

ମହାନଦୀ କୋଲ ଫିଲ୍ଡସ୍ ଲିମିଟେଡ୍
महानदी कोलफील्डस लिमिटेड
Mahanadi Coalfields Limited
(A subsidiary of Coal India Limited)

OFFICE OF THE SUB AREA MANAGER
ORIENT SUB AREA
PO: ORIENT COLLIERY
VIA- BRAJRAJNAGAR- 768233
DIST: JHARSUGUDA, ODISHA
PHONE: 06645 240726



MCL

Ref no: MCL/OA/SAM/OSA/Sectt./ 282

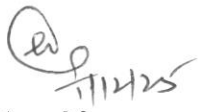
Date: 01/12/25

To
The Chief Conservator of Forest,
Ministry of Environment & Forest,
Regional Office (Eastern Zone),
A/3, Chandrasekharpur,
Bhubaneswar-751023, Odisha.
E-mail-mef@ori.nic.in

Sub: Submission of Half yearly (Apr -25 to Sep-25) compliance report of the conditions stipulated in the Environment Clearance letter in respect of Orient Colliery Mine No 1&2, Orient Area, MCL.

Dear Sir,

Please find enclosed herewith a copy of Half Yearly (Apr -25 to Sep-25) compliance report of the conditions stipulated in the Environment Clearance (EC) letter as per condition no. xvii of General Conditions of EC in respect of Orient Colliery Mine no. 1&2, Orient Area, MCL for your kind information.


Sub-Area Manager
Orient Colliery Mine no. 1&2
Orient Area, MCL

Copy to:

1. Director, EIA Monitoring Cell,
Ministry of Environment & Forest,
Paryavaran Bhawan, CGO Complex,
Lodhi Road, New Delhi-110003.
2. The Member Secretary,
Orissa State Pollution Control Board,
Paribesh Bhawan, A/118,
Nilakantha Nagar, Unit-VIII,
Bhubaneswar-751012. Odisha.
3. Regional Officer,
State Pollution Control Board (Odisha),
Plot No-370/5971, Babubagicha (Cox Colony)
Jharsuguda, 768203
4. GM (Env. & Forest), MCL, SBP for kind information
5. Colliery Manager, OC-1&2 mine
6. Area Environment Officer, OA
7. Office file.

**HALF-YEARLY PROGRESS REPORT
OF COMPLIANCE
WITH
ENVIRONMENTAL CLEARANCE
CONDITIONS
(April-25 to September-25)**

**ORIENT COLLIERY U/G MINE: 1&2, (0.87 MTPA)
ORIENT AREA.**



MAHANADI COAL FIELDS LIMITED

**HALF YEARLY PROGRESS REPORT OF COMPLIANCE WITH
ENVIROMENTAL CLEARANCE CONDITIONS
(HALF-YEARLY ENDING SEP 2025)**

Name of the Project: Orient Colliery U/G Mine No: 1&2, MCL (0.87 MTPA)

No. & date of MOEF clearance: Letter No. J-11015/197/2008-IA.II (M) Dated 26th February, 2013


A. Specific Conditions:

Condition No.	Conditions stipulated in the EC	Compliance
(i)	Coal would be transported by belt conveyor onto surface bunkers from where it would be dispatched directly to small consumers by road using 54 trucks of 18-T capacity, and to major consumers and basket linkage by rail from Orient Railway Siding at a distance of 1.5 km covered by road. Coal transportation should be by covered trucks.	Coal is being transported from underground by belt conveyor onto surface from where it is dispatched directly to small consumers by road. Coal transported through trucks by road is covered with tarpaulin.
(ii)	Transport from mine to siding with covered tippers and with mine-3 coal arrangement for mechanized conveyor loading of railway wagons. The coal being transported by road will be dispatched by conveyor system which will be established within 2 years to a common CHP and loading should be by bulk loaders.	For compliance of Point no. 17 of Special Conditions mentioned in the Consent Order granted to Orient Colliery Mine No. 1&2 for the year 2018-19 by State Pollution Control Board, Odisha, operation of Orient Railway Siding has been stopped. No coal is being dispatched through rail mode. Since there is a proposal to include most of the land acquired for underground mining from O.C. 1&2 under Lajkura Expansion Project (15 MTY) there is no proposal for instalment of conveyor system in future.
(iii)	Avenue plantation should be provided with suitable width.	Avenue plantation of suitable width has already beendone along both sides of the coal transport road. Annexure 'D' attached for ready reference.
(iv)	The frequency of water spraying should be increased in addition to water spraying through mobile water tanker to reduce dust pollution.	The frequency of water spraying has been increased as per the stipulated condition by providing pipelines to suppress the suspended dust at the point of discharge of coal from conveyor belt to surface and by contractual water tanker in CT Road. Apart from this fog canon has been installed at coal stock to suppress coal dust while loading.
(v)	The Social Audit should be conducted for the CSR Activity carried out in the area for the year 2011-12 other than the TISS e.g. Xavier Institute, Sambalpur University etc. The report of the same should be uploaded into the Company's website. A copy of the audit report should be circulated to all the members of Committee.	An impact assessment study of CSR activities of MCL from 2010-11 to 2014-15 covering social audit for the CSR Activity carried out in Orient Area for the year 2011-12 was undertaken by NIT, Rourkela. The said study report also has been uploaded into MCL web-site.
(vi)	All the schools in MCL area should be provided with Black Boards, toilets etc. More funds should be spent on CSR activities. Financial progress and Physical progress should be monitored.	All the schools in MCL area have been provided with Black Boards and MCL released major funds for building toilets in thousands of schools in villages across the state under Swachha Vidyalaya Abhiyan campaign.
(vii)	No mining shall be undertaken in/under the forest land until prior forestry clearance has been obtained under the provisions of FC Act 1980.	Stage-I forestry clearance has already been obtained vide F.No. 8-82/2012-FC, dtd 29/01/2013 for the mine and the action/process for obtaining final forestry clearance has already been initiated.

(viii)	No additional land, manpower and equipment and water shall be used for the expansion project.	No additional land, manpower and equipment and water are being used for the mine at present.
(ix)	Mine closures activities include sealing of incline mouth dismantling of haulage system, clearing and afforestation of coal stock area, plantation on barren land and old abandoned mine.	Activities of sealing of incline mouth, dismantling of haulage system, clearing and afforestation of coal stock area, plantation on barren land and old abandoned mine shall be done before the mine is closed.
(x)	Mining shall be carried out as per statute at a safe distance from river/ nallah	Mining is being done at a safe distance from river/ nallah as per statutory provisions under CMR, 2017 & relevant DGMS circulars applicable to the mine.
(xi)	No mining should be carried out below the railway track.	Presently no mining has been done below any railway track.
(xii)	No depillaring shall be undertaken vertically below and within 60 m of nallahs and ponds within the subsidence influence area.	No depillaring has been done vertically below and within 60 m of nallahs and ponds within the subsidence influence area.
(xiii)	Sufficient coal pillars shall be left unextracted around the air shaft (within the subsidence influence area) to protect from any damage from subsidence, if any.	Sufficient coal pillars have been left unextracted around the air shaft.
(xiv)	Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.	Solid barriers have been left below the roads falling within the blocks to avoid any damage to the roads.
(xv)	No depillaring operation shall be carried out below habitation.	No depillaring operation has been done below habitation.
(xvi)	Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains. Details of extent of subsidence that has occurred and the extent of area under subsidence and measures to be taken therefore be furnished to the ministry for record.	No subsidence has been found to occur due to mining operations in the mine.
(xvii)	Mining shall be carried out as per statute at a safe distance from river/ nallah flowing within adjacent to the lease boundary at the time of depillaring, protective bunds and garland drains shall be provided so that no water from the surface enters the subsidence area and the shaft.	Presently mining is being done at a safe distance from river/ nallah as per statutory provisions applicable to the mine and necessary protective measures as per CMR, 2017 & relevant DGMS circulars shall be taken at the time of depillaring.
(xviii)	While extracting panels in the lower seam, all water bodies in the subsidence area shall be drained. Dewatering of the old grooves of the upper seam shall be continued as long as the lower seam is worked to prevent accumulation of large water bodies over working area.	All the precautions necessary shall be observed as per CMR, 2017 in the mine during the extraction of panels in the lower seam.
(xix)	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	Adequate numbers of high-root-density tree species have already been planted over the areas likely to be affected by subsidence. Annexure 'D' attached.
(xx)	Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks developed due to subsidence in underground mining shall be filled with clay and sand, suitable material. The area should be reclaimed back to the normal state.	Regular monitoring of subsidence movement on the surface over and around the working area is being done. No subsidence has been observed so far, no cracks have been observed anywhere.

(xxi)	Garland/surface drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity shall be designed keeping 50% safety margin over an above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also be provided adequate retention period to allow proper settling of silt material. Sufficient number of pumps of adequate capacity shall be deployed to pump out mine water during peak rainfall.	Garland drains have been provided around mine openings. Sumps of adequate capacity have been established below ground keeping in view of maximum rainfall & adequate retention time, sufficient number of pumps of adequate capacity has been installed below ground. Cleaning of the garland drain is being done before every monsoon season.
(xxii)	CHP shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc .	Presently there is no CHP installed for the mine as the production is meager in quantity.
(xxiii)	Drills shall be wet operated only.	Procurement action of hydraulic roof bolter with dust suppression system is under process. Manual spraying in working district is being done.
(xxiv)	The major approach roads from ML used for mineral transportation shall be black topped and a 3-tier avenue plantation developed using a mix of native species.	The major approach roads from ML used for mineral transportation have already been provided with black topping and a 3-tier avenue plantation. Annexure 'D' attached for ready reference.
(xxv)	An afforestation plan shall be prepared and implemented for the areas acquired under surface rights and shall include areas along roads, infrastructure, township, CHP, along ML boundary, etc. by planting native species in consultation with the local DFO/ Agriculture Department. The density of the trees shall be around 2500 plants per ha.	Adequate plantation has been done in the mine lease area having 2500 no. of plants/Ha. as per the advice of forest department. There is no such land available to take up further plantation activities.
(xxvi)	A Conservation Plan for endangered species shall be formulated in case they inhabit/visit/reported within the study area and implemented in consultation with the State Forest and Wildlife Departments. A budgetary provision shall be earmarked for its establishment and maintenance and a report thereon be submitted as part of the Monitoring Report to the MoEF RO, Bhubaneswar and also regularly (at least once a year) uploaded on the Company's website.	No endangered species inhabited within the study area of the mine.
(xxvi i)	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post- monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.	The groundwater level in the wells of the nearby villages is being monitored by CMPDIL. There has been no change in the water level of the well due to mining. Extract of the well water level monitoring report of CMPDIL is enclosed as Annexure 'E'.
(xxvi ii)	Monitoring of drinking water should be carried out regularly.	Monthly monitoring of drinking water is being carried out by CMPDIL. Extract of the monitoring report of CMPDI has been attached herewith in Annexure 'G'.

(xxix)	Project specific CSR should be prepared & activities under CSR undertaken for the neighboring villages shall be for not less than Rs 5 per tonne of coal with escalation factor every year be provided under the CSR for the life of the project and the progress made thereon shall be uploaded on the company annually on the company website. Green Belt/plantation should be provided on both side of road in Piper war area. CSR funds could be utilized for this purpose;	Adequate fund has been allocated for activities under CSR which is being done in the neighboring villages.
(xxx)	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring shows a declining trend of ground water level. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	Ponds of the nearby villages are being maintained by the Company under CSR activity and supply of drinking water to the nearby villagers is made during the Summer.
(xxxi)	Sewage treatment plant shall be installed in the township. ETP shall also be provided for treating workshop and CHP effluents.	The number of employees is very less and hence, domestic effluent generated is very less which is presently, being disposed off through a soak pit with septic tank arrangement. Hence, there is no requirement for installment of STP as such. No ETP has been installed as there is no CHP and workshop effluents generated are very negligible in quantity.
(xxxii)	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1:5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for anyone particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bhubaneswar.	Land use map/ Vegetation Cover Mapping of Ib Valley Coalfields including Orient Mine No.1&2 based on Satellite Data for the year 2017 has been enclosed in the previous compliance report, i.e., April'18 to Sept'18.
(xxxiii)	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval. Mine closure should ensure that no illegal mining begins after mine is closed	A Progressive Mine Closure Plan has already been submitted to the Ministry of Environment & Forests. The Final Mine Closure Plan along with details of Corpus Fund shall be submitted to MOEF 5 years in advance of final mine closure for approval.
(xxxiv)	If the water quality parameters such as F, pH, heavy metals, etc exceed the prescribed limits, suitable measures by the proponent be taken to ensure that the local communities are provided alternate source of water for their livelihood.	The water quality parameters such as F, pH, heavy metals, etc are within the prescribed limits so far.
(xxxv)	Medical camps should be organized in the area for regular check up of workers/villagers/population. Detailed prevalent disease pattern in the area should be documented and details of medical facilities provided for the same be made available to the MoEF.	Periodical medical camps are organized in the area for regular check up of workers/villagers/population
(xxxvi)	Proponent should make written submission on the compliances/ clarifications to the MoEF on the above cited issues.	Compliance Report on the above cited issues is being submitted to MOEF.



Sub-Area Manager,
Orient Colliery Mine No.1&2,
Orient Sub-Area, OA, MCL

B. General Conditions:

Condition No.	Conditions stipulated in the EC	Compliance
(i)	No change in technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.	There has been no change in mining technology and scope of working so far.
(ii)	No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.	There has been no change in calendar plan of extraction quantum of coal. Coal production for last five years is as follows: 2025-26 (Till Sep) : 65,240 Te 2024-25 : 2,06,005 Te 2023-24 : 1,99,005 Te 2022-23 : 1,92,795 Te 2021-22 : 230,250 Te 2020-21 : 2,03,591 Te 2019-20: 3,14,000 Te 2018-19: 3,19,732 Te
(iii)	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM10, PM2.5, SO2 and NOx. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, in particulates shall be carried out at least once in six months.	Ambient air quality monitoring stations have been established in consultation with State Pollution Control Board in front of the Gate of Colliery Manager. Annexure 'B' attached for ready reference.
(iv)	Data on ambient air quality (PM10, PM 2.5, SO2 and NOx and heavy metals such as Hg, As, Ni, Cr, etc) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognized under the EP Rules, 1986 shall be furnished as part of the compliance report.	Data of ambient air quality is being submitted (half yearly) to MOEF, State Pollution Control Board & Central Pollution Control Board. Annexure B is attached for ready reference.
(v)	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.	Adequate measures have been taken to reduce noise levels below 85 dBA at the working places. Since it is underground mine noise levels are within the limits. Annexure 'C' attached for ready reference.
(vi)	Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, and treated so as to conform to the standards including for heavy metals before discharge prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.	Waste water from the mine is collected in sedimentation ponds and treated suitably before being allowed to discharge on ground. No wastewater discharged from workshop. Annexure 'A' attached for ready reference.
(vii)	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of the mineral shall be covered with tarpaulins and optimally loaded.	Vehicular emissions kept under control by regular checking of exhaust emissions. Vehicles used for transporting coal are optimally loaded and covered with tarpaulins before they are dispatched.
(viii)	Monitoring of environmental quality parameters shall be carried out through establishment of	Environmental monitoring work is being done through CMPDIL having adequate laboratory

	adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analyzed through a laboratory recognized under EP Rules, 1986.	facilities as required by State Pollution Control Board.																		
(ix)	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	Persons working in dusty areas are provided with dust masks and educated on health aspects through training. Number of persons provided with dust masks (Apr-25 to Sep.-2025): 270 Nos.																		
(x)	Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.	Periodical occupational health check up of all workers is carried out once in every five years regularly and corrective measures are being taken as when necessary.																		
		<table border="1"> <thead> <tr> <th>Year</th> <th>No. of employees</th> </tr> </thead> <tbody> <tr> <td>2018(Jul-Jun)</td> <td>230</td> </tr> <tr> <td>2019(Jul-Jun)</td> <td>126</td> </tr> <tr> <td>2020(Jul-Jun)</td> <td>160</td> </tr> <tr> <td>2021(Jul-Jun.)</td> <td>140</td> </tr> <tr> <td>2022(Jul-Jun.)</td> <td>166</td> </tr> <tr> <td>2023</td> <td>104</td> </tr> <tr> <td>2024</td> <td>114</td> </tr> <tr> <td>2025 (Apr-Sep)</td> <td>143</td> </tr> </tbody> </table>	Year	No. of employees	2018(Jul-Jun)	230	2019(Jul-Jun)	126	2020(Jul-Jun)	160	2021(Jul-Jun.)	140	2022(Jul-Jun.)	166	2023	104	2024	114	2025 (Apr-Sep)	143
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2024	114																			
2025 (Apr-Sep)	143																			
(xi)	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 company.	A separate environment management cell headed by GM (Envt.) at Company HQ who reports directly to DT (P&P) of Company.																		
(xii)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhubaneswar.	Funds earmarked for environmental protection measures are kept in a separate account head of "Environment". Year-wise expenditure is reported to MOEF, State Pollution Control Board by Company HQ. Environment expenditure during 2025-26: Rs. 94,82,307.72 /-																		
(xiii)	The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests a http://envfor.nic.in	Advertisement relating to the fact that the project has been accorded environmental clearance was made in the Oriya daily "DHARITRI (Sambalpur)" and English Newspaper "NEW INDIAN EXPRESS (Bhubaneswar)" on Dtd.05.03.2013.																		
(xiv)	A copy of the environmental clearance letter shall be marked to concerned Panchayat/Zila Parishad, Municipal Corporation or Urban Local Body and local NGO, if any, from whom any suggestion/ representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on the company's website.	A copy of environmental clearance has been given to the concerned local panchayats and Municipal Corporation and also displayed on the company's website.																		
(xv)	A copy of the clearance letter shall be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Centre and Collector's Office/Tahsildar's Office for 30 days.	A copy of the clearance letter has been sent to the State Pollution Control Board, Odisha, Bhubaneswar Regional Office, District Industry Centre, Collector's Office and Tahsildar's Office, Jharsuguda for display of such clearance.																		

(xvi)	The clearance letter shall be uploaded on the company's website. The compliance status of the	The environmental clearance letter has been uploaded to the company's website. The monitoring
(xvii)	stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as PM10, PM2.5, SO2 and NOx (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.	data of environmental quality parameters are being displayed at the entrance of the project premises and mines office and in a corporate office and on the company's website.
(xvii)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.	Six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) are being submitted to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.
(xviii)	The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	The requisite data/information/monitoring reports are being furnished to the Regional Office of MOEF, Bhubaneswar.
(xix)	The environmental statement for each financial year ending 31st Sep in Form-V is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MOEF by E-mail.	The environmental statement for the financial year ending 31st Mar'2024 in Form-V has been submitted to State Pollution Control Board, Odisha, Bhubaneswar vide letter no. Ref No. MCL/OA/SAM/OSA/CM/2025/205 on dated 17.09.2025 and shall be so continued in future also.


Sub-Area Manager,
Orient Colliery Mine No.1&2,
Orient Sub-Area, OA, MCL

FORM-I

**MINISTRY OF ENVIRONMENT & FOREST
REGIONAL OFFICE**

MONITORING PROFORMA PART-I (DATA SHEET)

- 1. Project Type: River-Valley/Mining Industry/Thermal /Nuclear/Other (Specify)** : Mining Industry (COAL)
- 2. Name of the Project** : Orient Colliery Mine No.1&2 (0.87MTPA)
- 3. Clearance Letter(s) OM no. & Date** : J-11015/197/2008-IA.11 (M) Dated 26/02/2013
- 4. Location** : Jharsuguda, Odisha
- (a) District(s), State(s)**
- 5. a) Address of concerned project Chief Engineer (with pin code and telephone/telex/Fax nos.** : Office of the Colliery Manager, Orient Colliery Mine No.1&2, At/PO: Brajrajnagar, Dist: Jharsuguda, Odisha, Pin: 768233, Tel. no.-06645-242977
- b) Address of Executive project Engineer/Manager (with pin code and telephone/telex/Fax nos.** : -do-
- 6. Salient Feature:**
- a. of the project** : Start of mine –O.C-1 was opened in the year-1940& O.C-2 was opened in the year-1954
Mine lease area- 1857.24 Ha.
Mineable reserve- 65.17 Million Tonne
(As on 31.03.2025)
Extractable reserve- 37.14 Million Tonne
(As on 31.03.2025)
The Grade of coal- Group-G-13(from 19/07/2023)
Mining Technology: Bord & Pillar with LHDs.
Targeted output- 0.87 MTPA of augmented project
Life of mine- 54 years from 01.04.2011
- b. of the Environmental Management plans** : Coal extraction from panels shall be done along with stowing to prevent damage to forest land due to subsidence.
- 7. Break up of the project area** : Total Mine lease area- 1857.24 Ha
- a. Submergence area (Forest and Non-Forest)** : Forest – 950.429 Ha.,
Non-Forest - (Agricultural land - 522.728 Ha.,
Grazing land- 111.826 Ha., Surface water body- 17.26 Ha.)
- b. Others** : 254.998 Ha. (Govt. plus tenancy)

8. Break up of project affected population with enumeration of those losing house/dwelling units only, agricultural land only, both dwelling unit and agricultural land and land less laborers/artisans. : NA
- a. SC, ST/Adivasis : NA
- b. Others : NA
9. Financial Details:
- a) Project cost as originally planned and Subsequently estimates and the year of price reference. : P.R- Not Available, Project cost – Rs lakhs
F.R.-1992-93 -do- Rs.170.87 lakhs
F.R.-May, 2013 -do- Rs.1152.25 lakhs
- b) Allocation made for environmental management plans, with item –wise and year wise break-up. : ECO development cost- 320.33 lakhs
Subsidence Management Cost- 208.88 lakhs
Anti-pollution measurement Cost- 111.45 lakhs
Cost of strengthening of existing forest land on surface- 160.25 lakhs
- c) Benefit cost ratio/internal rate of return and the year of assessment : Cost/ tonne = Rs. 12,801.532, Loss/ tonne = Rs 12,063. 718 (FY2025-26 Upto Sep-2025)
- d) Whether 9 c) includes the cost of environment management plans so far :
- e) Actual expenditure incurred on the project: Rs 8351.72 lakhs (FY2025-26 Upto Sept.-2025)
- f) Actual expenditure incurred on the Env't. Mgmt plans, so far : Miscellaneous Cost like subsidence prediction studies etc- Rs 19.70 Lakhs
TOTAL- Rs 19.70 Lakhs
10. Forest land requirements :
- a) The status of approval of a diversion of forest land non-forestry use, : Stage-I Forest Clearance for 1300.935 Ha of forest land for U/G mining including 99.06 ha of forest land for surface breaking has been obtained for O.C-Mine No.1&2, O.C-Mine No.3 and HBM & HRC (Combined). Stage-II Forest Clearance is under process
- b) The status clear felling : Nil
- c) Comments on the viability and Sustainability programme in the light of actual field experience so far :
- 11: Status of construction
- a) Date of commencement (Actual and /or planned) : In the year-1940
- b) Date of completion (Actual and /or planned) : Planned for completion in the year-2095

12. Reason for the delay if the project is yet to start : NA
13. Date of site visit : In the month of Sepch'2013
- a) The date on which the project was monitored by the regional office, if any : -do-
- b) Date of visit for this monitoring report :for obtaining action, information and status
14. Details of correspondence with project authority of compliance to safe guard



**Sub-Area Manager,
Orient Colliery Mine
No.1&2, Orient Sub-Area,
OA, MCL**



FORM-II


PROFORMA FOR PROVIDING INFORMATION ON REHABILITATION

1. No. of villages affected : Nil (Rehabilitation Plan not applicable)
2. Families affected : SC- NIL, ST- NIL, OTH- NIL, Total- NIL
3. Compensation package offered per family :

State/Centre norms	Project Package
As per state Govt. Package	NA

4. Budget estimate for rehabilitation : NA
a) Total Outlay : NA
b) Amount paid/used. : NA
5. Employment details :
a) Total employment to be provided : NA
b) Employment given so far. : NA
6. Rehabilitation & Resettlement details : NA
a) Nos. of families rehabilitated : NA
i. Name of the site : NA
ii. Families rehabilitated : SC- NIL, ST- NIL, OTH- NIL, Total- NIL
b) Families yet to be rehabilitated : NA
i. Name of site : NA
ii. No. of families : SC- NIL, ST- NIL, OTH- NIL, Total- NIL

Any other information:


**Sub-Area Manager,
Orient Colliery Mine No.1&2,
Orient Sub-Area, OA, MCL**

FORM-III**FORMAT FOR PROVIDING PARTICULARS ON GREEN BELT/PLANTATION UNDER F C ACT, 1980 AND E (P), ACT, 1986**

1. a. Name of Organization : Orient Colliery UG Mine No.1&2
 b. Evt. Clearance order No. : J-11015/197/2008-IA.II (M) Dated 26/02/2013
 c. Forest Clearance order No. : F.No. 8-82/2012-FC, dtd.29/01/2013 for Stage-I FC.
2. Location, Block/Sub Division/
 Dist/State : Village- Lamtibahal, Block- Brajrajnagar
 Sub Division- Jharsuguda,
 Dist- Jharsuguda, State- Odisha.
3. Address for communication : Colliery Manager, Orient Colliery Mine No.1&2, MCL
 P.O- Brajrajnagar, Dist: Jharsuguda (Odisha),
 Pin-768233.
4. Existing vegetation in the area/region :
 a. Species (Trees/shrub/Grasses/climbers) : Trees, Shrub, Grasses & Climbers
 b. major prevalent species of each type :
5. Land coverage by the project :
 a. Total area under the project : 1857.24 ha.
 b. Area covered for basic infrastructure
 (road, building/factory etc.) : 41.13 ha.
6. Details about natural vegetation :
 a. Name and number of tree/species felled : Nil
 b. Name and number of plants species still
 available in the area. : NA as this is an underground mine.
 c. By protecting the area will indigenous :
 d. Extent of green belt developed. : 70.066 Ha. for Orient Area
7. Plantation required to be carried out as per :
 a. Condition of Environment : As per stipulated condition no. ix (of
 specific conditions of EC).
 (Clearance in Ha/No. of plants/Ha) 2500 no. of plants/Ha.
 b. Condition of Forest Conservation Act, :
 forest clearance in Ha/No.
 c. Voluntarily in Ha./No. : 2500 no./Ha.

8. Details about plantation**a. Total area available for plantation in the year 2025-26 in each category.**

i. Green belt	ii. Ext. dump	iii. BIF area	iv. Road sides	v. Block plantations
Nil	Nil	Nil	Nil	Nil

b. Plantation details (Category wise & methodology used)

Year of plantation	Species planted	Spacing	Height attained	Total area covered till Sep.-25	Proposed plantation Programme in 2025-26
1992 to 2025	Given in Annexure - D	2m X 2m	2m to 8m	70.066 Ha. for Orient Area	Presently, no suitable bearing land for undertaking plantation activities is available within the mining lease area of orient Area. However, Tahsildar, Jharsuguda has been requested with a copy to the Collector, Jharsuguda to provide suitable land for plantation outside the lease area. Plantation activities will be taken up as soon as such land is available

c. Survival % of plantation (for last five years): 82.32 % to 86.56 % after 3 years of maintenance activity for such plantation.

9. Agency carrying out plantation and maintenance: Chhattisgarh Rajya Van Vikash Nigam, Korba, (CG) & Orissa Forest Development Corporation Ltd., Jharsuguda (C -KL) Division.

10. Financial Details.(Year wise and item wise)

Sl. No.	Year	Fund allocated (in Rs. For 03/05 years)	Expenditure made in Rs. For 03/05 years	Average cost of each surviving plants in Rs. (plantation scheme valid for 3 years & w.e.f. the year 2011-12 valid for 5 years)
1	1992-93	Nil	Nil	Nil
2	1993-94	Nil	Nil	Nil
3	1994-95	Nil	Nil	Nil
4	1995-96	Nil	Nil	Nil
5	1996-97	Nil	Nil	Nil
6	1997-98	Nil	Nil	Nil
7	1998-99	Nil	Nil	Nil
8	1999-00	Nil	Nil	Nil
9	2000-01	Nil	Nil	Nil
10	2001-02	Nil	Nil	Nil
11	2002-03	Nil	Nil	Nil
12	2003-04	Nil	Nil	Nil
13	2004-05	Nil	Nil	Nil
14	2005-06	590572.57	466868	44.33
15	2006-07	2294746.18	2248370	59.70
16	2007-08	636000	620566	60.31
17	2008-09	1041224.5	1041224.5	46.28
18	2009-10	760592	760592	41.83
19	2010-11	957600	957600	68.40
20	2011-12	1314800	1314800	113.34
21	2012-13	Nil	Nil	Nil
22	2013-14	Nil	Nil	Nil
23	2014-15	46,500	46,500	31.00
24	2015-16	11,75,500	11,75,500	23.51
25	2016-20	NIL	NIL	NIL
26	2020-21	2,91,827	2,91,827 (Incl. maintenance cost for two years of Rs 2,70,052)	833.79
27	2021-22	7,52,210	7,52,210	167.16
28	2022-23	204000	204000	100.00
29	2023-24	7625	7625	152.50
30	2024-25	676200	676200	67.62
31	2025-26 (Till Sep)	Nil	Nil	Nil

11. Remarks/any other information.

: Orient Area, MCL may be assigned to take up
Plantation outside the lease area.

Date: 01/12/25


(Handwritten signature and date)
01/12/25

**Sub-Area Manager,
Orient Colliery Mine No.1&2,
Orient Sub-Area, OA, MCL**

(Handwritten signature)

Annexure 'A'
EFFLUENT QUALITY REPORT FOR APRIL 2025 TO SEPTEMBER 2025
ORIENT COLLIERY U/ G MINE NO. 1&2
(Values are in mg/l except PH)


SAMPLING STATION	DATE	PH	OG	TSS	COD	BOD	NO3N
Mine Sump of Mine No. 2	09-Apr-25	8.55	<4.0	27	16	-	-
Mine Sump of Mine No. 2	13-May-25	8	<4.0	34	28	-	-
Mine Sump of Mine No. 2	27-May-25	7.85	<4.0	36	22	-	-
Mine Sump of Mine No. 2	12-Jun-25	7.29	<4.0	17	24	-	-
Mine Sump of Mine No. 2	15-Jul-25	7.25	<4.0	14	12	-	-
Mine Sump of Mine No. 2	14-Aug-25	7.01	<4.0	23	20	-	-
Mine Sump of Mine No. 2	13-Sep-25	7.53	<4.0	14	20	-	-
MAX	—	8.55	—	36	28	—	—
MIN	—	7.01	—	14	12	—	—
Permissible limit	—	5.5-9.0	10	100	250	—	—


Sub-Area Manager
Orient Colliery Mine No-1&2
Orient Sub-Area, OA, MCL

Annexure 'B'
AMBIENT AIR QUALITY REPORT FOR APRIL 2025 TO SEPTEMBER 2025
ORIENT COLLIERY U/ G MINE NO. 1&2
(Values are in $\mu\text{g}/\text{m}^3$)

Monitoring station	DATE	SPM	PM 10	PM 2.5	SO2	NOx
Orient GM Office	01-Apr-25	183	78	39	8.7	19.53
Orient GM Office	02-Apr-25	129	75	37	9.11	23.73
Orient Mine No 1&2	05-Apr-25	134	122	51	9.53	26.07
Orient GM Office	07-Apr-25	146	80	41	10.89	23.22
Orient GM Office	08-Apr-25	145	72	35	19.62	30.18
Orient GM Office	16-Apr-25	175	63	34	11.64	25.68
Orient GM Office	17-Apr-25	163	57	31	15.03	33.97
Orient GM Office	21-Apr-25	168	67	36	10.75	26.07
Orient GM Office	22-Apr-25	155	56	30	18.01	35.95
Orient Mine No 1&2	24-Apr-25	215	89	46	20.43	35.16
Orient GM Office	28-Apr-25	159	58	31	14.68	26.72
Orient GM Office	29-Apr-25	149	55	27	13.12	41.66
Orient GM Office	02-May-25	138	55	26	12.05	28.76
Orient GM Office	03-May-25	151	60	29	12.55	31.61
Orient Mine No 1&2	08-May-25	200	78	40	9.62	24.28
Orient GM Office	09-May-25	166	66	32	9.69	17.2
Orient GM Office	10-May-25	133	53	25	14.48	32.33
Orient GM Office	16-May-25	171	66	32	13.87	18.75
Orient GM Office	17-May-25	138	53	26	12.38	28.48
Orient GM Office	23-May-25	148	58	28	17.75	32.01
Orient GM Office	24-May-25	133	51	25	15.02	21.9
Orient GM Office	30-May-25	154	60	29	12.9	33.5
Orient GM Office	31-May-25	144	57	27	12.75	28.03
Orient GM Office	04-Jun-25	160	55	29	9.61	30.3
Orient GM Office	05-Jun-25	123	48	25	14.27	31.68
Orient GM Office	11-Jun-25	143	53	27	19.82	24.48
Orient GM Office	12-Jun-25	114	42	23	9.36	26.45
Orient GM Office	18-Jun-25	136	55	27	12.49	21.49
Orient GM Office	19-Jun-25	119	39	22	15.42	27.46
Orient Mine No 1&2	14-Jun-25	171	75	34	10.84	38.89
Orient Mine No 1&2	30-Jun-25	168	79	36	16.84	28.55
Orient GM Office	25-Jun-25	155	66	30	13.47	23.26
Orient GM Office	26-Jun-25	118	45	20	12.56	22.3
Orient GM Office	03-Jul-25	139	52	24	13.35	24.9
Orient GM Office	04-Jul-25	144	59	26	14.24	22.94
Orient GM Office	08-Aug-25	164	70	29	13.3	16.61
Orient GM Office	09-Aug-25	155	59	23	16.42	31.98
Orient GM Office	18-Aug-25	149	67	28	18.42	23.24
Orient GM Office	19-Aug-25	140	49	24	13.83	24.3
Orient GM Office	25-Aug-25	133	47	21	17.36	24.2
Orient GM Office	26-Aug-25	155	73	31	13.38	30.29
Orient GM Office	01-Sep-25	153	64	29	12.05	28.86
Orient GM Office	02-Sep-25	143	50	24	12.26	24.92
Orient GM Office	08-Sep-25	150	61	27	15.92	28.86
Orient GM Office	09-Sep-25	123	42	19	16.52	27.63

Orient GM Office	15-Sep-25	151	58	27	14.92	28.41
Orient GM Office	16-Sep-25	125	44	20	21.06	23.43
Orient GM Office	22-Sep-25	118	37	15	8.51	17.75
Orient GM Office	23-Sep-25	146	53	24	13.91	35.28
Orient Mine No 1&2	13-Sep-25	196	87	40	10.98	26.3
Orient Mine No 1&2	27-Sep-25	219	115	48	10.03	24.94
MAX		219	122	51	21.06	41.66
MIN		114	37	15	8.51	16.61
Permissible		500	250		120	120


 Sub-Area Manager
 Orient Colliery Mine No-1&2
 Orient Sub-Area, OA, MCL



Annexure 'C'
NOISE LEVEL REPORT OF APRIL 2025 TO SEPTEMBER 2025
ORIENT COLLIERY U/ G MINE NO. 1&2
Figures are in dB (A)

DATE	STATION	Noise- DAY (6.0AM to 10.00PM)	Noise- NIGHT (10.00PM 6.00AM)
03-Apr-25	Orient Mine No. 1 & 2	64.9	60.5
03-Apr-25	VIP Guest House, IB Valley (Reported Only)	53.6	46.7
17-Apr-25	Orient Mine No. 1 & 2	60.4	56.7
17-Apr-25	VIP Guest House, IB Valley (Reported Only)	60.4	58.6
13-May-25	Orient Mine No. 1 & 2	60.8	54.2
13-May-25	VIP Guest House, IB Valley (Reported Only)	49.51	37.42
27-May-25	Orient Mine No. 1 & 2	61.9	57.6
27-May-25	VIP Guest House, IB Valley (Reported Only)	49.9	38.3
02-Jun-25	Orient Mine No. 1 & 2	60.4	55.2
02-Jun-25	VIP Guest House, IB Valley (Reported Only)	51.8	42.9
23-Jun-25	Orient Mine No. 1 & 2	64.8	60.7
23-Jun-25	VIP Guest House, IB Valley (Reported Only)	50.4	40.9
04-Aug-25	Orient Mine No. 1 & 2	52.5	42.2
04-Aug-25	VIP Guest House, IB Valley (Reported Only)	49.2	40.8
20-Aug-25	VIP Guest House, IB Valley (Reported Only)	50.5	41.2
23-Aug-25	Orient Mine No. 1 & 2	52.7	41.4
08-Jul-25	VIP Guest House, IB Valley (Reported Only)	49.7	40.4
11-Jul-25	Orient Mine No. 1 & 2	49.5	41.8
28-Jul-25	VIP Guest House, IB Valley (Reported Only)	49.6	39.2
31-Jul-25	Orient Mine No. 1 & 2	52.6	42.5
05-Sep-25	Orient Mine No. 1 & 2	52.2	42
05-Sep-25	VIP Guest House, IB Valley (Reported Only)	49.4	41.2

19-Sep-25	Orient Mine No. 1 & 2	52.6	39.7
19-Sep-25	VIP Guest House, IB Valley (Reported Only)	52.6	40.3
	MAX	64.9	60.7
	MIN	49.2	37.42
	Permissible	75	70

[Handwritten Signature]

**Sub-Area Manager
Orient Colliery Mine No-1&2
Orient Sub-Area, OA, MCL**


[Handwritten Mark]

Annexure-'D'
NAME OF THE SPECIES PLANTED IN AND AROUND
ORIENT COLLIERY U/ G MINE NO. 1&2

Sl. No.	Local Name of Species
1	Jack Fruit
2	Mango
3	Amla
4	Jamu
5	Neem
6	Karanja
7	Kadamba
8	SiSepuba
9	Jaafra
10	Rain tree
11	Chakunda

PLANTATION WORK UNDERTAKEN IN ORIENT COLLIERY MINE NO 1&2,
ORIENT AREA, MCL SINCE 2005-06


Year of plantation	No. of plants planted		Total plantation area in Ha.
	Block plantation	Avenue plantation	
2005-06	18,400	1,600	8.36
2006-07	50,475	Nil	22.43
2007-08	12,500	Nil	5.00
2008-09	22,500	Nil	9.0
2009-10	22,000	Nil	8.80
2010-11	14,000	Nil	5.6
2011-12	10,000	1,600	4.64
2014-15	1,500	Nil	Within School Premises of Rajpur, Loisingh, Chandinimal, Kudopali and Gourmal Gram Panchayat
2015-16	NIL	NIL	50,000 nos. of hybrid mango seedlings were distributed to schools in the vicinity of Orient Area in Jharsuguda District.
2016-20	NIL	NIL	Presently, no suitable non-coal bearing land is available within the mining lease area. However, Tahasildar, Jharsuguda has been requested with a copy to the Collector, Jharsuguda to provide suitable land for plantation outside the mine lease area.
2020-21	350	NIL	Plantation done of 350 nos of saplings in Rampur Colony of Orient Area in 0.26 Ha.
2021-22	1000	Nil	0.4 Ha (Plantation activity carried out in premises of Mine No.-3 & Mine No.-4.)
	NIL	Nil	1500 nos. of plants distributed to employees of OA and 2000 nos. of plant distributed in nearby villages.
2022-23	540	NIL	Planted in OC-4 mine, Orient Area in 0.216 Ha
	NIL	NIL	Distributed to employees of Orient Area
2023-24	50	NIL	Planted in OC-4 mine, Orient Area
2024-25	10000	NIL	Planted by Orient Area near Hill Top Colony, SOCP in 4.56 Ha
2025-26	NIL	1000	Planted by Orient Area in front of HBM in 0.8 Ha
Total		1,67,515	70.066


 Sub-Area Manager
 Orient Colliery Mine No.1&2
 Orient Sub-Area, OA, MCL




Annexure 'E'
WELL WATER LEVEL MONITORING DATA FOR OC-1&2,
ORIENT AREA, MCL FOR APR 2025 to SEP 2025)

Name of the Station	Date of sampling	Depth to Water Level (in m. bgl)
HIRMA	May 2025	6.20
MALDA/GATIAPARA		5.60
PATRAPALI-II		4.10
CHARBATI/FALSIBUNA		9.10
KHINDA		2.90
HIRMA	August 2025	1.7
MALDA/GATIAPARA		0.6
PATRAPALI-II		0.5
CHARBATI/FALSIBUNA		1.8
KHINDA		0.2


Sub-Area Manager
Orient Colliery Mine No.1&2
Orient Sub-Area, OA, MCL

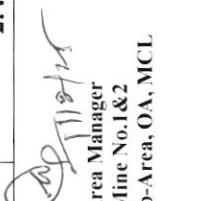
Annexure 'F'
PIEZOMETER WATER LEVEL MONITORING DATA FOR OC-1&2,
ORIENT AREA, MCL FOR APR 2025 to SEP 2025)

Name of the Station	Date of sampling	Depth to Water Level (in meter)
Piezometer No MIP 03; Besides Ib Valley GM House, Latitude 21.85446 N Longitude 83.926961 E	May 2025	9.10
Piezometer No MIP 03; Besides Ib Valley GM House, Latitude 21.85446 N Longitude 83.926961 E	August 2025	3.78


Sub-Area Manager,
Orient Colliery Mine No.1&2
Orient Sub-Area, OA, MCL

Annexure 'G'
Drinking Water Quality Data: Orient Area
Orient Mine No I&2

PROJECT	Mine no 1 & 2 Filter Plant	Indian Drinking Standards								(IS-10500):2012
		10-Apr-25	14-May-25	13-Jun-25	14-Jul-25	14-Aug-25	13-Sep-25	Acceptable	Permissible	
Date of Sampling	10-Apr-25	14-May-25	13-Jun-25	14-Jul-25	14-Aug-25	13-Sep-25	Acceptable	Permissible		
Parameter	10-Apr-25	14-May-25	13-Jun-25	14-Jul-25	14-Aug-25	13-Sep-25	Acceptable	Permissible		
Colour (Hazen)	2	2	2	1	2	1	Agreeable	Agreeable	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	3	3	2	2	2	2	Agreeable	Agreeable	1	5
pH	8.13	7.4	7.23	7.53	6.98	7.54	6.5-8.5	No relaxation	200	600
Total Alkalinity (mg/L)	109.25	128	120	138.54	155.47	126.06	200	600	200	600
Chloride (mg/L)	31.12	26	16	21.5	36.91	77.19	1.0	No relaxation	250	1000
Sulphate (mg/L)	11.56	20.32	14.72	26.54	54.05	42.74	250	1000	500	2000
Nitrate (mg/L)	<0.5	<0.5	<0.5	1.42	<0.5	24.16	500	2000	75	200
Total Hardness (as CaCO ₃) (mg/L)	95.62	96	104	87.43	78.44	129.42	75	200	0.05	1.5
Calcium (mg/L)	19.16	17.6	14.4	20.67	26.72	49.2	0.05	1.5	0.1	0.3
Fluoride (mg/L)	0.38	0.1	0.39	0.46	0.42	0.77	0.1	0.3	200	400
Total Dissolved Solids (mg/L)	212	200	215	226	230	283	200	400	45	No relaxation
Copper (mg/L)	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	45	No relaxation	1	1.5
Manganese (mg/L)	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	1	1.5	0.01	No relaxation
Iron (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.01	No relaxation	0.01	No relaxation
Zinc (mg/L)	0.23	<0.04	<0.04	0.42	<0.04	0.21	0.01	No relaxation	5	15
Lead (mg/L)	<0.005	<0.001	<0.005	<0.005	<0.005	<0.005	0.05	No relaxation	0.05	No relaxation
Cadmium (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.5	2.4	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.5	2.4	0.003	No relaxation
Arsenic (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.5	2.4	0.5	2.4
Boron (mg/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.5	2.4	0.5	2.4


 Sub-Area Manager
 Orient Colliery Mine No.1&2
 Orient Sub-Area, OA, MCL