulated conditions are not implemented and / or information are found to have been suppressed / wrongly furnished in the application form.

The occupier must comply with the conditions stipulated in section A, B, C, D, E and F to keep this consent order valid.

To

Sri Kapil Chandra Sahoo, Mines Manager (Occupier)  
M/s Mahanadi Coalfields Ltd. (Mandapal Sand Mine)  
At/PO - Deulbera Colliery,  
Dist. - Angul - 759102

  
REGIONAL OFFICER

Memo No. 1533 (7) Dt. 27.04.2016

Copy forwarded to the:

1. Member Secretary, State Pollution Control Board, Paribesh Bhawan, Nilakantha Nagar, Unit-VIII, Bhubaneswar-12 for kind information.
2. Collector & District Magistrate, Angul
3. General Manager, District Industries Centre, Angul
4. Asst. Director, Factories & Boilers, Angul
5. DFO, North Forest Division, Angul
6. Copy to Guard File, Regional Office of State Pollution Control Board, Angul
7. Copy to Guard File, State Pollution Control Board, Bhubaneswar

  
REGIONAL OFFICER  
o/c





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Annexure-I

**GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS PART-A: EFFLUENTS**

Sl No	Parameters	Standards			
		Inland surface (a)	Public seweres (b)	Land for irrigation (c)	Marine Costal Areas (d)
1.	Colour & odour	Colour less or order less as far as practicable	---	See 6 of Annex-I	See 6 of Annex-I
2.	Suspended Solids (mg/l)	100	600	200	a. For process wastewater -100 b. For cooling water effluent 10% above total suspended matter of effluent
3.	Particular size of SS	Shall pass 850	---	---	---
4.	PH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
5.	Temperature	Shall not exceed 5° C above the receiving water temperature	----	--	Shall not exceed 5° C above the receiving water temperature
6.	Oil & Grease mg/l max	10	20	10	20
7.	Total residual chlorine	1.0	---	--	1.0
8.	Ammoniacal nitrogen (as N) mg/l max.	50	50	--	50
9.	Total Kjeldahl nitrogen (as NH <sub>3</sub> ) mg/l max.	100	--	--	100
10.	Free ammonia (as NH <sub>3</sub> ) mg/l max.	5.0	--	--	5.0
11.	Biochemical Oxygen Demand (5 days at (20° C) mg/l max.	30	350	100	100
12.	Chemical Oxygen Demand, mg/l max	250	---	--	250
13.	Arsenic (as As) mg/l max.	0.2	0.2	0.2	0.2
14.	Mercury (as Hg)mg /l max.	0.01	0.01	--	.001



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15.	Lead (as Pb) mg/l max.	01	1.0	--	2.0
16.	Cadmium (as Cd) mg/l max	2.0	1.0	--	2.0
17.	Hexavalent Chromium (as Cr+6) mg/l max	0.1	2.0		1.0
18.	Total Chromium (as Cr) mg/l max	2.0	2.0	--	2.0
19.	Copper (as Cu) mg/l max	3.0	3.0	--	3.0
20.	Zinc (As Zn) mg/l max	5.0	15	--	15
21.	Selenium (as Se) mg/l max	0.05	0.05	--	0.05
22.	Nickel (as Ni) mg/l max	3.0	3.0	--	5.0
23.	Cyanide (as CN) mg/l max	0.2	2.0	0.2	0.02
24.	Flouride (As F) mg/l max	2.0	15	--	15
25.	Dissolved phosphate (as P) mg/l max	5.0	--	--	--
26.	Sulphide (As S) mg/l max	2.0	--	--	5.0
27.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l max	1.0	5.0	--	5.0
28.	Radio active materials a-Alpha emitter Micro Curie/ml b-Beta emitter Micro curie/ml	10 <sup>7</sup> 10 <sup>8</sup>	10 <sup>7</sup> 10 <sup>6</sup>	10 <sup>8</sup> 10 <sup>7</sup>	10 <sup>7</sup> 10 <sup>6</sup>
29.	Bio assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
30.	Manganese (as Mn)	2mg/l	2mg/l	--	2mg/l
31.	Iron (as Fe)	3 mg/l	3 mg/l	--	3 mg/l
32.	Vanadium (as V)	0.2 mg/l	0.2 mg/l	--	0.2 mg/l
33.	Nitrate Nitrogen	10 mg/l	--	--	20 mg/l



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Annexure-II

**PART – B : NATIONAL AMBIENT AIR QUALITY STANDARDS**

Pollutant	Time weighted average	Concentration in ambient air		Method of measurement
		Industrial Area, Residential, Rural & other areas	Ecologically Sensitive Area (notified by Central Govt.)	
1	2	3	4	5
Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Annual average*	50	20	-Improved West and Gaeke method -Ultraviolet fluorescence
	24 hours**	80	80	
Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual average*	40	30	-Modified Jacob & Honchheiser modified (Na-Arsenite) method -Chemiluminescence
	24 hours**	80	80	
Particulate Matter (size less than 10micron) or PM <sub>10</sub> , µg/m <sup>3</sup>	Annual average*	60	60	-Gravimetric -TOEM - Beta attenuation
	24 hours**	100	100	
Particulate matter (size less than 2.5micron) or PM <sub>2.5</sub> , µg/m <sup>3</sup>	Annual average*	40	40	-Gravimetric -TOEM - Beta attenuation
	24 hours**	60	60	
Ozone (O <sub>3</sub> ) µg/m <sup>3</sup>	8hours**	100	100	-UV Photometric -Chemiluminescence -Chemical Method
	1 hour**	180	180	
Lead (Pb), µg/m <sup>3</sup>	Annual average*	0.50	0.50	-AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper - ED-XRF using Teflon filter
	24 hours**	1.0	1.0	
Carbon Monoxide (CO), µg/m <sup>3</sup>	8hours**	02	02	-Non dispersive infrared (NDIR) spectroscopy
	1 hour**	04	04	
Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	Annual*	100	100	-Chemiluminescence -Indophenol Blue Method
	24 hours**	400	400	
Benzene (C <sub>6</sub> H <sub>6</sub> ) µg/m <sup>3</sup>	Annual*	05	05	-Gas Chromatography based continuous analyzer -Adsorption and Desorption followed by GC analysis
Benzo (a) Pyrene (BaP) – Particulate phase only, ng/m <sup>3</sup>	Annual*	01	01	-Solvent extraction followed by HPLC / GC analysis
Arsenic (As), ng/m <sup>3</sup>	Annual*	06	06	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
Nickel (Ni), ng/m <sup>3</sup>	Annual*	20	20	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

\* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

\*\* 24 hourly / 8 hourly / 1 hourly should be met 98% of the time in a year. However, 2% of the time, it may exceed but not on two consecutive days of monitoring.