

**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(Forest Conservation Division)**

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Indira Paryavaran Bhawan,  
Jor Bag Road, Aliganj,  
New Delhi – 110003.

**Dated: 29th May, 2023**

To,

**The Regional Officer,**  
Integrated Regional Office,  
Ranchi.

**Subject: Proposal for the non-forest use of 192.36 ha (Forest land – 57.29 ha and Jungle Jhari 135.07 ha) of forest land for Magadh East Opencast mining project in favour of M/s CCL, Chatra South, Jharkhand – regarding.**

Madam/Sir,

I am directed to refer to Integrated Regional Office, Ranchi's no. FP/JH/MIN/87235/2020/1059 dated 21.04.2023 on above mentioned subject submitting Site Inspection Report (SIR) in response to Ministry's letter dated 07.12.2022. In this regard the State Government vide their letter No. Van Bhumi-26/2022-862 V.P. dated 06.03.2023 has reported that mining activities within the area proposed for diversion have been admitted by the user agency and necessary actions in this regards may be taken, for which the user agency has expressed consent. Accordingly the Ministry vide letter dated 28.04.2023 asked the State Government and the IRO Ranchi to give details of violation in the instant case.

The SIR submitted by the IRO, does not refer to the violation which has been reported by the State Govt itself. Further, only one patch of land identified for compensatory afforestation has been inspected, out of the total 8 patches proposed in this regard.

Keeping above in view, the IRO Ranchi is again requested to examine the issue of violation and other details in view of the letter dated 06.03.2023 of the State Government and the letter dated 28.04.2023 of this Ministry (**copies enclosed**). The inspection for the remaining CA areas be completed and it has to be ensured that the areas proposed for CA are suitable for plantation and free from all encumbrances.

**Encl: As Above**

Signed by  
Suneet Bhardwaj  
Date: 29-05-2023 19:18:40

Yours sincerely,

Sd/-  
(Suneet Bhardwaj)  
**Assistant Inspector General of Forests**

**Copy to:**

1. The Principal Secretary (Forests), Government of Jharkhand, Ranchi;

I/45112/2023

2. The PCCF (HoFF), Department of Forest, Government of Jharkhand, Ranchi;
3. The Nodal Officer (FCA), Department of Forest, Government of Jharkhand, Ranchi;
4. User Agency;
5. Monitoring Cell, FC Division, MoEF & CC, New Delhi for uploading on PARIVESH portal.

झारखण्ड सरकार  
वन, पर्यावरण एवं जलवायु परिवर्तन विभाग

पत्र संख्या-वन भूमि-26/2022-862 व०प०, राँची, दिनांक-06/03/2023

प्रेषक,

जलज कुमार,  
उप परामर्शी।

सेवा में,

वैज्ञानिक 'डी०',  
भारत सरकार,  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय,  
इन्दिरा पर्यावरण भवन, अलीगंज, जोरबाग रोड,  
नई दिल्ली-110003।

विषय :- मेसर्स सी०सी०एल० के मगध पूर्वी खुली खदान परियोजना हेतु चतरा दक्षिणी वन प्रमंडल अंतर्गत 192.36 हे० (वनभूमि-57.29 हे० एवं जंगल-झाड़ी-135.07 हे०) वनभूमि अपयोजन का प्रस्ताव के संबंध में।

प्रसंग :- भवदीय पत्र संख्या-F.No. 8-27/2022-FC दिनांक-07.12.2022

महाशय,

निदेशानुसार उपर्युक्त विषयक प्रासंगिक पत्र के आलोक में प्रधान मुख्य वन संरक्षक-सह-कार्यकारी निदेशक, बंजर भूमि विकास बोर्ड, झारखण्ड, राँची के पत्रांक-169 दिनांक-20.02.2023 से प्राप्त निराकरण प्रतिवेदन की छायाप्रति (अनुलग्नक सहित) आवश्यक कार्रवाई हेतु संलग्न है।

अतः अनुरोध है कि विषयक प्रस्ताव में अग्रतर कार्रवाई करने की कृपा की जाय।

अनु०-यथोक्त।

विश्वासभाजन

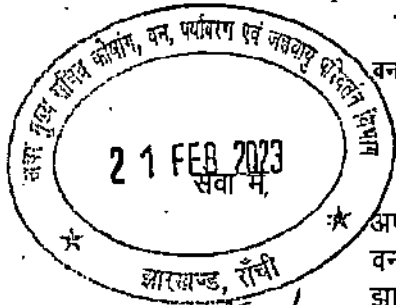
*Leet*  
4/3/23  
(जलज कुमार)  
उप परामर्शी।

से० (FC)  
(पर्यावरण एवं वन)  
889 (MIBS)  
29/03/23

*Shub*  
3/4/23  
TO/PAK

OAC (BS)  
Please put up urgently.  
Pambach  
05/4/23

कार्यालय : प्रधान मुख्य वन संरक्षक-सह-कार्यकारी निदेशक,  
बंजर भूमि विकास बोर्ड, झारखंड, राँची।



वन भवन, डोरण्डा, राँची, झारखंड, पिन-834002, Email : pccf-ednodal@gov.in

पत्रांक- 169

राँची, दिनांक- 20/02/2023

अपर मुख्य सचिव,  
वन, पर्यावरण एवं जलवायु परिवर्तन विभाग,  
झारखण्ड सरकार, राँची।

30.4.17-5 फरवरी /  
विषय :-

प्रसंग :-  
20/2/23

मेसर्स सी0सी0एल0 की मगध पूर्वी खुली खदान परियोजना हेतु चतरा दक्षिणी वन प्रमण्डल अन्तर्गत 192.36 हे0 (वनभूमि-57.29 हे0 एवं जंगल झाड़ी-135.07 हे0) वनभूमि अपयोजन प्रस्ताव (FP/JH/MIN/87235/2020) के संबंध में।

1. भारत सरकार, पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली का पत्रांक F.No. 8-27/2022-FC दिनांक 07.12.2022 - पृ. - 2/पृ०
2. क्षेत्रीय मुख्य वन संरक्षक, हजारीबाग का पत्रांक 389 दिनांक 11.02.2023

महाशय,  
क्षेत्रीय प्रमुख  
22/2/2023

उपर्युक्त विषयक संदर्भ में सूचित करना है कि भारत सरकार के प्रासंगिक पत्र-1 द्वारा सी0सी0एल0 के मगध पूर्वी खुली खदान परियोजना हेतु चतरा दक्षिणी वन प्रमण्डल अन्तर्गत 192.36 हे0 (वनभूमि-57.29 हे0 एवं जंगल झाड़ी- 135.07 हे0) वनभूमि अपयोजन प्रस्ताव में बारह बिन्दुओं पर पृच्छा की गई है, जिसका निराकरण प्रतिवेदन क्षेत्रीय मुख्य वन संरक्षक, हजारीबाग के पत्रांक 389 दिनांक 11.02.2023 (छायाप्रति संलग्न) द्वारा प्राप्त हुआ है।

क्षेत्रीय मुख्य वन संरक्षक, हजारीबाग के प्रतिवेदानुसार निराकरण निम्नवत् प्रतिवेदित किया जाता है :-

Sl. No.	Query raised by GOI	DFO's Comments
1	2	3
1	As per detail furnished in Part-I, total forest area and non-forest area required under the proposal are 192.36 ha and 219.88 ha, thereby total area required for the project is 412.24. However, detail of area filled in the Part-I by the user agency under column M1(i)(a) mentioned the total area of the project as 495.92 ha. This discrepancy needs to be rectified by the State.	<p>From the reply of the user agency, it is clear that the total proposed area under diversion in this proposal is of 412.24 Ha only including 192.36 ha forest land and 219.86 Ha non-forest land.</p> <p>The area shown by the user agency under column M1(i) a is 495.92 Ha which includes the instant- proposal's area of 412.24 Ha and 83.68 Ha of already. diverted area vide GoI, MOEF letter no. F. NO-8-38/2008-FC; dated 18.10.2010. This 83.68 Ha diverted forest land is a part of 96.72 Ha totally diverted area vide the above said GOI, MOLF letter no and the balance 13.04 Ha of the already above mentioned 96.72 Ha has now has been brought and shown in Sanghmitra OCP of the Magadh Sanghmitra Area of M/S CCL.</p> <p>The reply and details provided by the user agency may be accepted.</p> <p>Annexure-I</p>

1033  
23/2/23

20.02.2023

अपर मुख्य सचिव  
वन, पर्यावरण एवं जलवायु परिवर्तन विभाग,  
सं० ..... 169 .....  
21 FEB 2023  
झारखण्ड, राँची।

ii	<p>Contrary to finding in the Part-II with regards to detail of unique species of flora and fauna, inspection report dated 26.05.2022 of the DCF mentions the occurrence of no species/rare/endangered species of flora and fauna. The same may be rectified.</p>	<p>The area is full of various species of flora and fauna and is facing very negative impact of the ongoing mining-activities. Visit of the endangered Asian elephant is very common in the hills of Develgada, Kurlonga and other places of the proposed forest under diversion. The adjacent forest area and non-forest area are the movement territories of the Asian elephant in which the wild elephant from the Palamu forest's and Ranchi forest seasonally and regularly come and stay for a sufficient period of time to give a clean indication that the proposed, forest area as well as the adjacent forest and non-forest area are a part of wild elephants (Asian elephant) habitat.</p>
iii	<p>Total project area is 1593.73 ha (as per Mining Plan) comprising of 495.92 ha in Chatra District and 1097.81 ha in Latehar District (Pg 205/c). Detail of forest land involved in the 1593.73 ha, along with detail of approval under the FC Act, 1980, if any, obtained needs to be intimated by the State.</p>	<p>The user agency has given the breakup of the total project the area of 1593 73 Ha by showing that 661.72 Ha is of forest land category and 932.00 Ha is of non-forest land category in both Chatra and Latehar district of the state where the Magadh OCP of M/S CCL is located &amp; is doing work of coal excavation in its different queries. The above said, 661.72 Ha forest land category includes 83.68 Ha of already diverted 96.72Ha forest land diverted by GoI, vide MoEF letter No. F. NO-8-38/2008-FC; dated 18.10.2010. and 192.36 Ha of the instant proposal &amp; 385.68 Ha forest land proposal is likely to be submitted by the user agency in Latehar. The reply made by the user agency may be accepted.</p>
iv	<p>The comments of the PCCF (Wildlife) revealed that user agency has not compiled with the provisions of WLMP stipulated in the past. The State Government may therefore furnish a justification for the same along with detailed comments on the observations made in the letter dated 29.08.2022 of the PCCF (Wildlife) including impact of the projects of UA on the hydrological regimes in the area as mentioned by the PCCF (CWLW).</p>	<p>The queries' made by the GOI is of big concern &amp; the user agency have been found very negligent to the compliance of the Conditions stipulated by GOI in respect of the already approved proposal of 96.72 Ha forest area vide GOI, MOEF letter no. F. NO-8-38/2008-FC; dated 18.10.2010. During the course of the review of the compliance of the stipulated condition of the previously approved proposal for 96.72 Ha forest land by DFO, it is found that wildlife mitigation measure in and around the project area is nil &amp; man-animal conflict as well as the depleting flora and fauna is very evident - after the mining activity has been started. The wildlife management plan has now been prepared by the user agency under the guidance of DFO, Chatra South at the cost of 1565.42 Lacs for 10 (ten) years. In which 872.78 Lac is for the management of wild life in Chatra South forest division &amp; 692.64 Lac is for wild life sanctuary of nearby Hazaribagh district.  User Agency has given undertaking to pay the cost of implementation of Approved Wildlife Management Plan attached as Annexure-IV</p>
V	<p>The examination of the DSS report (copy enclosed) revealed the following:</p>	
V (a)	<p>As per DSS report, vegetation density is up to 0.4 (copy enclosed) while DCF in Part-II reported vegetation density of 0.8, therefore, the same needs to be revisited and exact status needs to be intimated by the State.</p>	<p>The proposed forest area under diversion of F(C) Act has been revisited on 30.01.2023 by Divisional forest officer south division and it has been found that some areas are having vegetation density of 0.8 and Some areas of even more than 0.8 while some areas are having vegetation density less than 0.8 and may be as low as 0.1 and 0.2. There may be difference in overall estimation of vegetation density of such a large forest area of different vegetation density and the report based</p>

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20.02.2023

		on DSS analysis. Moreover on the basis of the visit of the proposed forest area under diversion, I am of the opinion that average vegetation density of the entire proposed area may be reported as 0.6
V (b)	Google Satellite Imagery of the area proposed for diversion revealed occurrence of cultivation, settlement, drainage/nala and mining activity on the area proposed for diversion. Comments on the same needs to be furnished by the state.	The proposed site has been inspected on 30.01.2023 by Divisional forest officer south division and the cultivation, settlement, Drainage/nala and illegal or unauthorised mining activities as raised in the queries has been visited. The settlement is very old and the people living in the settlement are all local scheduled tribes mostly Oraon tribes. The scheduled tribes living in the settlement had cleared the adjacent land and have been doing the work of cultivation since very long. The Drainage/nala present in the proposed forest area shall be conserved and managed as per the feasibility report approved by Minor irrigation dept. Chatra districts Executive Engineer's vide letter no 38 date 25.01.2023. The mining activity as referred in the query has been admitted by the user agency and necessary actions in this regards may be taken, for which the user agency has expressed consent.  Mining Plan enclosed as <b>Annexure-II</b> & copy of Feasibility report for Nala diversion enclosed as <b>Annexure-V</b>
V (c)	Certain encroachments in the form of cultivation, road etc. is visible in the area proposed for raising CA. Comments on the same needs to be furnished by the State Government.	In place of the 29.51 Ha degraded forest area identified earlier for raising CA, which has been found encroached in the form of cultivation, road etc a new and fresh patch of approx. equivalent degraded forest area of 30.02 Ha for raising CA has been identified & the KML file and DGPS of the newly identified forest area for raising CA is being submitted and identified as mentioned in the reply of the user agency.  <b>Annexure-VI &amp; VII</b>
V	The Ministry granted approval to 96.72 Ha of forest land on 18.10.2010. Status of compliance of the conditions stipulated in the said approval including preparation and implementation of Wildlife Management Plan and reasons/justification for non-compliance, if any, may also be furnished by the State.	Of course, there is no justification of the non-compliance of the stipulated condition of MOEF, GOI regarding the non-implementation WLMP in respect of 96.72 Ha of forest land approved for mining work in favour of M/S CCL it is sever lapses in regard of flora & fauna of the project area which has suffered a long after the project was commissioned by M/S CCL.  Moreover the lapses now has been identified and the desired wild life Margent Plan has been prepared by the user agency under the guidance of DFO, Chatra South at a cost of 1565.42 Lacs & the use agency has to deposit the cost of approved WLMP by Chief wild life conservator of the state before the grant of Stage I approval to the instant proposal by GOI. The issue raised by GOI regarding the pending WLMP in respect of the 96.72 Ha of past proposal is uncompromising and the state forest department has taken steps to rectify the lapses happened in the past regarding the implantation of WLMP of 96.72 Ha proposal of the past  <b>Annexure-VIII</b>

*[Signature]*  
20.02.2022

vi	<p>In compliance of FRA, 2006 three certificates in respect of forest area of 651.16 ha, 32.15 ha and 44.70 ha were submitted. The State Government may, therefore, clarify the corresponding certificate issued in respect of extant proposal and justification furnishing of three separate certificates. Further, detail of documents pertaining to meeting of Sub-Divisional Level Committee could not be found in the compliance. However, the same can be furnished after Stage-I approval and before Stage-II approval.</p>	<p>The user agency has shown in the reply that FRA has been obtained on 10.7.2018, 20.01.2015 and 17.01.2022 for 115.51 Ha, 32.15 Ha and 44.70 Ha forest area respectively of the proposal and the user agency is also agreed to submit the details of documents pertaining to meeting of Sub- Divisional Level Committee after stage I approval and before stage II approval.</p> <p>The reply made by the user agency may be accepted.</p>
vii	<p><b>Examination of Mining Plan revealed the following:</b></p>	
viii	<p>Magadh OCP is proposed for captive use of Tandawa TPP; however, in light of amendment in the MMDR Act, 1957, the State Government needs to confirm that whether use of coal from the mine is proposed for captive use only or otherwise.</p>	<p>User agency has submitted that the Coal obtained from the mines of the proposed OCP shall not be used for captive uses.</p> <p>(Details given in point no 1.1.4 of chapter 1, page no-1 of 57 of Approved Mine Plan copy enclosed as Annexure-II)</p>
ix	<p>The Mining Plan envisages transportation of coal through rail while underlying section in the Mining Plan mentions strengthening of a Kutcha road from Tandwa to Magadh over a length of 17 km. Therefore, it needs to be clarified that whether the road Tandwa-Magadh is proposed only for approach to the project or for transportation as well. A clarification in this regard may be furnished by the State.</p>	<p>The user agency has replied in the following words "Mode of coal transportation will be mainly by Magadh Railway siding &amp; Conveyor corridor (from Magadh OCP to NTPC Tandwa).</p> <p>The road Tandwa-Magadh is proposed for approach to the project".</p> <p>The abovementioned reply of the user agency may be accepted.</p>
x	<p>The extant proposal does not involve rehabilitation; however, as per the Mining Plan rehabilitation of 998 families has been proposed in the project. A justification establishing the irrelevancy of the rehabilitation proposed in the Mining Plan and rehabilitation indicated as nil in Part-I of Form-A may be obtained from the user agency.</p>	<p>From the reply made by the user agency it is clear that there is involvement of rehabilitation in the instant proposal, which was not correctly indicated in instant proposal at the time of its submission. The user agency has now admitted that 303 families are required to be rehabilitated in this Project- and 32 Project affected families of Masilong village have already been shifted under R&amp;R Policy of CIL and the rest 271 PAF'S Shall also be shifted under R&amp;R Policy of CIL. The user agency must do the rehabilitation works under the guidance of district and forest administration of Chatra district.</p> <p>Copy of Approval of R&amp;R site enclosed as Annexure-X &amp; Plan showing R&amp;R site is enclosed as Annexure-XI</p>

*[Signature]*  
20.02.2023

xi	The examination of land use proposed in the mining plan revealed the following:	
(a)	An area of 159.68 ha has been proposed for safety zone. Justification for proposing such a large area, along with underlying standard prescribed by the relevant Department/Organization, needs to be furnished by the State.	The reply made by the user agency may be accepted  Land use plan of Magadh OCP enclosed as <b>Annexure-XIV</b>
(b)	An area of 14.8 ha has been proposed for diversion of river/nallah/canal (Pg 206/c). The status of feasibility reports for said diversion along with comments of Water Resource Department on the feasibility of said proposed diversion needs to be informed by the State.	In compliance to the query, the user agency has Submitted the duly approved feasibility report- for Nala diversion vide letter no. 38 dated 25-1.2023 of the Executive Engineer, Minor irrigation department Chatra of Government of Jharkhand and the same may be accepted.  Feasibility report for Nala diversion enclosed as <b>Annexure-V</b>
(c)	As per the land use, approved in the Mining Plan, no Green Belt has been proposed in the project area. Reasons and underlying guidelines justifying the same may be furnished by the State.	In response to the query the user agency clarifies that out of 412.92 Ha Area of current application, 110.92 Ha has been proposed for Green belt in the inland proposal. The proposed Green Belt area must be adequately protected , conserved and developed by the user agency under guidance of Local forest administration by preparing a developmental and conservation plan for this area.
(d)	The area proposed for OB dump may be optimized to the extent possible and possibilities may be explored to use the already mined out areas for OB dumping.	The user agency has submitted the reply in the following words: "Proposed 23.81 Ha of Land is proposed for OB dump is optimal which include 22.81 Ha Non Forest land and 1.00 Ha in Forest Land. De-coaled area is not available in current mine for OB dumping. As soon as de-coaled area will be made available internal OB dumping be followed." The above said reply of the user agency may be accepted.
xii	Status of reclamation measures undertaken by the user agency in their lease area as per the provisions provided in the Progressive Mine Closure Plans and gaps if any, may be intimated by the State.	In compliance to the query, the user agency has Submitted that Total 2,42,78,895.00 CUM of OB has been backfilled since the commissioning of the mines i.e. 2014 and dump has been Planted. The reply made by the user agency may be accepted.  Progressive mine closure Activity copy enclosed as <b>Annexure-XII</b> Joint inspection report for plantation enclosed as <b>Annexure-XIII</b> Sample photograph of Mine reclamation (In Pit Filling & Plantation Enclosed as <b>Annexure-XV</b> )

*[Signature]*  
20.02.2023



AS

अतएव क्षेत्रीय मुख्य वन संरक्षक, हजारीबाग से प्राप्त निराकरण प्रतिवेदन की तीन प्रतियाँ इस पत्र के साथ संलग्न कर अग्रेत्तर कार्रवाई हेतु भेजी जा रही है।

संचिका में प्रधान मुख्य वन संरक्षक (HoFF), झारखण्ड का अनुमोदन प्राप्त है।

अनु०: यथोक्त।

विश्वासभाजन,  
20.02.2022

प्रधान मुख्य वन संरक्षक-सह-कार्यकारी निदेशक,  
बंजर भूमि विकास बोर्ड, झारखण्ड, राँची।

20-2



कार्यालय - क्षेत्रीय मुख्य वन संरक्षक, हजारीबाग।  
वन भवन, हजारीबाग,

Ph. No. 06546-223962, Email- rccf-hazaribagh@gov.in

पत्रांक : 389

दिनांक : 11-02-2023

सेवा में,

प्रधान मुख्य वन संरक्षक  
-सह-  
कार्यकारी निदेशक, बंजर भूमि विकास बोर्ड,  
झारखण्ड, राँची।

विषय-

मेसर्स सी०सी०एल० द्वारा मगध ओ०सी०पी० फेज-2 हेतु 192.36 हे० (वन भूमि- 57.29 हे० एवं जंगल झाड़ी भूमि- 135.07 हे०) वन भूमि अपयोजन प्रस्ताव पर भारत सरकार द्वारा की गई पृच्छा का अनुपालन के संबंध में।

भविष्य का ज्ञापक 1295 दिनांक 21.12.2022

उपर्युक्त विषयक प्रसंगिक पत्र के सन्दर्भ में सूचित करना है कि विषयक परियोजना मेसर्स सी०सी०एल० द्वारा मगध ओ०सी०पी० फेज-2 हेतु 192.36 हे० (वन भूमि- 57.29 हे० एवं जंगल झाड़ी भूमि- 135.07 हे०) वन भूमि अपयोजन प्रस्ताव में भारत सरकार, पर्यावरण वन एवं जलवायु परिकल्पना मंत्रालय, न्यू दिल्ली द्वारा बारह बिन्दुओं पर पृच्छा की गई है। इन पृच्छित बिन्दुओं का वन प्रमंडल पदाधिकारी, चतरा दक्षिणी वन प्रमंडल के पत्रांक 327 दिनांक 31.01.2023 तथा वन संरक्षक, प्रादेशिक अंचल चतरा ने अपने पत्रांक 126 दिनांक 11.02.2023 (छाया प्रति संलग्न) से इस कार्यालय को प्राप्त है। प्रयोक्ता अधिकरण द्वारा समर्पित बिन्दुवार निराकरण प्रतिकेदन पर वन प्रमंडल पदाधिकारी चतरा दक्षिणी वन प्रमंडल एवं वन संरक्षक, प्रादेशिक अंचल, चतरा का मतव्य निम्नवत है-

Sl. No.	Query	DFO's Comments
1	2	3
i	As per detail furnished in Part-I total forest area and non-forest area required under the proposal are 192.36 ha and 219.88 ha, thereby total area required for the project is 412.24. However, detail of area filled in the Part-I by the user agency under column M1(i)(a) mentioned the total area of the project as 495.92 ha. This discrepancy needs to be rectified by the State.	From the reply of the user agency, it is clear that the total proposed area under diversion in this proposal is of 412.24 Ha only including 192.36 ha forest land and 219.86 Ha non-forest land.  The area shown by the user agency under column M1(i) a is 495.92 Ha which includes the instant-proposal's area of 412.24 Ha and 83.68 Ha of already diverted area vide GOI, MOEF letter no. F. NO-8-38/2008-FC, dated 18.10.2010. This 83.68 Ha diverted forest land is a part of 96.72 Ha totally diverted area vide the above said GOI, MOLF letter no. and the balance 13.04 Ha of the already above mentioned 96.72 Ha has now has been brought and shown in Sanghmitra OCP of the Magadh Sanghmitra Area of M/S CCL.  The reply and details provided by the user agency may be accepted.

CCL Magadh OCP 192.36/ha.

*(Signature)*

	<p>Contrary to finding in the Part-II (With regards to detail of unique species of flora and fauna, inspection report dated 26.05.2022 of the DCF mentions the occurrence of no species/rare/endangered species of flora and fauna. The same may be rectified.</p>	<p>The area is full of various species of flora and fauna and is facing very negative impact of the ongoing mining activities. Visit of the endangered Asian elephant is very common in the hills of Develgada, Kurlonga and other places of the proposed forest under diversion. The adjacent forest area and non-forest area are the movement territories of the Asian elephant in which the wild elephant from the Palamu forest's and Ranchi forest seasonally and regularly come and stay for a sufficient period of time to give a clear indication that the proposed forest area as well as the adjacent forest and non-forest area are a part of wild elephants (Asian elephant) habitat.</p>
iii	<p>Total project area is 1593.73 ha (as per Mining Plan) comprising of 495.92 ha in Chatra District and 1097.81 ha in Latehar District (Pg-205/c). Detail of forest land involved in the 1593.73 ha, along with detail of approval under the FC Act, 1980, if any, obtained needs to be intimated by the State.</p>	<p>The user agency has given the breakup of the total project the area of 1593.73 Ha by showing that 661.72 Ha is of forest land category and 932.00 Ha is of non-forest land category in both Chatra and Latehar district of the state where the Magadh OCP of M/S CCL is located &amp; is doing work of coal excavation in its different queries. The above said 661.72 Ha forest land category includes 83.68 Ha of already diverted 96.72 Ha forest land diverted by GOI, vide MoEF letter No. F. NO-8-38/2008-FC, dated 18.10.2010, and 192.36 Ha of the instant proposal &amp; 385.68 Ha forest land proposal is likely to be submitted by the user agency in Latehar.</p>
iv	<p>The comments of the PCCF (Wildlife) revealed that user agency has not complied with the provisions of WLMP stipulated in the past. The State Government may therefore furnish a justification for the same along with detailed comments on the observations made in the letter dated 29.08.2022 of the PCCF (Wildlife) including impact of the projects of UA on the hydrological regimes in the area as mentioned by the PCCF (CWLW).</p>	<p>The reply made by the user agency may be accepted. The queries made by the GOI is of big concern &amp; the user agency have been found very negligent to the compliance of the Conditions stipulated by GOI in respect of the already approved proposal of 96.72 Ha forest area vide GOI, MOEF letter no. F. NO-8-38/2008-FC, dated 18.10.2010. During the course of the review of the compliance of the stipulated condition of the previously approved proposal for 96.72 Ha forest land by DFO, it is found that wildlife mitigation measure in and around the project area is nil. &amp; man-animal conflict as well as the depleting flora and fauna is very evident after the mining activity has been started. The wildlife management plan has now been prepared by the user agency under the guidance of DFO, Chatra South at the cost of 1565.42 Lacs for 10 (ten) years. In which 872.78 Lac is for the management of wild life in Chatra South forest division &amp; 692.64 Lac is for wild life sanctuary of nearby Hazaribagh district.</p>
V	<p>The examination of the DSS report (copy enclosed) revealed the following:</p>	
V (a)	<p>As per DSS report, vegetation density is up to 0.4 (copy enclosed)</p>	<p>The proposed forest area under diversion of F(C) Act has been revisited on 30.01.2023 by Divisional forest.</p>

CCL Magadh OCP 192.36 ha.

2

	while DCF in Part-II reported vegetation density of 0.8, therefore, the same needs to be revisited and exact status needs to be intimated by the State.	officer south division and it has been found that some areas are having vegetation density of 0.8 and Some areas of even more than 0.8 while some areas are having vegetation density less than 0.8 and may be as low as 0.1 and 0.2. There may be difference in overall estimation of vegetation density of such a large forest area of different vegetation density and the report based on DSS analysis. Moreover on the basis of the visit of the proposed forest area under diversion, I am of the opinion that average vegetation density of the entire proposed area may be reported as 0.6
V (b)	Google Satellite Imagery of the area proposed for diversion revealed occurrence of cultivation, settlement, drainage/nala and mining activity on the area proposed for diversion. Comments on the same needs to be furnished by the state.	The proposed site has been inspected on 30.01.2023 by Divisional forest officer south division and the cultivation, settlement, Drainage/nala and illegal or unauthorised mining activities as raised in the queries has been visited. The settlement is very old and the people living in the settlement are all local scheduled tribes mostly Oraon tribes. The scheduled tribes living in the settlement had cleared the adjacent land and have been doing the work of cultivation since very long. The Drainage/nala present in the proposed forest area shall be conserved and managed as per the feasibility report approved by Minor irrigation dept. Chatra districts Executive Engineer's vide letter no 38, date 25.01.2023. The mining activity as referred in the query has been admitted by the user agency and necessary actions in this regards may be taken, for which the user agency has expressed consent.
V (c)	Certain encroachments in the form of cultivation, road etc. is visible in the area proposed for raising CA. Comments on the same needs to be furnished by the State Government.	In place of the 29.51 Ha degraded forest area identified earlier for raising CA, which has been found encroached in the form of cultivation, road etc a new and fresh patch of approx. equivalent degraded forest area of 30.02 Ha for raising CA has been identified & the KML file and DGPS of the newly identified forest area for raising CA is being submitted and identified as mentioned in the reply of the user agency.
v	The Ministry granted approval to 96.72 Ha of forest land on 18.10.2010. Status of compliance of the conditions stipulated in the said approval including preparation and implementation of Wildlife Management Plan and reasons/justification for non-compliance, if any, may also be furnished by the State.	Of course, there is no justification of the non-compliance of the stipulated condition of MOEF, GOI regarding the non-implementation WLMP in respect of 96.72 Ha of forest land approved for mining work in favour of M/S CCL it is sever lapses in regard of flora & fauna of the project area which has suffered a long after the project was commissioned by M/S CCL. Moreover the lapses now has been identified and the desired wild life Margent Plan has been prepared by the user agency under the guidance of DFO, Chatra South at a cost of 1565.42 Lacs & the use agency has to deposit the cost of approved WLMP by Chief wild life conservator of the state before the grant of Stage I

		approval to the instant proposal by GOI. The issue raised by GOI regarding the pending WLMP in respect of the 96.72 Ha of past proposal is uncompromising and the state forest department has taken steps to rectify the lapses happened in the past regarding the implantation of WLMP of 96.72 Ha proposal of the past
vi	In compliance of FRA, 2006 three certificates in respect of forest area of 651.16 ha, 32.15 ha and 44.70 ha were submitted. The State Government may, therefore, clarify the corresponding certificate issued in respect of extant proposal and justification furnishing of three separate certificates. Further, detail of documents pertaining to meeting of Sub-Divisional Level Committee could not be found in the compliance. However, the same can be furnished after Stage-I approval and before Stage-II approval.	The user agency has shown in the reply that FRA has been obtained on 10.7.2018, 20.01.2015 and 17.01.2022 for 115.51 Ha, 32.15 Ha and 44.70 Ha forest area respectively of the proposal and the user agency is also agreed to submit the details of documents pertaining to meeting of Sub-Divisional Level Committee after stage I approval and before stage II approval.  The reply made by the user agency may be accepted.
vii	<b>Examination of Mining Plan revealed the following:</b>	
viii	Magadh OCP is proposed for captive use of Tandawa TPP; however, in light of amendment in the MMDR Act, 1957, the State Government needs to confirm that whether use of coal from the mine is proposed for captive use only or otherwise.	User agency has submitted that the Coal obtained from the mines of the proposed OCP shall not be used for captive uses.
ix	The Mining Plan envisages transportation of coal through rail while underlying section in the Mining Plan mentions strengthening of a Kutcha road from Tandwa to Magadh over a length of 17 km. Therefore, it needs to be clarified that whether the road Tandwa-Magadh is proposed only for approach to the project or for transportation as well. A clarification in this regard may be furnished by the State.	The user agency has replied in the following words. "Mode of coal transportation will be mainly by Magadh Railway siding & Conveyor corridor (from Magadh OCP to NTPC Tandwa).  The road Tandwa-Magadh is proposed for approach to the project".  The abovementioned reply of the user agency may be accepted.
x	The extant proposal does not involve rehabilitation; however, as per the Mining Plan rehabilitation of 998 families has been proposed in the project. A justification establishing the irrelevancy of the rehabilitation proposed in the Mining Plan and rehabilitation indicated as nil in Part-I of Form-A	From the reply made by the user agency it is clear that there is involvement of rehabilitation in the instant proposal, which was not correctly indicated in instant proposal at the time of its submission. The user agency has now admitted that 303 families are required to be rehabilitated in this Project- and 32 Project affected families of Masilong village have already been shifted under R&R Policy of CIL and the rest 271 PAF'S

	may be obtained from the user agency.	Shall also be shifted under R&R Policy of CIL. The user agency must do the rehabilitation works under the guidance of district and forest administration of Chatra district.
xi	<b>The examination of land use proposed in the mining plan revealed the following:</b>	
(a)	An area of 159.68 ha has been proposed for safety zone. Justification for proposing such a large area, along with underlying standard prescribed by the relevant Department/Organization, needs to be furnished by the State.	The reply made by the user agency may be accepted
(b)	An area of 14.8 ha has been proposed for diversion of river/nallah/canal (Pg 206/c). The status of feasibility reports for said diversion along with comments of Water Resource Department on the feasibility of said proposed diversion needs to be informed by the State.	In compliance to the query, the user agency has Submitted the duly approved feasibility report for Nala diversion vide letter no. 38 dated 25-1-2023 of the Executive Engineer, Minor irrigation department Chatra of Government of Jharkhand and the same may be accepted.
(c)	As per the land use, approved in the Mining Plan, no Green Belt has been proposed in the project area. Reasons and underlying guidelines justifying the same may be furnished by the State.	In response to the query the user agency clarifies that out of 412.92 Ha Area of current application, 110.92 Ha has been proposed for Green belt in the inland proposal. The proposed Green Belt area must be adequately protected, conserved and developed by the user agency under guidance of Local forest administration by preparing a developmental and conservation plan for this area.
(d)	The area proposed for OB dump may be optimized to the extent possible and possibilities may be explored to use the already mined out areas for OB dumping.	The user agency has submitted the reply in the following words: "Proposed 23.81 Ha of Land is proposed for OB dump is optimal which include 22.81 Ha Non Forest land and 1.00 Ha in Forest Land. De-coaled area is not available in current mine for OB dumping. As soon as de-coaled area will be made available internal OB dumping be followed." The above said reply of the user agency may be accepted.
xii	Status of reclamation measures undertaken by the user agency in their lease area as per the provisions provided in the Progressive Mine Closure Plans and gaps if any, may be intimated by the State.	In compliance to the query, the user agency has Submitted that Total 2,42,78,895.00 CUM of OB has been backfilled since the commissioning of the mines i.e. 2014 and dump has been Planted. The reply made by the user agency may be accepted.

वन प्रमंडल पदाधिकारी, चतरा दक्षिणी वन प्रमंडल एवं वन संरक्षक, प्रादेशिक अंचल चतरा द्वारा दिये गये उपरोक्त मंतव्य से अंधोहस्ताक्षरी भी सहमत है। वन संरक्षक, प्रादेशिक अंचल चतरा से प्राप्त निराकरण प्रतिवेदन की पांच प्रतियां सभी अनुलग्नकों सहित इस पत्र के साथ संलग्न कर भेजते हुए अनुरोध है कि विषयक मामले में अग्रेत्तर आवश्यक कार्रवाई करने की कृपा की जाय।

अनु०-यथोक्त।

आपका विश्वासी

क्षेत्रीय मुख्य वन संरक्षक,  
चतरा विभाग।



# कार्यालय : वन संरक्षक, प्रादेशिक अंचल, चतरा

वन भवन, स्थान+पो+जिला - चतरा, झारखण्ड - 825401

Telefax-06541-253690, Email - cf-chatra@gov.in

सेवा में,

पत्रांक :- 126

दिनांक :- 11.02.2023

मिनोज

क्षेत्रीय मुख्य वन संरक्षक,  
हजारीबाग।

विषय:-

मेसर्स सी०सी०एल० द्वारा मगध ओ०सी०पी० फेज-2 हेतु 192.36 हे० (वन भूमि- 57.29 हे० एवं जंगल झाड़ी भूमि- 135.07 हे०) वन भूमि अपयोजन प्रस्ताव पर भारत सरकार द्वारा की गई पृच्छा का अनुपालन के संबंध में।

प्रसंग:-

प्रधान मुख्य वन संरक्षक-सह-कार्यकारी निर्देशक बंजरभूमि विकास बोर्ड, झारखण्ड, रांची का ज्ञापांक 1295 दिनांक 21.12.2022 तथा आपका ज्ञापांक 2914 दिनांक 22.12.2022

महाशय,

उपर्युक्त विषयक प्रसंगिक पत्र के संदर्भ में सूचित करना है कि विषयक परियोजना में भारत सरकार, पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय, न्यू दिल्ली द्वारा बारह बिन्दुओं पर पृच्छा की गई है। प्रयोक्ता अभिकरण द्वारा अपने पत्रांक PO(M)/PD/2022-23/3153 दिनांक 27.01.2023 से बिन्दुवार अनुपालन प्रतिवेदन समर्पित किया गया है, जिसे वन प्रमंडल पदाधिकारी, चतरा दक्षिणी वन प्रमंडल द्वारा अपने पत्रांक 327 दिनांक 31.01.2023 (छाया प्रति संलग्न) से मंतव्य के साथ इस कार्यालय को समर्पित किया गया है, जो बिन्दुवार निम्नवत है-

Sl. No.	Query	DFO's Comments
1	2	3
i	As per detail furnished in Part-I, total forest area and non-forest area required under the proposal are 192.36 ha and 219.88 ha, thereby total area required for the project is 412.24. However, detail of area filled in the Part-I by the user agency under column M1(i)(a) mentioned the total area of the project as 495.92 ha. This discrepancy needs to be rectified by the State.	From the reply of the user agency, it is clear that the total proposed area under diversion in this proposal is of 412.24 Ha only including 192.36 ha forest land and 219.86 Ha non-forest land.  The area shown by the user agency under column M1(i) a is 495.92 Ha which includes the instant proposal's area of 412.24 Ha and 83.68 Ha of already diverted area vide GOI, MOEF letter no. F. NO-8-38/2008-FC; dated 18.10.2010. This 83.68 Ha diverted forest land is a part of 96.72 Ha totally diverted area vide the above said GOI, MOEF letter no and the balance 13.04 Ha of the already above mentioned 96.72 Ha has now has been brought and shown in Sanghmitra OCP of the Magadh Sanghmitra Area of M/S CCL.  The reply and details provided by the user agency may be accepted.

क्षेत्रीय मुख्य वन संरक्षक  
हजारीबाग  
456  
11.02.2023



ii	<p>Contrary to finding in the Part-II with regards to detail of unique species of flora and fauna, inspection report dated 26.05.2022 of the DCF mentions the occurrence of no species/rare/endangered species of flora and fauna. The same may be rectified.</p>	<p>The area is full of various species of flora and fauna and is facing very negative impact of the ongoing mining activities. Visit of the endangered Asian elephant is very common in the hills of Develgada, Kurlonga and other places of the proposed forest under diversion. The adjacent forest area and non-forest area are the movement territories of the Asian elephant in which the wild elephant from the Palamu forest's and Ranchi forest seasonally and regularly come and stay for a sufficient period of time to give a clear indication that the proposed forest area as well as the adjacent forest and non-forest area are a part of wild elephants (Asian elephant) habitat.</p>
iii	<p>Total project area is 1593.73 ha (as per Mining Plan) comprising of 495.92 ha in Chatra District and 1097.81 ha in Latehar District (Pg. 205/c). Detail of forest land involved in the 1593.73 ha, along with detail of approval under the FC Act, 1980, if any, obtained needs to be intimated by the State.</p>	<p>The user agency has given the breakup of the total project the area of 1593.73 Ha by showing that 661.72 Ha is of forest land category and 932.00 Ha is of non-forest land category in both Chatra and Latehar district of the state where the Magadh OCP of M/S CCL is located &amp; is doing work of coal excavation in its different queries. The above said 661.72 Ha forest land category includes 83.68 Ha of already diverted 96.72 Ha forest land diverted by GoI, vide MoEF letter No. F. NO-8-38/2008-FC, dated 18.10.2010, and 192.36 Ha of the instant proposal &amp; 385.68 Ha forest land proposal is likely to be submitted by the user agency in Latehar.</p>
iv	<p>The comments of the PCCF (Wildlife) revealed that user agency has not complied with the provisions of WLMP stipulated in the past. The State Government may therefore furnish a justification for the same along with detailed comments on the observations made in the letter dated 29.08.2022 of the PCCF (Wildlife) including impact of the projects of UA on the hydrological regimes in the area as mentioned by the PCCF (CWLW).</p>	<p>The reply made by the user agency may be accepted. The queries made by the GOI is of big concern, &amp; the user agency have been found very negligent to the compliance of the Conditions stipulated by GOI in respect of the already approved proposal of 96.72 Ha forest area vide GOI, MOEF letter no. F. NO-8-38/2008-FC, dated 18.10.2010. During the course of the review of the compliance of the stipulated condition of the previously approved proposal for 96.72 Ha forest land by DFO, it is found that wildlife mitigation measure in and around the project area is nil &amp; man-animal conflict as well as the depleting flora and fauna is very evident after the mining activity has been started. The wildlife management plan has now been prepared by the user agency under the guidance of DFO, Chatra South at the cost of 1565.42 Lacs for 10 (ten) years. In which 872.78 Lac is for the management of wild life in Chatra South forest division &amp; 692.64 Lac is for wild life sanctuary of nearby Hazaribagh district.</p>
v	<p>The examination of the DSS report (copy enclosed) revealed the following:</p>	

(a)	As per DSS report, vegetation density is up to 0.4 (copy enclosed) while DCF in Part-II reported vegetation density of 0.8, therefore the same needs to be revisited and exact status needs to be intimated by the State.	The proposed forest area under diversion of F(C) Act has been revisited on 30.01.2023 by Divisional forest officer, south division and it has been found that some areas are having vegetation density of 0.8 and some areas of even more than 0.8 while some areas are having vegetation density less than 0.8 and may be as low as 0.1 and 0.2. There may be difference in overall estimation of vegetation density of such a large forest area of different vegetation density and the report based on DSS analysis. Moreover on the basis of the visit of the proposed forest area under diversion, I am of the opinion that average vegetation density of the entire proposed area may be reported as 0.6
V (b)	Google Satellite Imagery of the area proposed for diversion revealed occurrence of cultivation, settlement, drainage/nala and mining activity on the area proposed for diversion. Comments on the same needs to be furnished by the state.	The proposed site has been inspected on 30.01.2023 by Divisional forest officer south division and the cultivation, settlement, Drainage/nala and illegal or unauthorised mining activities as raised in the queries has been visited. The settlement is very old and the people living in the settlement are all local scheduled tribes mostly Oraon tribes. The scheduled tribes living in the settlement had cleared the adjacent land and have been doing the work of cultivation since very long. The Drainage/nala present in the proposed forest area shall be conserved and managed as per the feasibility report approved by Minor irrigation dept. Chatra districts Executive Engineer's vide letter no 38 date 25.01.2023. The mining activity as referred in the query has been admitted by the user agency and necessary actions in this regards may be taken, for which the user agency has expressed consent.
V (c)	Certain encroachments in the form of cultivation, road etc. is visible in the area proposed for raising CA. Comments on the same needs to be furnished by the State Government.	In place of the 29.51 Ha degraded forest area identified earlier for raising CA, which has been found encroached in the form of cultivation, road etc a new and fresh patch of approx. equivalent degraded forest area of 30.02 Ha for raising CA has been identified & the KML file and DGPS of the newly identified forest area for raising CA is being submitted and identified as mentioned in the reply of the user agency.
V	The Ministry granted approval to 96.72 Ha of forest land on 18.10.2010. Status of compliance of the conditions stipulated in the said approval including preparation and implementation of Wildlife Management Plan and reasons/justification for non-compliance, if any, may also be furnished by the State.	Of course, there is no justification of the non-compliance of the stipulated condition of MOEF, GOI regarding the non-implementation WLMP in respect of 96.72 Ha of forest land approved for mining work in favour of M/S CCL it is sever lapses in regard of flora & fauna of the project area which has suffered a long after the project was commissioned by M/S CCL. Moreover the lapses now has been identified and the desired wild life Margent Plan has been prepared by

*[Handwritten signature]*

		<p>the user agency under the guidance of DFO, Chatra South at a cost of 1565.42 Lacs &amp; the use agency has to deposit the cost of approved WLMP by Chief wild life conservator of the state before the grant of Stage I approval to the instant proposal by GOI. The issue raised by GOI regarding the pending WLMP in respect of the 96.72 Ha of past proposal is uncompromising and the state forest department has taken steps to rectify the lapses happened in the past regarding the implantation of WLMP of 96.72 Ha proposal of the past</p>
vi	<p>In compliance of FRA, 2006 three certificates in respect of forest area of 651.16 ha, 32.15 ha and 44.70 ha were submitted. The State Government may, therefore, clarify the corresponding certificate issued in respect of extant proposal and justification furnishing of three separate certificates. Further, detail of documents pertaining to meeting of Sub-Divisional Level Committee could not be found in the compliance. However, the same can be furnished after Stage-I approval and before Stage-II approval.</p>	<p>The user agency has shown in the reply that FRA has been obtained on 10.7.2018, 20.01.2015 and 17.01.2022 for 115.51 Ha, 32.15 Ha and 44.70 Ha forest area respectively of the proposal and the user agency is also agreed to submit the details of documents pertaining to meeting of Sub-Divisional Level Committee after stage I approval and before stage II approval.</p> <p>The reply made by the user agency may be accepted.</p>
vii	<p>Examination of Mining Plan revealed the following:</p>	
viii	<p>Magadh OCP is proposed for captive use of Tandawa TPP, however, in light of amendment in the MMDR Act, 1957, the State Government needs to confirm that whether use of coal from the mine is proposed for captive use only or otherwise.</p>	<p>User agency has submitted that the Coal obtained from the mines of the proposed OCP shall not be used for captive uses.</p>
ix	<p>The Mining Plan envisages transportation of coal through rail while underlying section in the Mining Plan mentions strengthening of a Kutcha road from Tandwa to Magadh over a length of 17 km. Therefore, it needs to be clarified that whether the road Tandwa-Magadh is proposed only for approach to the project or for transportation as well. A clarification in this regard may be furnished by the State.</p>	<p>The user agency has replied in the following words "Mode of coal transportation will be mainly by Magadh Railway siding &amp; Conveyor corridor (from Magadh OCP to NTPC Tandwa).</p> <p>The road Tandwa-Magadh is proposed for approach to the project".</p> <p>The abovementioned reply of the user agency may be accepted.</p>

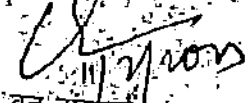
XII  
Status of reclamation measures undertaken by the user agency in their lease area as per the provisions provided in the Progressive Mine Closure Plans and gaps if any may be intimated by the State

In compliance to the query, the user agency has Submitted that Total 2,42,78,895.00 CUM of OB has been backfilled since the commissioning of the mines i.e. 2014 and dump has been Planted.  
The reply made by the user agency may be accepted.

वन प्रमंडल पदाधिकारी, चतरा दक्षिणी वन प्रमंडल द्वारा दिये गये उपरोक्त मंतव्य से अधोहस्ताक्षरी भी सहमत है। वन प्रमंडल पदाधिकारी, चतरा दक्षिणी वन प्रमंडल से प्राप्त निराकरण प्रतिवेदन की छः प्रतियां सभी अनुलग्नकों सहित इस पत्र के साथ संलग्न कर भेजते हुए अनुरोध है कि विषयक मामले में अग्रेत्तर आवश्यक कार्रवाई करने की कृपा की जाय।

अनुलग्नक-यथावत

आपका विश्वासी



वन संरक्षक  
प्रादेशिक अंचल, चतरा।

पत्रांक: 327

दिनांक: 30/01/2023

वन संरक्षक  
प्रादेशिक अंचल, चतरा।

विषय:-

मेसर्स सी०सी०एल० द्वारा मगध ओ०सी०पी० फेज-2 हेतु 192.36 हे० (वन भूमि- 57.29 हे० एवं जंगल झाड़ी भूमि- 135.07 हे०) वन भूमि अपयोजन प्रस्ताव पर भारत सरकार द्वारा की गई पृच्छा का अनुपालन के संबंध में।

प्रसंग:-

भारत सरकार, पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, न्यू दिल्ली का पत्र संख्या-8-27/2022-FC दिनांक 07.12.2022

महाशय,

उपरोक्त विषयक प्रसंगिक पत्र के सन्दर्भ में सूचित करना है कि भारत सरकार, पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय, न्यू दिल्ली द्वारा विषयगत प्रयोजना हेतु समर्पित प्रस्ताव पर की गई बारह बिन्दुओं पर पृच्छा के आलाोक में प्रयोक्ता अभिकरण ने अपने पत्रांक-PO(M)/PD/2022-23/3153 दिनांक 27.01.2023 द्वारा बिन्दुवार अनुपालन प्रतिवेदन समर्पित किया गया है। समर्पित बिन्दुवार अनुपालन प्रतिवेदन पर कड़िकावार अधोहस्ताक्षरी मंतव्या दी गई है जो निम्नवत् है:-

Condi tion No.	Query	DFO Comments
	2	3
i	As per detail furnished in Part-I, total forest area and non-forest area required under the proposal are 192.36 ha and 219.88 ha, thereby total area required for the project is 412.24. However, detail of area filled in the Part-I by the user agency, under column M1(i)(a) mentioned the total area of the project as 495.92 ha. This discrepancy needs to be rectified by the State.	From the reply of the user agency, it is clear that the total proposed area under diversion in this proposal is of 412.24 Ha only including 192.36 ha forest land and 219.86 Ha non-forest land.  The area shown by the user agency under column M1(i) a is 495.92 Ha which includes the instant proposal's area of 412.24 Ha and 83.68 Ha of already diverted area vide GOI, MOEF letter no. F -NO-8-38/2008-FC, dated 18.10.2010. This 83.68 Ha diverted forest land is a part of 96.72 Ha totally diverted area vide the above said GOI, MOEF letter no and the balance 13.04 Ha of the already above mentioned 96.72 Ha has now has been brought and shown in Sanghmitra OCP of the Magadh Sanghmitra Area of M/S CCL. The reply and details provided by the user agency may be accepted.
ii	Contrary to finding in the Part-II with regards to detail of unique species of flora and fauna inspection report dated 26.05.2022 of the DCF mentions the occurrence of no species/rare/endangered species	The area is full of various species of flora and fauna and is facing very negative impact of the ongoing mining activities. Visit of the endangered Asian elephant is very common in the hills of Develgada, Kurlonga and other places of the proposed forest under diversion. The adjacent

<p>of flora and fauna. The same may be rectified.</p>	<p>32</p> <p>forest area and non-forest area are the movement territories of the Asian elephant in which the elephant from the Palamu forests and Ranchi forest seasonally and regularly come and stay for a sufficient period of time to give a clear indication that the proposed forest area as well as the adjacent forest and non-forest area are a part of wild elephants (Asian elephant) habitat.</p>
<p>iii Total project area is 1593.73 ha (as per Mining Plan) comprising of 495.92 ha in Chatra District and 1097.81 ha in Latehar District (Pg 205/c). Detail of forest land involved in the 1593.73 ha, along with detail of approval under the FC Act, 1980, if any, obtained needs to be intimated by the State.</p>	<p>The user agency has given the breakup of the total project the area of 1593.73 Ha by showing that 661.72 Ha is of forest land category and 932.00 Ha is of non-forest land category in both Chatra and Latehar district of the state where the Magadh OCP of M/S CCL is located &amp; is doing work of coal excavation in its different queries. The above said 661.72 Ha forest land category includes 83.68 Ha of already diverted 96.72 Ha forest land diverted by GoI, vide MoEF letter No. F. NO-8-38/2008-FC; dated 18.10.2010. and 192.36 Ha of the instant proposal &amp; 385.68 Ha forest land proposal is likely to be submitted by the user agency in Latehar.</p> <p>The reply made by the user agency may be accepted.</p>
<p>iv The comments of the PCCF (Wildlife) revealed that user agency has not complied with the provisions of WLMP stipulated in the past. The State Government may therefore furnish a justification for the same along with detailed comments on the observations made in the letter dated 29.08.2022 of the PCCF (Wildlife) including impact of the projects of UA on the hydrological regimes in the area as mentioned by the PCCF (CWLW).</p>	<p>The queries made by the GOI is of big concern &amp; the user agency have been found very negligent to the compliance of the Conditions stipulated by GOI in respect of the already approved proposal of 96.72 Ha forest area vide GOI, MOEF letter no. P. NO-8-38/2008-FC; dated 18.10.2010. During the course of the review of the compliance of the stipulated condition of the previously approved proposal for 96.72 Ha forest land by DFO, it is found that wildlife mitigation measure in and around the project area is nil &amp; man-animal conflict as well as the depleting flora and fauna is very evident - after the mining activity has been started. The wildlife management plan has now been prepared by the user agency under the guidance of DFO, Chatra South at the cost of 1565.42 Laes. for 10 (ten) years. In which 872.78 Lac is for the management of wild life in Chatra South forest division &amp; 692.64 Lac is for wild life sanctuary of nearby Hazaribagh district.</p>

The examination of the DSS report (copy enclosed) revealed the following:

a) As per DSS report, vegetation density is up to 0.4 (copy enclosed) while DCF in Part-II reported vegetation density of 0.8, therefore, the same needs to be revisited and exact status needs to be intimated by the State.

The proposed forest area under diversion of F(C) Act has been revisited on 30.01.2023 and it has been found that some areas are having vegetation density of 0.8 and Some areas of even more than 0.8 while some areas are having vegetation density less than 0.8 and may be as low as 0.1 and 0.2. There may be difference in overall estimation of vegetation density of such a large forest area of different vegetation density and the report based on DSS analysis. Moreover on the basis of the visit of the proposed forest area under diversion, I am of the opinion that average vegetation density of the entire proposed area may be reported as 0.6

V (b) Google Satellite Imagery of the area proposed for diversion revealed occurrence of cultivation, settlement, drainage/nala and mining activity on the area proposed for diversion. Comments on the same needs to be furnished by the state.

The proposed site has been inspected on 30.01.2023 and the cultivation, settlement, Drainage/nala and illegal or unauthorised mining activities as raised in the queries has been visited. The settlement is very old and the people living in the settlement are all local scheduled tribes mostly Oraon tribes. The scheduled tribes living in the settlement had cleared the adjacent land and have been doing the work of cultivation since very long. The Drainage/nala present in the proposed forest area shall be conserved and managed as per the feasibility report approved by Minor irrigation dept. Chatra districts Executive Engineer's vide letter no 38 date 25.01.2023. The mining activity as referred in the query has been admitted by the user agency and necessary actions in this regards may be taken, for which the user agency has expressed consent.

V (c) Certain encroachments in the form of cultivation, road etc. is visible in the area proposed for raising CA. Comments on the same needs to be furnished by the State Government.

In place of the 29.51 Ha degraded forest area identified earlier for raising CA, which has been found encroached in the form of cultivation, road etc a new and fresh patch of approx. equivalent degraded forest area of 30.02 Ha for raising CA has been identified & the KML file and DGPS of the newly identified forest area for raising CA is being submitted and identified as mentioned in the reply of the user agency.

v The Ministry granted approval to 96.72 Ha of forest land on 18.10.2010. Status of compliance of the conditions stipulated in the said approval

Of course; there is no justification of the non-compliance of the stipulated condition of MOEF, GOI regarding the non-implementation WLMP in respect of 96.72 Ha of forest land approved for

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including preparation and implementation of Wildlife Management Plan and reasons/justification for non-compliance, if any, may also be furnished by the State.

mining work in favour of M/S CCL it is sever lapses in regard of flora & fauna of the project area which has suffered a long after the project was commissioned by M/S CCL.

Moreover the lapses now has been identified and the desired wild life Margent Plan has been prepared by the user agency under the guidance of DEO, Chitra South at a cost of 1565.42 Lacs & the use agency has to deposit the cost of approved WLMP by Chief wild life conservator of the state before the grant of Stage I approval to the instant proposal by GOI. The issue raised by GOI regarding the pending WLMP in respect of the 96.72 Ha of past proposal is uncompromising and the state forest department has taken steps to rectify the lapses happened in the past regarding the implantation of WLMP of 96.72 Ha proposal of the past.

vi	In compliance of FRA, 2006 three certificates in respect of forest area of 651.16 ha, 32.15 ha and 44.70 ha were submitted. The State Government may, therefore, clarify the corresponding certificate issued in respect of extant proposal and justification furnishing of three separate certificates. Further, detail of documents pertaining to meeting of Sub-Divisional Level Committee could not be found in the compliance. However, the same can be furnished after Stage-I approval and before Stage-II approval.	The user agency has shown in the reply that FRA has been obtained on 10.7.2018, 20.01.2015 and 17.01.2022 for 115.51 Ha, 32.15 Ha and 44.70 Ha forest area respectively of the proposal and the user agency is also agreed to submit the details of documents pertaining to meeting of Sub-Divisional Level Committee after stage I approval and before stage II approval.  The reply made by the user agency may be accepted.
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vii	Examination of Mining Plan revealed the following:	
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viii	Magadh OCP is proposed for captive use of Tandawa TPP; however, in light of amendment in the MMDR Act, 1957, the State Government needs to confirm that whether use of coal from the mine is proposed for captive use only or otherwise.	The reply made by the user agency clarifies that the Coal obtained from the mines of the proposed OCP shall not be used for captive uses.
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ix	The Mining Plan envisages transportation of coal through rail while underlying section in the Mining Plan mentions strengthening of a Kutcha road	The user agency has replied in the following words "Mode of coal transportation will be mainly by Magadh Railway siding & Conveyor corridor (from Magadh OCP to NTPC Tandwa).
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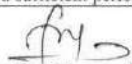


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 1/11


	<p>from Tandwa to Magadh over a length of 17 km. Therefore, it needs to be clarified that whether the road Tandwa-Magadh is proposed only for approach to the project or for transportation as well. A clarification in this regard may be furnished by the State.</p>	<p>The road Tandwa-Magadh is proposed for approach to the project".</p> <p>The abovementioned reply of the user agency may be accepted.</p>
<p>x</p>	<p>The extant proposal does not involve rehabilitation; however, as per the Mining Plan rehabilitation of 998 families has been proposed in the project. A justification establishing the irrelevancy of the rehabilitation proposed in the Mining Plan and rehabilitation indicated as nil in Part-I of Form-A may be obtained from the user agency.</p>	<p>The From the reply made by the user agency it is clear that there is involvement of rehabilitation in the instant proposal, which was not correctly indicated in instant proposal at the time of its submission. The user agency has now admitted that 308 families are required to be rehabilitated in this Project and 32 Project affected families of Masilong village have already been shifted under R&amp;R Policy of CIL and the rest 271 PAF'S Shall also be shifted under R&amp;R Policy of CIL. The user agency must do the rehabilitation works under the guidance of district and forest administration of Chatra district.</p>
<p>xi</p>	<p>The examination of land use proposed in the mining plan revealed the following:</p>	
<p>(a)</p>	<p>An area of 159.68 ha has been proposed for safety zone. Justification for proposing such a large area, along with underlying standard prescribed by the relevant Department/Organization, needs to be furnished by the State.</p>	<p>The reply made by the user agency may be accepted</p>
<p>(b)</p>	<p>An area of 14.8 ha has been proposed for diversion of river/nallah/canal (Pg 206/c). The status of feasibility reports for said diversion along with comments of Water Resource Department on the feasibility of said proposed diversion needs to be informed by the State.</p>	<p>In compliance to the query, the user agency has Submitted the duly approved feasibility report- for Nala diversion vide letter no. 38 dated 25-1.2023 of the Executive Engineer, Minor irrigation department Chatra of Government of Jharkhand and the same may be accepted.</p>
<p>(c)</p>	<p>As per the land use, approved in the Mining Plan, no Green Belt has been proposed in the project area. Reasons and underlying guidelines justifying the same may be furnished by the State.</p>	<p>In response to the query the user agency clarifies that out of 412.92 Ha Area of current application, 110.92 Ha has been proposed for Green belt in the inland proposal. The proposed Green Belt area must be adequately protected, conserved and developed by the user agency under guidance of Local forest administration, by preparing a developmental and conservation plan for this area.</p>

Point wise Reply of Query raised in File No 8-27/2022-FC; Dated 7<sup>th</sup> December 2022 in respect of Proposal for the non-forest use of 192.36 (Forest land - 57.29 ha and Jungle Jhari 135.07 ha) of forest land for Magadh East Opencast mining project in favour of M/s CCL, Chatra South, Jharkhand -reg.

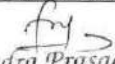
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i	As per detail furnished in Part-I, total forest area and non-forest area required under the proposal are 192.36 ha and 219.88 ha, thereby total area required for the project is 412.24. However, detail of area filled in the Part-I by the user agency under column M1(i) is 495.92 ha and the total area of the project as 495.92 ha. This discrepancy needs to be rectified by the State.	<p>The boundary of Mine plan is for 495.92 Ha includes</p> <p>a) 412.24 Ha of current application (Notified Forest Land 57.29 Ha + GM JJ Land 135.07 + Non-Forest Land 219.88 Ha = 412.24 Ha) and</p> <p>b) 83.68 Ha of already diverted forest land proposal (which is part of 96.72 Ha. Released vide Stage II Clearance F. No. 8-38/2008-FC; Dated 18.10.2010.)</p> <p>Thus, the difference of 13.04 Ha (96.72 Ha -83.68 Ha) is now included in Sanghamitra OCP the sister colliery of Magadh OCP. <b>The plan is enclosed herewith as Annexure I.</b></p> <p style="text-align: center;">Land details of Magadh East OCP:</p> <table border="1"> <thead> <tr> <th rowspan="2">Village</th> <th colspan="4">Current application for diversion of 192.36 Ha in Magadh East OCP</th> <th colspan="2">Part of the earlier diverted proposal of 96.72 Ha included in Magadh East OCP</th> </tr> <tr> <th>Notified Forest (In Ha)</th> <th>GMJJ (In Ha)</th> <th>Forest land</th> <th>Non Forest Land</th> <th>Notified Forest (In Ha)</th> <th>GMJJ (In Ha)</th> </tr> </thead> <tbody> <tr> <td>Masilong</td> <td>13.35</td> <td>32.14</td> <td>45.49</td> <td>20.58</td> <td>0</td> <td>0</td> </tr> <tr> <td>Develgada</td> <td>0.00</td> <td>1.00</td> <td>1</td> <td>33.81</td> <td>0</td> <td>3.99</td> </tr> <tr> <td>Saradhu</td> <td>43.94</td> <td>101.93</td> <td>145.87</td> <td>127.76</td> <td>12.46</td> <td>54.72</td> </tr> <tr> <td>Kundi</td> <td>0.00</td> <td>0.00</td> <td>0</td> <td>37.74</td> <td>0</td> <td>12.51</td> </tr> <tr> <td><b>Total</b></td> <td><b>57.29</b></td> <td><b>135.07</b></td> <td><b>192.36</b></td> <td><b>219.88</b></td> <td><b>12.46</b></td> <td><b>71.22</b></td> </tr> <tr> <td></td> <td></td> <td></td> <td><b>412.24 Ha</b></td> <td></td> <td><b>83.68 Ha</b></td> <td></td> </tr> <tr> <td><b>Total land</b></td> <td></td> <td></td> <td colspan="4"><b>412.24 + 83.68 = 495.92 Ha</b></td> <td></td> </tr> </tbody> </table>	Village	Current application for diversion of 192.36 Ha in Magadh East OCP				Part of the earlier diverted proposal of 96.72 Ha included in Magadh East OCP		Notified Forest (In Ha)	GMJJ (In Ha)	Forest land	Non Forest Land	Notified Forest (In Ha)	GMJJ (In Ha)	Masilong	13.35	32.14	45.49	20.58	0	0	Develgada	0.00	1.00	1	33.81	0	3.99	Saradhu	43.94	101.93	145.87	127.76	12.46	54.72	Kundi	0.00	0.00	0	37.74	0	12.51	<b>Total</b>	<b>57.29</b>	<b>135.07</b>	<b>192.36</b>	<b>219.88</b>	<b>12.46</b>	<b>71.22</b>				<b>412.24 Ha</b>		<b>83.68 Ha</b>		<b>Total land</b>			<b>412.24 + 83.68 = 495.92 Ha</b>					<p>From the reply of the user agency, it is clear that the total proposed area under diversion in this proposal is of 412.24 Ha only including 192.36 ha forest land and 219.86 Ha non-forest land.</p> <p>The area shown by the user agency under column M1(i) is 495.92 Ha which includes the instant- proposal's area of 412.24 Ha and 83.68 Ha of already diverted area vide GoI, MOEF letter no. F. NO-8-38/2008-FC; dated 18.10.2010. This 83.68 Ha diverted forest land is a part of 96.72 Ha totally diverted area vide the above said GOI, MOEF letter no and the balance 13.04 Ha of the already above mentioned 96.72 Ha has now has been brought and shown in Sanghamitra OCP of the Magadh Sanghamitra Area of M/S CCL.</p> <p>The reply and details provided by the user agency may be accepted.</p>
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**Surendra Prasad Suman**  
 Divisional Forest Office,  
 Chatra South Forest Division


						time to give a clean indication that the proposed, forest area as well as the adjacent forest and non-forest area are a part of wild elephants (Asian elephant) habitat.	
iii	Total project area is 1593.73 ha (as per Mining Plan) comprising of 495.92 ha in Chatra District and 1097.81 ha in Latehar District (Pg 205/c). Detail of forest land involved in the 1593.73 ha, along with detail of approval under the FC Act, 1980, if any, obtained needs to be intimated by the state.	<b>Total land details of 1593.73 Ha land is as under:</b>					The user agency has given the breakup of the total project the area of 1593 73 Ha by showing that 661.72 Ha is of forest land category and 932.00 Ha is of non-forest land category in both Chatra and Latehar district of the state where the Magadh OCP of M/S CCL is located & is doing work of coal excavation in its different queries. The above said, 661.72 Ha forest land category includes 83.68 Ha of already diverted 96.72Ha forest land diverted by GoI, vide MoEF letter No. F. 103-8-38/2008-FC, dated 18.10.2010, and 192.36 Ha of the instant proposal & 385.68 Ha forest land proposal is likely to be submitted by the user agency in Latehar.
		<b>Land details in Chatra District (Ha)</b>					
		<b>Sl No</b>	<b>Forest Proposal</b>	<b>Forest land (NF + GM JJ)</b>	<b>Non Forest land</b>	<b>Total</b>	<b>Remarks</b>
		1	Already Diverted forest land (96.72)	83.68	0	83.68	83.68 Ha of already diverted forest land proposal which is part of 96.72 Ha. Released vide Stage II Clearance F. No. 8-38/2008-FC; Dated 18.10.2010.) Thus, the difference of 13.04 Ha (96.72 Ha - 83.68 Ha) is now included in Sanghamitra OCP the sister colliery of Magadh OCP
		2	Present Application	192.36	219.88	412.24	Application for diversion of 192.36 Ha submitted vide FP/JH/MIN/87235/20 dated 19.03.2021
		<b>Land details in Latehar District (Ha)</b>					
							The reply made by the user agency may be accepted.

  
**Surendra Prasad Suman**  
 Divisional Forest Officer,  
 Chatra South Forest Division

		I	Magadh OCP West	385.68	712.13	1097.81	The FC of the project has ben considerably delayed due to CS & RS Survey issue in Latehar District Hence the Magadh Project was divided in two district wise a separate mining plan approval	
			G Total	661.72	932.01	1593.73		
iv	The comments of the PCCF (Wildlife) revealed that user agency has not compiled with the provisions of WLMP stipulated in the past. The State Government may therefore furnish a justification for the same along with detailed comments on the observations made in the letter dated 29.08.2022 of the PCCF (Wildlife) including impact of the projects of UA on the hydrological regimes in the area as mentioned by the PCCF (CWLW).	<p>WLMP has been prepared in consultation of DFO, Chatra South and the same has been submitted for approval to DFO Chatra South on 24.01.2023 vide letter no 1064. (receiving copy enclosed as Annexure III)</p> <p>Magadh OCP, M-S Area, CCL also undertakes (Copy enclose as Annexure IV) to pay the cost of implementation of approved Wild Life Management Plan.</p>						The queries' made by the GOI is of big concern & the user agency have been found very negligent to the compliance of the Conditions stipulated by GOI in respect of the already approved proposal of 96.72 Ha forest area vide GOI, MOEF letter no. F. NO-8-38/2008-FC; dated 18.10.2010. During the course of the review of the compliance of the stipulated condition of the previously approved proposal for 96.72 Ha forest land by DFO, it is found that wildlife mitigation measure in and around the project area is nil & man-animal conflict as well as the depleting flora and fauna is very evident - after the mining activity has been started. The wildlife management plan has now been prepared by the user agency under the guidance of DFO, Chatra South at the cost of 1565.42 Lacs for 10 (ten) years. In which 872.78 Lac is for the management of wild life in Chatra South forest division & 692.64 Lac is for wild life sanctuary of nearby Hazaribagh district.
V	The examination of the DSS report (copy enclosed) revealed the following:							
V (a)	As per DSS report, vegetation density is up to 0.4 (copy							The proposed forest area under diversion of F(C) Act has been revisited on 30.01.2023 and it has

  
 Surendra Prasad Suman  
 Divisional Forest Office,  
 Chatra South Forest Division

	enclosed) while DCF in Part-II reported vegetation density of 0.8, therefore, the same needs to be revisited and exact status needs to be intimated by the State.	NA	been found that some areas are having vegetation density of 0.8 and Some areas of even more than 0.8 while some areas are having vegetation density less than 0.8 and may be as low as 0.1 and 0.2. There may be difference in overall estimation of vegetation density of such a large forest area of different vegetation density and the report based on DSS analysis. Moreover on the basis of the visit of the proposed forest area under diversion, I am of the opinion that average vegetation density of the entire proposed area may be reported as 0.6
V (b)	Google Satellite Imagery of the area proposed for diversion revealed occurrence of cultivation, settlement, drainage/nala and mining activity on the area proposed for diversion. Comments on the same needs to be furnished by the state.	<p><b>Cultivation:-</b> The project boundary of instant proposal i.e. 495.92 Ha has been acquired under CBA Act, but as the rehabilitation &amp; Compensation of some parts is in process, the mining activity will begin only after final rehabilitation &amp; Compensation.</p> <p><b>Settlement:-</b> 303 families are to be rehabilitated from Chatra district.(details available in 1.2.5 of page no 02 of 57 in Mining Plan Enclosed as Annexure II).</p> <p><b>Drainage/Nala:-</b> Feasibility report for Nalah Diversion Has been prepared &amp; the same has been approved vide letter No 38; Dated 25.01.2023 by Executive Engineer Minor irrigation Department Chatra GoJ (Copy enclosed as Annexure V)</p> <p><b>Mining activity:-</b> Mining activity has been done inadvertently due to measurement error and discrepancy in land records. However the area has been identified as GMJJ Land and all necessary compliance for diversion including payment of all dues shall be done.</p>	The proposed site has been inspected on 30.01.2023 and the cultivation, settlement, Drainage/nala and illegal or unauthorised mining activities as raised in the queries has been visited. The settlement is very old and the people living in the settlement are all local scheduled tribes mostly Oraon tribes. The scheduled tribes living in the settlement had cleared the adjacent land and have been doing the work of cultivation since very long. The Drainage/nala present in the proposed forest area shall be conserved and managed as per the feasibility report approved by Minor irrigation dept. Chatra districts Executive Engineer's vide letter no 38 date 25.01.2023. The mining activity as referred in the query has been admitted by the user agency and necessary actions in this regards may be taken, for which the user agency has expressed consent.
V (c)	Certain encroachments in the form of cultivation, road etc. is visible in the area proposed for raising CA. Comments on the same needs to be furnished by the State Government.	29.51 Ha encroached area visible in the area proposed for raising CA in the form of House, road nalah has been identified removed & compensated with additional 30.02 Ha of CA land in Bargaoin Village DGPS of Additional CA Land enclosed as Annexure VI (Soft Copy of KML & DGPS of CA land is being attached hereby as Annexure VII)	In place of the 29.51 Ha degraded forest area identified earlier for raising CA, which has been found encroached in the form of cultivation, road etc a new and fresh patch of approx. equivalent degraded forest area of 30.02 Ha for raising CA has been identified & the KML file and DGPS of the newly identified forest area for raising CA is being submitted and identified as

  
 Surendra Prasad Suman  
 Divisional Forest Officer,  
 Chatra South Forest Division


v	<p>The Ministry granted approval to 96.72 Ha of forest land on 18.10.2010. Status of compliance of the conditions stipulated in the said approval including preparation and implementation of Wildlife Management Plan and reasons/ justification for non-compliance, if any, may also be furnished by the State.</p>	<p>The updated compliance in respect of already diverted proposal of 96.72 ha <b>Copy enclosed as Annexure VIII</b></p> <p>WLMP has been prepared in consultation of DFO, Chatra South and the same has been submitted for approval to DFO Chatra South on 24.01.2023 vide letter no 1064. <b>(receiving copy enclosed as Annexure III)</b></p> <p>Magadh OCP, M-S Area, CCL also undertakes <b>(Copy enclose as Annexure IV)</b> to pay the cost of implementation of approved Wild Life Management Plan.</p>	<p>mentioned in the reply of the user agency.</p> <p>Of course, there is no justification of the non-compliance of the stipulated condition of MOEF, GOI regarding the non-implementation WLMP in respect of 96.72 Ha of forest land approved for mining work in favour of M/S CCL it is sever lapses in regard of flora &amp; fauna of the project area which has suffered a long after the project was commissioned by M/S CCL. Moreover the lapses now has been identified and the desired wild life Margent Plan has been prepared by the user agency under the guidance of DFO, Chatra South at a cost of 1565.42 Lacs &amp; the use agency has to deposit the cost of approved WLMP by Chief wild life conservator of the state before the grant of Stage I approval to the instant proposal by GOI. The issue raised by GOI regarding the pending WLMP in respect of the 96.72 Ha of past proposal is uncompromising and the state forest department has taken steps to rectify the lapses happened in the past regarding the implantation of WLMP of 96.72 Ha proposal of the past</p>																									
vi	<p>In compliance of FRA, 2006 three certificates in respect of forest area of 651.16 ha, 32.15 ha and 44.70 ha were submitted. The State Government may, therefore, clarify the corresponding certificate issued in respect of extant proposal and justification furnishing of three separate certificates. Further, detail of documents pertaining to meeting of Sub-Divisional Level Committee could not be found in the compliance. However, the</p>	<p align="center"><b>Details of FRA Granted For Magadh East OCP(192.36 Ha)</b></p> <table border="1" data-bbox="456 1140 1084 1457"> <thead> <tr> <th>SI No</th> <th>FRA Ref No (Issued by DC Chatra )</th> <th>Date of Issue of FRA</th> <th>Total Area of FRA Issued</th> <th>Village</th> <th>Area in Ha for Magadh East OCP</th> <th>Total Forest area (NF+GM JJ) in present proposal</th> </tr> </thead> <tbody> <tr> <td rowspan="3">1</td> <td rowspan="3">833</td> <td rowspan="3">10.07.2018</td> <td rowspan="3">651.16</td> <td>Dewelgada</td> <td>1.00</td> <td rowspan="3">115.51</td> </tr> <tr> <td>Mansilong</td> <td>13.34</td> </tr> <tr> <td>Saradu</td> <td>101.17</td> </tr> <tr> <td>2</td> <td>48</td> <td>20.01.20</td> <td>32.15</td> <td>Mansilong</td> <td>32.15</td> <td>32.15</td> </tr> </tbody> </table>	SI No	FRA Ref No (Issued by DC Chatra )	Date of Issue of FRA	Total Area of FRA Issued	Village	Area in Ha for Magadh East OCP	Total Forest area (NF+GM JJ) in present proposal	1	833	10.07.2018	651.16	Dewelgada	1.00	115.51	Mansilong	13.34	Saradu	101.17	2	48	20.01.20	32.15	Mansilong	32.15	32.15	<p>The user agency has shown in the reply that FRA has been obtained on 10.7.2018, 20.01.2015 and 17.01.2022 for 115.51 Ha, 32.15 Ha and 44.70 Ha forest area respectively of the proposal and the user agency is also agreed to submit the details of documents pertaining to meeting of Sub- Divisional Level Committee after stage I approval and before stage II approval. The reply made by the user agency may be accepted.</p>
SI No	FRA Ref No (Issued by DC Chatra )	Date of Issue of FRA	Total Area of FRA Issued	Village	Area in Ha for Magadh East OCP	Total Forest area (NF+GM JJ) in present proposal																						
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**Surendra Prasad Suman**  
 Divisional Forest Officer,  
 Chatra South Forest Division

	same can be furnished after Stage-I approval and before Stage-II approval.			15				
		3	59	17.01.20 22	44.70	Saradu	44.70	44.70
		<b>Grand Total Forest Area(NF+GMJJ)</b>						
		As the proceedings of Gram Sabha was done at different time hence the FRA was issued separately accordingly						
		The detail of documents pertaining to meeting of Sub-Divisional Level Committee shall be submitted before stage II approval						
vii	<b>Examination of Mining Plan revealed the following:</b>							
viii	Magadh OCP is proposed for captive use of Tandawa TPP; however, in light of amendment in the MMDR Act, 1957, the State Government needs to confirm that whether use of coal from the mine is proposed for captive use only or otherwise.	Magadh OCP is non-captive mine of capacity 20 MTPA. Out of this 10 MTPA will be supplied to NTPC Tandwa and rest 10 MTPA will be supplied through basket linkage to other plants Hindalco-Renukut, Jhasugida –vedanta, NTPC-Haryana, Punjab, UP, Bihar, NTPC-Delhi, Adhunic-T, Tata Power- Tata Nagar, NPC-Dhanbad. <b>(details given in point no 1.1.4 of chapter 1, page no-1 of 57 of Approved Mine Plan copy enclosed as Annexure II)</b>					The reply made by the user. agency clarifies that the Coal obtained from the mines of the proposed OCP shall not be used for captive uses.	
ix	The Mining Plan envisages transportation of coal through rail while underlying section in the Mining Plan mentions strengthening of a Kutcha road from Tandwa to Magadh over a length of 17 km. Therefore, it needs to be clarified that whether the road Tandwa-Magadh is proposed only for approach to the project or for transportation as well. A clarification in this regard may be furnished by the State.	Mode of coal transportation will be mainly by Magadh Railway siding & Conveyor corridor (from Magadh OCP to NTPC Tandwa). The road Tandwa-Magadh is proposed for approach to the project					The user agency has replied in the following words "Mode of coal transportation will be mainly by Magadh Railway siding & Conveyor corridor (from Magadh OCP to NTPC Tandwa). The road Tandwa-Magadh is proposed for approach to the project". The abovementioned reply of the user agency may be accepted.	

  
 Surendra Prasad Suman  
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x	The extant proposal does not involve rehabilitation; however, as per the Mining Plan rehabilitation of 998 families has been proposed in the project. A justification establishing the irrelevancy of the rehabilitation proposed in the Mining Plan and rehabilitation indicated as nil in Part-I of Form-A may be obtained from the user agency.	As the mining plan consist the total rehabilitation required in both Chatra and Latehar district. The proposed application for diversion of 192.36 Ha forest land is for Chatra district only. 998 families has been proposed in mine plan is for both Chatra and Latehar portion, out of 988 only 303 families are to be rehabilitated from Chatra district.(details given in point no 1.2.5 of page no 02 of 57 of mining plan enclosed as Annexure II). The relevant R&R Policy of CIL is being enclosed (enclosed as Annexure IX).  Out of which 32 PAFs of Masilong Village have already been shifted by payment of Lumpsum amount under R&R Policy of CIL. For rehabilitation of remaining 271 PAFs will be shifted to R&& site  R&R site has been approved by competent authority copy of Approval of R&R site enclosed as Annexure X & Plan showing R&R Site is enclosed as Annexure XI	The From the reply made by the user agency it is clear that there is involvement of rehabilitation in the instant proposal, which was not correctly indicated in instant proposal at the time of its submission. The user agency has now admitted that 303 families are required to be rehabilitated in this Project- and 32 Project affected families of Masilong village have already been shifted under R&R Policy of CIL and the rest 271 PAF'S Shall also be shifted under R&R Policy of CIL. The user agency must do the rehabilitation works under the guidance of district and forest administration of Chatra district.																																																
xi	<b>The examination of land use proposed in the mining plan revealed the following:</b>																																																		
(a)	An area of 159.68 ha has been proposed for safety zone. Justification for proposing such a large area, along with underlying standard prescribed by the relevant Department/Organization, needs to be furnished by the State.	As per page no 51 of 57 of Mining Plan, Land use plan of Chatra district portion having total area of 495.92 is mentioned below:-  <table border="1" data-bbox="462 1060 1031 1291"> <thead> <tr> <th>Land Use</th> <th>Land in Ha</th> <th>Notified Forest</th> <th>GMJJ</th> <th>Non-Forest</th> </tr> </thead> <tbody> <tr> <td>Quarry</td> <td>345.89</td> <td>55.57</td> <td>150.52</td> <td>139.80</td> </tr> <tr> <td>OB Dump</td> <td>27.80</td> <td>0</td> <td>4.99</td> <td>22.81</td> </tr> <tr> <td>Conveyor Corridor</td> <td>2.56</td> <td>0</td> <td>0.58</td> <td>2.98</td> </tr> <tr> <td>Road</td> <td>2.71</td> <td>0</td> <td>0.65</td> <td>2.06</td> </tr> <tr> <td>Safety Zone</td> <td>5.04</td> <td>5.04</td> <td>0</td> <td>0</td> </tr> <tr> <td>Green Belt</td> <td>110.92</td> <td>9.14</td> <td>49.55</td> <td>52.23</td> </tr> <tr> <td></td> <td>495.92</td> <td>69.75</td> <td>206.29</td> <td>219.88</td> </tr> </tbody> </table> Out of this also 495.92 Ha of Land in Chatra district, 83.68 Ha is already released (Magadh OCP (96.72 Ha) diverted vide MoEF&CC F.No. 8-38/2008-FC dated 18.10.2010). Thus the land use plan for remaining area of 412.24 Ha (495.92 Ha-83.68 Ha) of Land for which the application has been made is as under <table border="1" data-bbox="462 1396 950 1451"> <thead> <tr> <th>Land Use</th> <th>Land in Ha</th> <th>Notified Forest</th> <th>Non-Forest</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Land Use	Land in Ha	Notified Forest	GMJJ	Non-Forest	Quarry	345.89	55.57	150.52	139.80	OB Dump	27.80	0	4.99	22.81	Conveyor Corridor	2.56	0	0.58	2.98	Road	2.71	0	0.65	2.06	Safety Zone	5.04	5.04	0	0	Green Belt	110.92	9.14	49.55	52.23		495.92	69.75	206.29	219.88	Land Use	Land in Ha	Notified Forest	Non-Forest					The reply made by the user agency may be accepted
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
  
 Surendra Prasad Suman  
 Divisional Forest Officer,  
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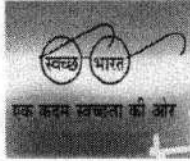


				<b>+GMJJ</b>			
		Quarry	266.20	126.40	139.80		
		OB Dump	23.81	1.00	22.81		
		Conveyor Corridor	3.56	0.58	2.98		
		Road	2.71	0.65	2.06		
		Safety Zone	5.04	5.04	0.00		
		Green Belt	110.92	58.69	52.23		
			<b>412.24</b>	<b>192.36</b>	<b>219.88</b>		
		Thus from above table 5.04 Ha Land is proposed for safety zone in current proposal. <b>Land use plan of Magadh OCP enclosed as Annexure XIV</b>					
(b)	An area of 14.8 ha has been proposed for diversion of river/nallah/canal (Pg 206/e). The status of feasibility reports for said diversion along with comments of Water Resource Department on the feasibility of said proposed diversion needs to be informed by the State.	Feasibility report for Nalah Diversion Has been prepared the same has been approved vide letter No 38; Dated 25.01.2023 by Executive Engineer Minor irrigation Department Chatra GoJ (Copy enclosed as Annexure V)					In compliance to the query, the user agency has Submitted the duly approved feasibility report for Nala diversion vide letter no. 38 dated 25-1.2023 of the Executive Engineer, Minor irrigation department Chatra of Government of Jharkhand and the same may be accepted.
(c)	As per the land use, approved in the Mining Plan, no Green Belt has been proposed in the project area. Reasons and underlying guidelines justifying the same may be furnished by the State.	<b>As per page no 51 of 57 of Mining Plan</b>					In response to the query the user agency clarifies that out of 412.92 Ha Area of current application, 110.92 Ha has been proposed for Green belt in the inland proposal. The proposed Green Belt area must be adequately protected , conserved and developed by the user agency under guidance of Local forest administration by preparing a developmental and conservation plan for this area .
		<b>Land Use</b>	<b>Land in Ha</b>	<b>Notified Forest +GMJJ</b>	<b>Non-Forest</b>		
		Quarry	266.20	126.40	139.80		
		OB Dump	23.81	1.00	22.81		
		Conveyor Corridor	3.56	0.58	2.98		
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		Safety Zone	5.04	5.04	0.00		
		<b>Green Belt</b>	<b>110.92</b>	<b>58.69</b>	<b>52.23</b>		
			<b>412.24</b>	<b>192.36</b>	<b>219.88</b>		
		110.92 Ha of Land has been proposed for Green Belt in current proposal.					

  
 Surendra Prasad Suma  
 Divisional Forest Officer,  
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(d)	The area proposed for OB dump may be optimized to the extent possible and possibilities may be explored to use the already mined out areas for OB dumping.	Proposed 23.81 Ha of Land is proposed for OB dump is optimal which include 22.81 Ha Non Forest land and 1.00 Ha in Forest Land. De-coaled area is not available in current mine for OB dumping. As soon as de-coaled area will be made available internal OB dumping be followed.	The user agency has submitted the reply in the following words: "Proposed 23.81 Ha of Land is proposed for OB dump is optimal which include 22.81 Ha Non Forest land and 1.00 Ha in Forest Land. De-coaled area is not available in current mine for OB dumping. As soon as de-coaled area will be made available internal OB dumping be followed." The above said reply of the user agency may be accepted.
xii	Status of reclamation measures undertaken by the user agency in their lease area as per the provisions provided in the Progressive Mine Closure Plans and gaps if any, may be intimated by the State.	Total 2,42,78,895.00 CUM of OB has ben backfilled since the commissioning of the mines i.e. 2014 and Rs 2374.74 has been Claimed for the year 2015-16 to 2019-20 under progressive mine closure Activity (Copy enclosed as Annexure XII) Around 15.97 Ha area on OB dump has been Planted vide different WO of plantation to DFO Chatra South. <b>Joint inspection report enclosed as Annexure XIII</b>  <b>Sample photograph of Mine reclamation (In Pit Filling &amp; Plantation Enclosed as Annexure XV)</b>	The reply made by the user agency may be accepted. However, the user agency has to come forward always' and every year for reclamation, of the mined out area through physical reclamation as well as the biological reclamation, as soon as the pits and voids become available to reclaim it.

  
**Surendra Prasad Sumari**  
 Divisional Forest Officer,  
 Chatra South Forest Division



**CENTRAL COALFIELDS LIMITED**

*(A Subsidiary of Coal India Limited)*

*(A Govt. of India Undertaking)*

**OFFICE OF THE PROJECT OFFICER**

**MAGADH OCP, MAGADH-SANGHMITRA AREA**

**CCL**

*(A Miniratna Category-I Company)*

Ref. No.: PO(M)/PD/2022-23/3153

Date: 27.01.2023

To

**The Divisional Forest Officer  
Chatra South**

**Sub: Point wise Reply of Query raised in File No 8-27/2022-FC; Dated 7<sup>th</sup> December 2022 in respect of Proposal for the non-forest use of 192.36 ha**


Dear Sir,

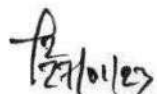
Please find enclosed here with Point wise Reply of Query raised in File No 8-27/2022-FC; Dated 7<sup>th</sup> December 2022 in respect of Proposal for the non-forest use of 192.36 ha (Forest land - 57.29 ha and Jungle Jhari 135.07 ha) of forest land for Magadh East Opencast mining project in favour of M/s CCL, Chatra South, Jharkhand -reg

This is for your kind information and further submission please.

Thanking you in anticipation.

Yours Faithfully

  
**Surendra Prasad Suman**  
Divisional Forest Officer,  
Chatra South Forest Division

  
**Project Officer Magadh OCP  
Magadh-Sanghmitra Area, CCL**

**NIRPENDRA NATH**  
Project Officer  
Magadh Project


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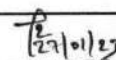
SI No	Query	Compliance																																																														
i	As per detail furnished in Part-I, total forest area and non-forest area required under the proposal are 192.36 ha and 219.88 ha, thereby total area required for the project is 412.24. However, detail of area filled in the Part-I by the user agency under column M1(i)(a) mentioned the total area of the project as 495.92 ha. This discrepancy needs to be rectified by the State.	<p>The boundary of Mine plan is for 495.92 Ha includes</p> <p>a) 412.24 Ha of current application (Notified Forest Land 57.29 Ha + GM JJ Land 135.07 + Non-Forest Land 219.88 Ha = 412.24 Ha) and</p> <p>b) 83.68 Ha of already diverted forest land proposal (which is part of 96.72 Ha. Released vide Stage II Clearance F. No. 8-38/2008-FC; Dated 18.10.2010.) Thus, the difference of 13.04 Ha (96.72 Ha -83.68 Ha) is now included in Sanghamitra OCP the sister colliery of Magadh OCP. <b>The plan is enclosed herewith as Annexure I.</b></p> <p style="text-align: center;"><b>Land details of Magadh East OCP:</b></p> <table border="1"> <thead> <tr> <th rowspan="2">Village</th> <th colspan="4">Current application for diversion of 192.36 Ha in Magadh East OCP</th> <th colspan="2">Part of the earlier diverted proposal of 96.72 Ha included in Magadh East OCP</th> </tr> <tr> <th>Notified Forest (In Ha)</th> <th>GMJJ (In Ha)</th> <th>Forest land</th> <th>Non Forest Land</th> <th>Notified Forest (In Ha)</th> <th>GMJJ (In Ha)</th> </tr> </thead> <tbody> <tr> <td><b>Masilong</b></td> <td>13.35</td> <td>32.14</td> <td>45.49</td> <td>20.58</td> <td>0</td> <td>0</td> </tr> <tr> <td><b>Develgada</b></td> <td>0.00</td> <td>1.00</td> <td>1</td> <td>33.81</td> <td>0</td> <td>3.99</td> </tr> <tr> <td><b>Saradhu</b></td> <td>43.94</td> <td>101.93</td> <td>145.87</td> <td>127.76</td> <td>12.46</td> <td>54.72</td> </tr> <tr> <td><b>Kundi</b></td> <td>0.00</td> <td>0.00</td> <td>0</td> <td>37.74</td> <td>0</td> <td>12.51</td> </tr> <tr> <td><b>Total</b></td> <td><b>57.29</b></td> <td><b>135.07</b></td> <td><b>192.36</b></td> <td><b>219.88</b></td> <td><b>12.46</b></td> <td><b>71.22</b></td> </tr> <tr> <td></td> <td></td> <td colspan="3" style="text-align: center;"><b>412.24 Ha</b></td> <td colspan="2" style="text-align: center;"><b>83.68 Ha</b></td> </tr> <tr> <td><b>Total land</b></td> <td colspan="6" style="text-align: center;"><b>412.24 + 83.68 = 495.92 Ha</b></td> </tr> </tbody> </table>	Village	Current application for diversion of 192.36 Ha in Magadh East OCP				Part of the earlier diverted proposal of 96.72 Ha included in Magadh East OCP		Notified Forest (In Ha)	GMJJ (In Ha)	Forest land	Non Forest Land	Notified Forest (In Ha)	GMJJ (In Ha)	<b>Masilong</b>	13.35	32.14	45.49	20.58	0	0	<b>Develgada</b>	0.00	1.00	1	33.81	0	3.99	<b>Saradhu</b>	43.94	101.93	145.87	127.76	12.46	54.72	<b>Kundi</b>	0.00	0.00	0	37.74	0	12.51	<b>Total</b>	<b>57.29</b>	<b>135.07</b>	<b>192.36</b>	<b>219.88</b>	<b>12.46</b>	<b>71.22</b>			<b>412.24 Ha</b>			<b>83.68 Ha</b>		<b>Total land</b>	<b>412.24 + 83.68 = 495.92 Ha</b>					
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*Surendra Prasad Suman*  
 Divisional Forest Officer,  
 Chatra South Forest Division

*22/10/23*  
**NIRPENDRA NATH**  
 Project Officer  
 Magadh Project

ii	Contrary to finding in the Part-II with regards to detail of unique species of flora and fauna, inspection report dated 26.05.2022 of the DCF mentions the occurrence of no species/rare/endangered species of flora and fauna. The same may be rectified.	NA					
iii	Total project area is 1593.73 ha (as per Mining Plan) comprising of 495.92 ha in Chatra District and 1097.81 ha in Latehar District (Pg 205/c). Detail of forest land involved in the 1593.73 ha, along with detail of approval under the FC Act, 1980, if any, obtained needs to be intimated by the State.	<b>Total land details of 1593.73 Ha land is as under:</b>					
		<b>Land details in Chatra District (Ha)</b>					
		<b>SI No</b>	<b>Forest Proposal</b>	<b>Forest land (NF + GM JJ)</b>	<b>Non Forest land</b>	<b>Total</b>	<b>Remarks</b>
		1	Already Diverted forest land (96.72)	83.68	0	83.68	83.68 Ha of already diverted forest land proposal (which is part of 96.72 Ha. Released vide Stage II Clearance F. No. 8-38/2008-FC; Dated 18.10.2010.) Thus, the difference of 13.04 Ha (96.72 Ha -83.68 Ha) is now included in Sanghamitra OCP the sister colliery of Magadh OCP
		2	Present Application	192.36	219.88	412.24	Application for diversion of 192.36 Ha submitted vide FP/JH/MIN/87235/2020 dated 19.03.2021
		<b>Land details in Latehar District (Ha)</b>					

  
 Surendra Prasad Suman  
 Divisional Forest Officer,  
 Chatra South Forest Division

  
 NIRPENDRA NATH  
 Project Officer  
 Magadh Project

		I	Magadh OCP West	385.68	712.13	1097.81	The FC of the project has ben considerably delayed due to CS & RS Survey issue in Latchar District Hence the Magadh Project was divided in two district wise a separate mining plan approval
		<b>G Total</b>		<b>661.72</b>	<b>932.01</b>	<b>1593.73</b>	
iv	The comments of the PCCF (Wildlife) revealed that user agency has not compiled with the provisions of WLMP stipulated in the past. The State Government may therefore furnish a justification for the same along with detailed comments on the observations made in the letter dated 29.08.2022 of the PCCF (Wildlife) including impact of the projects of UA on the hydrological regimes in the area as mentioned by the PCCF (CWLW).	<p>WLMP has been prepared in consultation of DFO, Chatra South and the same has been submitted for approval to DFO Chatra South on 24.01.2023 vide letter no 1064. (receiving copy enclosed as Annexure III)</p> <p>Magadh OCP, M-S Area, CCL also undertakes (Copy enclose as Annexure IV) to pay the cost of implementation of approved Wild Life Management Plan.</p>					
V	The examination of the DSS report (copy enclosed) revealed the following:						
V (a)	As per DSS report, vegetation density is up						

Surendra Prasad Samant  
Divisional Forest Officer,  
Chatra South Forest Division

29/01/23  
NIRPENDRA NATH  
Project Officer  
Magadh Project

	to 0.4 (copy enclosed) while DCF in Part-II reported vegetation density of 0.8, therefore, the same needs to be revisited and exact status needs to be intimated by the State.	NA
V (b)	Google Satellite Imagery of the area proposed for diversion revealed occurrence of cultivation, settlement, drainage/nala and mining activity on the area proposed for diversion. Comments on the same needs to be furnished by the state.	<p><b>Cultivation:-</b> The project boundary of instant proposal i.e. 495.92 Ha has been acquired under CBA Act, but as the rehabilitation &amp; Compensation of some parts is in process, the mining activity will begin only after final rehabilitation &amp; Compensation.</p> <p><b>Settlement:-</b> 303 families are to be rehabilitated from Chatra district. <b>(details available in 1.2.5 of page no 02 of 57 in Mining Plan Enclosed as Annexure II).</b></p> <p><b>Drainage/Nala:-</b> Feasibility report for Nalah Diversion Has been prepared &amp; the same has been approved vide letter No 38; Dated 25.01.2023 by Executive Engineer Minor irrigation Department Chatra GoJ <b>(Copy enclosed as Annexure V)</b></p> <p><b>Mining activity:-</b> Mining activity has been done inadvertently due to measurement error and discrepancy in land records. However the area has been identified as GMJJ Land and all necessary compliance for diversion including payment of all dues shall be done.</p>
V (c)	Certain encroachments in the form of cultivation, road etc. is visible in the area proposed for raising CA. Comments on the same needs to be furnished by the State Government.	29.51 Ha encroached area visible in the area proposed for raising CA in the form of House, road nalah has been identified removed & compensated with additional <b>30.02 Ha of CA land in Bargaoin Village DGPS of Additional CA Land enclosed as Annexure VI</b> <b>(Soft Copy of KML &amp; DGPS of CA land is being attached hereby as Annexure VII)</b>
v	The Ministry granted	

*Surendra Prasad Sun*  
Divisional Forest Officer,  
Chatra South Forest Division

*Nirpendra Nath*  
NIRPENDRA NATH  
Project Officer  
Magadh Project

approval to 96.72 Ha of forest land on 18.10.2010. Status of compliance of the conditions stipulated in the said approval including preparation and implementation of Wildlife Management Plan and reasons/justification for non-compliance, if any, may also be furnished by the State.

The updated compliance in respect of already diverted proposal of 96.72 ha **Copy enclosed as Annexure VIII**  
 WLMP has been prepared in consultation of DFO, Chatra South and the same has been submitted for approval to DFO Chatra South on 24.01.2023 vide letter no 1064. **(receiving copy enclosed as Annexure III)**  
 Magadh OCP, M-S Area, CCL also undertakes **(Copy enclose as Annexure IV)** to pay the cost of implementation of approved Wild Life Management Plan.

vi In compliance of FRA, 2006 three certificates in respect of forest area of 651.16 ha, 32.15 ha and 44.70 ha were submitted. The State Government may, therefore, clarify the corresponding certificate issued in respect of extant proposal and justification furnishing of three separate certificates. Further, detail of documents pertaining to meeting of Sub-Divisional Level Committee could not be found in the compliance.

**Details of FRA Granted For Magadh East OCP(192.36 Ha)**

Sl No	FRA Ref No (Issued by DC Chatra)	Date of Issue of FRA	Total Area of FRA Issued	Village	Area in Ha for Magadh East OCP	Total Forest area (NF+GMLL) in present proposal
1	833	10.07.2018	651.16	Dewelgada	1.00	115.51
				Mansilong	13.34	
				Saradu	101.17	
2	48	20.01.2015	32.15	Mansilong	32.15	32.15
3	59	17.01.2022	44.70	Saradu	44.70	44.70
<b>Grand Total Forest Area(NF+GMJJ)</b>						<b>192.36</b>

As the proceedings of Gram Sabha was done at different time hence the FRA was issued separately

*Surendra Prasad Surin*  
 Divisional Forest Officer,  
 Chatra South Forest Division

*24/01/23*  
**NIRPENDRA NATH**  
 Project Officer  
 Magadh Project



	However, the same can be furnished after Stage-I approval and before Stage-II approval.	accordingly  The detail of documents pertaining to meeting of Sub-Divisional Level Committee shall be submitted before stage II approval
vii	<b>Examination of Mining Plan revealed the following:</b>	
vii i	Magadh OCP is proposed for captive use of Tandawa TPP; however, in light of amendment in the MMDR Act, 1957, the State Government needs to confirm that whether use of coal from the mine is proposed for captive use only or otherwise.	Magadh OCP is non-captive mine of capacity 20 MTPA. Out of this 10 MTPA is will be supplied to NTPC Tandwa and rest 10 MTPA will be supplied through basket linkage to other plants Hindalco-Renukut, Jhasugida –vedanta, NTPC-Hariyana, Punjab, UP, Bihar, NTPC-Delhi, Adhunic-T, Tata Power- Tata Nagar, NPC-Dhanbad. <b>(details given in point no 1.1.4 of chapter 1, page no-1 of 57 of Approved Mine Plan copy enclosed as Annexure II)</b>
ix	The Mining Plan envisages transportation of coal through rail while underlying section in the Mining Plan mentions strengthening of a Kutcha road from Tandwa to Magadh over a length of 17 km. Therefore, it needs to be clarified that whether the road Tandwa-Magadh is proposed only for	Mode of coal transportation will be mainly by Magadh Railway siding & Conveyor corridor (from Magadh OCP to NTPC Tandwa). The road Tandwa-Magadh is proposed for approach to the project

*for*  
Surentra Prasad Suman  
Environmental Officer,  
Central South Forest Division

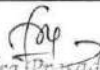
*27/01/23*  
NIRPENDRA NATH  
Project Officer  
Magadh Project

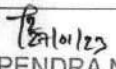
	approach to the project or for transportation as well. A clarification in this regard may be furnished by the State.																										
x	The extant proposal does not involve rehabilitation; however, as per the Mining Plan rehabilitation of 998 families has been proposed in the project. A justification establishing the irrelevancy of the rehabilitation proposed in the Mining Plan and rehabilitation indicated as nil in Part-I of Form-A may be obtained from the user agency.	<p>As the mining plan consist the total rehabilitation required in both Chatra and Latehar district. The proposed application for diversion of 192.36 Ha forest land is for Chatra district only. 998 families has been proposed in mine plan is for both Chatra and Latehar portion, out of 988 only 303 families are to be rehabilitated from Chatra district.(details given in point no 1.2.5 of page no 02 of 57 of mining plan enclosed as Annexure II). The relevant R&amp;R Policy of CIL is being enclosed (enclosed as Annexure IX).</p> <p>Out of which 32 PAFs of Masilong Village have already been shifted by payment of Lumpsum amount under R&amp;R Policy of CIL. For rehabilitation of remaining 271 PAFs will be shifted to R&amp;&amp; site</p> <p>R&amp;R site has been approved by competent authority copy of Approval of R&amp;R site enclosed as Annexure X &amp; Plan showing R&amp;R Site is enclosed as Annexure XI</p>																									
xi	<b>The examination of land use proposed in the mining plan revealed the following:</b>																										
(a)	An area of 159.68 ha has been proposed for safety zone. Justification for proposing such a large area, along with underlying standard prescribed by the relevant Department/Organization	<p>As per page no 51 of 57 of Mining Plan, Land use plan of Chatra district portion having total area of 495.92 is mentioned below:-</p> <table border="1"> <thead> <tr> <th>Land Use</th> <th>Land in Ha</th> <th>Notified Forest</th> <th>GMJJ</th> <th>Non-Forest</th> </tr> </thead> <tbody> <tr> <td>Quarry</td> <td>345.89</td> <td>55.57</td> <td>150.52</td> <td>139.80</td> </tr> <tr> <td>OB Dump</td> <td>27.80</td> <td>0</td> <td>4.99</td> <td>22.81</td> </tr> <tr> <td>Conveyor Corridor</td> <td>2.56</td> <td>0</td> <td>0.58</td> <td>2.98</td> </tr> <tr> <td>Road</td> <td>2.71</td> <td>0</td> <td>0.65</td> <td>2.06</td> </tr> </tbody> </table>	Land Use	Land in Ha	Notified Forest	GMJJ	Non-Forest	Quarry	345.89	55.57	150.52	139.80	OB Dump	27.80	0	4.99	22.81	Conveyor Corridor	2.56	0	0.58	2.98	Road	2.71	0	0.65	2.06
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 Divisional Forest Officer,  
 Chatra South Forest Division


12/10/23  
 NIRPENDRA NATH  
 Project Officer  
 Magadh Project

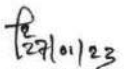
, needs to be furnished by the State.	Safety Zone	5.04	5.04	0	0																															
	Green Belt	110.92	9.14	49.55	52.23																															
		495.92	69.75	206.29	219.88																															
	<p>Out of this also 495.92 Ha of Land in Chatra district, 83.68 Ha is already released (Magadh OCP (96.72 Ha) diverted vide MoEF&amp;CC F.No. 8-38/2008-FC dated 18.10.2010). Thus the land use plan for remaining area of 412.24 Ha (495.92 Ha-83.68 Ha) of Land for which the application has been made is as under</p> <table border="1"> <thead> <tr> <th>Land Use</th> <th>Land in Ha</th> <th>Notified Forest +GMJJ</th> <th>Non-Forest</th> </tr> </thead> <tbody> <tr> <td>Quarry</td> <td>266.20</td> <td>126.40</td> <td>139.80</td> </tr> <tr> <td>OB Dump</td> <td>23.81</td> <td>1.00</td> <td>22.81</td> </tr> <tr> <td>Conveyor Corridor</td> <td>3.56</td> <td>0.58</td> <td>2.98</td> </tr> <tr> <td>Road</td> <td>2.71</td> <td>0.65</td> <td>2.06</td> </tr> <tr> <td>Safety Zone</td> <td>5.04</td> <td>5.04</td> <td>0.00</td> </tr> <tr> <td>Green Belt</td> <td>110.92</td> <td>58.69</td> <td>52.23</td> </tr> <tr> <td></td> <td><b>412.24</b></td> <td><b>192.36</b></td> <td><b>219.88</b></td> </tr> </tbody> </table> <p>Thus from above table 5.04 Ha Land is proposed for safety zone in current proposal. <b>Land use plan of Magadh OCP enclosed as Annexure XIV</b></p>					Land Use	Land in Ha	Notified Forest +GMJJ	Non-Forest	Quarry	266.20	126.40	139.80	OB Dump	23.81	1.00	22.81	Conveyor Corridor	3.56	0.58	2.98	Road	2.71	0.65	2.06	Safety Zone	5.04	5.04	0.00	Green Belt	110.92	58.69	52.23		<b>412.24</b>	<b>192.36</b>
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(b)	An area of 14.8 ha has been proposed for diversion of river/nallah/canal (Pg 206/c). The status of feasibility reports for said diversion along with comments of Water Resource Department on the feasibility of said proposed diversion needs to be informed by the State.	Feasibility report for Nalah Diversion Has been prepared the same has been approved vide letter No 38; Dated 25.01.2023 by Executive Engineer Minor irrigation Department Chatra GoJ (Copy enclosed as Annexure V)																																		
(c)	As per the land use,	<b>As per page no 51 of 57 of Mining Plan</b>																																		

  
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 Divisional Forest Officer,  
 Chatra South Forest Division


  
 NIRPENDRA NATH  
 Project Officer  
 Magadh Project

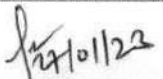
<p>approved in the Mining Plan, no Green Belt has been proposed in the project area. Reasons and underlying guidelines justifying the same may be furnished by the State.</p>	<table border="1" data-bbox="589 659 1338 898"> <thead> <tr> <th>Land Use</th> <th>Land in Ha</th> <th>Notified Forest +GMJJ</th> <th>Non-Forest</th> </tr> </thead> <tbody> <tr> <td>Quarry</td> <td>266.20</td> <td>126.40</td> <td>139.80</td> </tr> <tr> <td>OB Dump</td> <td>23.81</td> <td>1.00</td> <td>22.81</td> </tr> <tr> <td>Conveyor Corridor</td> <td>3.56</td> <td>0.58</td> <td>2.98</td> </tr> <tr> <td>Road</td> <td>2.71</td> <td>0.65</td> <td>2.06</td> </tr> <tr> <td>Safety Zone</td> <td>5.04</td> <td>5.04</td> <td>0.00</td> </tr> <tr> <td><b>Green Belt</b></td> <td><b>110.92</b></td> <td><b>58.69</b></td> <td><b>52.23</b></td> </tr> <tr> <td></td> <td><b>412.24</b></td> <td><b>192.36</b></td> <td><b>219.88</b></td> </tr> </tbody> </table> <p>110.92 Ha of Land has been proposed for Green Belt in current proposal.</p>	Land Use	Land in Ha	Notified Forest +GMJJ	Non-Forest	Quarry	266.20	126.40	139.80	OB Dump	23.81	1.00	22.81	Conveyor Corridor	3.56	0.58	2.98	Road	2.71	0.65	2.06	Safety Zone	5.04	5.04	0.00	<b>Green Belt</b>	<b>110.92</b>	<b>58.69</b>	<b>52.23</b>		<b>412.24</b>	<b>192.36</b>	<b>219.88</b>
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<p>(d) The area proposed for OB dump may be optimized to the extent possible and possibilities may be explored to use the already mined out areas for OB dumping.</p>	<p>Proposed 23.81 Ha of Land is proposed for OB dump is optimal which include 22.81 Ha Non Forest land and 1.00 Ha in Forest Land. De-coaled area is not available in current mine for OB dumping. As soon as de-coaled area will be made available internal OB dumping be followed.</p>																																
<p>xii Status of reclamation measures undertaken by the user agency in their lease area as per the provisions provided in the Progressive Mine Closure Plans and gaps if any, may be intimated by the State.</p>	<p>Total 2,42,78,895.00 CUM of OB has ben backfilled since the commissioning of the mines i.e. 2014 and Rs 2374.74 has been Claimed for the year 2015-16 to 2019-20 under progressive mine closure Activity (<b>Copy enclosed as Annexure XII</b>) Around 15.97 Ha area on OB dump has been Planted vide different WO of plantation to DFO Chatra South. <b>Joint inspection report enclosed as Annexure XIII</b> <b>Sample photograph of Mine reclamation (In Pit Filling &amp; Plantation Enclosed as Annexure XV)</b></p>																																

  
 Surendra Prasad Suran  
 Divisional Forest Officer,  
 Chatra South Forest Division

  
 NIRPENDRA NATH  
 Project Officer  
 Magadh Project

**MINING PLAN  
AND  
MINE CLOSURE PLAN  
MAGADH OCP (20 MTY)**

  
Surendra Prasad Suman  
Divisional Forest Office,  
Chatra South Forest Division

  
NIRPENDRA NATH  
Project Officer  
Magadh Project

**Note No. #1****URGENCY MINUTES**

In view of the urgency expressed by GM(Environment) and duly recommended by D(T/P&P), the extract of the draft minutes in respect of the following subject proposal is as follows:

**Item No. 499.4(6): Proposal seeking approval of Mining Plan and Mine Closure Plan of Magadh OCP (20 MTPA), - including Magadh East OCP in Chatra district with Project Area of 1593.73 Ha (including 495.92 Ha of Magadh East OCP) and mine closure cost of Rs. 21119.30 lakh.**

The Board was apprised that the forest application of Magadh OCP with EC Capacity of 20 MTY for an area of 659.05 Ha was made on 28.03.2016 which includes 222.35 Ha in Chatra District and 436.70 Ha in Latehar District.

The FC of the project has been considerably delayed due to Cadastral Survey & Revisional Survey issue in Latehar District. Consequently, a separate forest application is required to be submitted. Accordingly, a revised mine plan of Magadh OCP for 1593.73 Ha (including 495.92 Ha of Magadh East OCP in Chatra district) has been prepared for the purpose of separate forest application in Chatra district to expedite clearance and maintain continuity of production.

In view of above, after detailed deliberations, the Board approved the Mining Plan and Mine Closure plan of Magadh OCP (20 MTPA), including Magadh East OCP in Chatra district with project Area of 1593.73 ha (including 495.92 Ha of Magadh East OCP) and mine closure cost of Rs. 21119.30 lakh for obtaining FC/EC from MoEF&CC.

Submitted for kind perusal and if agreed, may kindly be put up to CMD, CCL for approval, please.

*\*The extract of the final minutes will be circulated after confirmation of the final minutes by the Board.*

10/03/2021 10:47 AM

**RAVI PRAKASH\***  
(COMPANY SECRETARY)

**Note No. #2**


Agreed.

10/03/2021 10:56 AM

**BHOLA SINGH**  
(DIRECTOR(TECHNICAL/PROJECT & PLANNING))

**Note No. #3**

Agreed

  
Surendra Prasad Suran  
Divisional Forest Officer,  
Chatra South Forest Division

  
NIRPENDRA NATH  
Project Officer  
Magadh Project


10/03/2021 2:05 PM

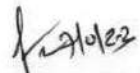
P.M.PRASAD  
(CHAIRMAN CUM MANAGING DIRECTOR)

**Note No. #4**

10/03/2021 2:08 PM

BHOLA SINGH  
(DIRECTOR(TECHNICAL/PROJECT & PLANNING))

  
Surendra Prasad Sumari  
Divisional Forest Officer,  
Chatra South Forest Division

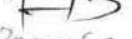
  
NIRPENDRA NATH  
Project Officer  
Magadh Project

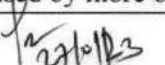
## Chapter 1: Project Information

	<i>Parameters</i>	<i>Details</i>
<b>1.1</b>	<b>INTRODUCTION</b>	
1.1.1	Name of Coal / Lignite Block	Magadh OCP
1.1.2	Name of the Coalfield/ Lignite Field	North Karanpura Coal Field
1.1.3	Base date of Mining Plan/ Mine Closure Plan	<b>Jan 2021</b>
1.1.4	Linked End Use Plant	Tandwa STPS & Basket Linkage- Coal from Magadh OCP to Hindalco-Renukut, Jhasugida-Vedanta, NTPC-Hariyana, Punjab, UP, Bihar, NTPC-Delhi, Adhunic-T, tata Power-Tata Nagar, NPC-Dhanbad
1.1.5	Distance of End use plant from the pit head of the project in "km"	<b>Tandwa STPS:8 km</b>
1.1.6	Mode of Coal Transport	By Rail

### 1.2 LOCATION, TOPOGRAPHY AND COMMUNICATION

1.2.1	Location of coal deposit (District and State)	District-Chatra, Latehar State-Jharkhand
1.2.2	Communication: PWD roads, railway lines, Air	The Magadh OCP is approachable by 12 Km long fare weather Kutchra road from Tandwa village which is connected to Khalari via Piparwar by a 20 Km long fare weather road in the south and to Hazaribagh by a 50 Km long Metalled road via Barkagaon. Another metalled road connects Tandwa village with Hazaribagh (80 Km) via Semaria. A fair weather kutchra road connecting Tandwa village with Balumath also runs close to this OCP, which in turn is connected to Khalari via Tori and Bijupara. The nearest railway station is the Ray, which is at a distance of about 35 Km from the block, on BarkakanaDehri-on-Sone loop line of the Eastern Railway. Tori Railway station is another nearby railhead, located south-west of the block, at a crowfly distance of about 45 Km.
1.2.3	Availability of power supply, water etc.	It is proposed to establish one no. 132/33KV, 2x50 MVA sub-station, which will be centrally located from the proposed Amrapali and Magadh mining projects and Proposed Regional 33KV switching station, at Magadh&Amrapali. A lump sump amount of Rs. 230.00 lakhs have been provided for development of source of water for potable and industrial use. There is no perennial source of water in that area except a small stream called Sadabaha. So a hydro-geological survey should be done to develop sources of water.
1.2.4	Prominent physiographic	The Magadh OCP is characterised by more or less flat terrain with

  
 Surendra Prasad Suman  
 Divisional Forest Officer,  
 Chatra South Forest Division

  
 NIRPENDRA NATH  
 Project Officer  
 Magadh Project



	<b>Parameters</b>	<b>Details</b>
	features, drainage pattern, natural water courses, rainfall data, highest flood level	gentle undulations. In general, the ground slopes towards south in major part of the block. In the northern part, it slopes towards the east. The maximum elevation of 509m is noticed in the northern part of the block, where lower seams are incroeping. The minimum elevation of 464m is noticed near the southern block boundary. The drainage of Magadh OCP is controlled by Pindar-Kalkalnala, flowing west to east in the northern side of the property. and Kuhubadnala flowing north to south along the Western block boundary. The Kuhubadnala meets the Garhi river in the south at a distance of about 10 Km. There is no parennial water body within the block. The average monthly rainfall during the monsoon period (June to October) is 200mm and during the non-monsoon period (Nov. to May) is 20mm.
1.2.5	Important surface features within the project area and major diversion or shifting involved	Total PAFs to be rehabilitated 998 (As estimated by Project) 303-In Magadh OCP(Eastern side)-ChatraDist 695-In Magadh OCP(Western side)-Latehar Dist.

### 1.3 DETAILS OF THE ALLOTMENT AGREEMENT

1.3.1	Name the Allottee	NA
1.3.2	Details of allotment/vesting order	
1.3.3	Name and address of the applicant	
1.3.4	Name of the Previous allottee of the Block	
1.3.5	Starting Date of the Mine as per CMDPA	
1.3.6	Rated Capacity as per CMDPA	
1.3.7	Production Schedule as per opening permission (meeting provisions of CMDPA if any)	
1.3.8	End Use of Coal/Lignite as per allotment order if any	
1.3.9	Cardinal Points co-ordinates of the Block boundary	

### 1.4 DETAILS OF THE PREVIOUS APPROVAL OF MINING PLAN

1.4.1	Date of Approval	NA
1.4.2	Conditions, if any	
1.4.3	Scheduled year of start of production	
1.4.4	Proposed year of achieving	

Surendra Prasad Sur.in  
Divisional Forest Office,  
Chatra South Forest Division

22/01/22  
NIRPENDRA NATH  
Project Officer  
Magadh Project

	<b>Parameters</b>	<b>Details</b>
	the targeted production	
1.4.5	Date of actual commencement of mining operations, if operations already started	
1.4.6	Likely date of mining operations, if operations not yet started & reasons for non-commencement of operations	
1.4.7	<b>Planned production and actual levels achieved in last 3 years (Coal in Mte, OB in MM<sup>3</sup>, SR in MM<sup>3</sup>/te)</b>	NA
1.4.8	<b>Statutory obligations vis-à-vis compliance status in a tabular form</b>	
1.4.9	Reasons for difference between the planned and actual production levels	

**1.5 PARAMETERS OF APPROVED MINING PLAN VIS-À-VIS PROPOSED MINING PLAN**

		<b>Approved Mining Plan</b>	<b>Proposed Mining Plan</b>
1.5.1	Block Area in "Ha"	3000	3000
1.5.2	Block Area Projectised "Ha"	1146	1146
1.5.3	Lease area "Ha"		
1.5.4	Project Area "Ha"	1769 Ha.	1593.73 ( <i>Reduction due to boundary adjustment to Sanghmitra OCP, 173.75 Ha and Kundi village 243 part plot, 1.52 Ha</i> )* *-Source CCL
1.5.5	Life of the Project "Yrs"	26	22
1.5.6	Minimum and Maximum Depth of working "m"	100 m-110 m	100 m-110 m
1.5.7	Net Geological Block "Ha"	3000	3000
1.5.8	Production Target "MTPA"	20.0	20.0
1.5.9	Seams Available "As per GR"	Top to bottom  1. IV 2. III (comb) 3. III (B) 4. II + III (B)	Top to bottom  1. IV 2. III (comb) 3. III (B) 4. II + III (B)

Surendra Prasad Sur  
Divisional Forest Officer,  
Chatra South Forest Division

*22/10/23*  
NIRPENDRA NATH  
Project Officer  
Magadh Project

	Parameters	Details	
		5. III + II (T) 6. II (T) + II (B) 7. II (T) 8. II (B) 9. I (T) 10. I (M) 11. I (B+M+T) 12. I (B)	5. III + II (T) 6. II (T) + II (B) 7. II (T) 8. II (B) 9. I (T) 10. I (M) 11. I (B+M+T) 12. I (B)
1.5.10	Seams not considered for Mining with Reasons	Seam V because Seam V with a thickness of 4 to 5 m lies with a parting of around 100 m has not been considered in Magadh OCP.	Seam V because Seam V with a thickness of 4 to 5 m lies with a parting of around 100 m has not been considered in Magadh OCP.
1.5.11	Gross Geological Reserve "Mt"	1069.53	1069.53
1.5.12	Net Geological Reserve "Mt"	962.58	962.58
1.5.13	Blocked Reserve "Mt"	106.95	106.95
1.5.14	Minable Reserve "Mt"	351 Mt	351 Mt
1.5.15	Extractable Reserves "Mt"	351 Mt	351 Mt
1.5.16	% of Extraction/ recovery	100%	100%
1.5.17	Reserve Depleted (till the base date) Reserves " Mt"	NA	13.75
1.5.18	Balance Extractable reserve "Mt"	351 Mt	337.25
1.5.19	Average Grade	F	F
1.5.20	OB in MM3	529.12	501.41
1.5.21	SR MM3/te	1.51	1.49
1.5.22	Mining Technology	Shovel-dumper mining system envisaged for working this OC mine.	Shovel-dumper mining system envisaged for working this OC mine.
1.5.23	Coal Beneficiation envisaged		NA
1.5.24	Handling of Rejects		NA
1.5.25	Land use pattern " Ha"(As per PR)		
1	Excavation Area	1146	1146
2	Top Soil Dump		
3	External Dump	194.71	166.91
4	Safety Zone/Green belt	307.15	159.68
5	Other Use	14.80	14.80
6	Infrastructure area	106.34	106.34
8	Undisturbed Area		
	<b>Total</b>	1769	1593.73
1.5.26	<b>Reasons for revision</b>	CCL decided to make separate forest application for Magadh OCP in ChatraDist in the name of Magadh East OCP(192.36 Ha)	

Surendra Prasad Sun...  
Divisional Forest Office,  
Chatra South Forest Division

27/01/23  
NIRPENDRA NATH  
Project Officer  
Magadh Project

Chapter 2: Exploration, Geology, Seam Sequence, Coal Quality and Reserve

	Parameters	Details		
2.1	<b>DETAILS OF THE BLOCK</b>			
2.1.1	Particulars of adjacent blocks: North, South, East, West	<b>North: Sanghmitra</b> <b>South: unblocked</b>	<b>East: Koyad Kishanpur</b> <b>South</b> <b>West: Tetariakhar</b>	
2.1.2	Location of the Block District / State	District-Chatra, State-Jharkhand		
2.1.3	Area of the Block "Ha"	3000		
2.1.4	Area of the geological block projectized "in Ha" (Area of the geological block considered for liquidation of coal reserve)	1146		
2.1.5	Balance area yet to be projectized "Ha"	1854		
2.1.6	Likely Reserve in the area yet to be projectized "Mte"	NA		
2.1.7	Cardinal Point Co-ordinates of the non-coal/lignite bearing area/ <b>existing mining lease</b> outside the allotted Geological Coal/Lignite block  (Duly certified in line with para 1.9 of the Guideline, if fresh inning lease required)		Longitude	Latitude
		Magadh Opencast Project	84°53'40" to 84°59'30"E	23°47'40" to 23°51'30"N
		Magadh	84°57'40" to 84°59'30"E	23°49'15" to 23°51'30"N
		Tandwa	84°55'35" to 84°57'40"E	23°47'40" to 23°50'38"N
		Dumarg arh	84°54'50" to 84°56'09"E	23°48'30" to 23°50'56"N
		Karimati	84°53'40" to 84°54'54"E	23°48'40" to 23°49'40"N
2.1.8	Certificate of <b>Qualified person/ Accredited Mining Plan preparing agency (MPPA)</b> if the project area is confined within the vested/allotted block boundary/ <b>existing mining lease</b> and  Where the project area extends beyond the block boundary, a certificate of <b>Qualified person/ Accredited Mining Plan preparing agency (MPPA)</b> should be supported with a certificate of State Government mines and Geology department must be attached, which should specify (a) intent of the state government for grant of lease beyond the vested geological boundary; (b) non-	NA		

Surendra Nath Singh  
Divisional Forest Officer,  
Chatra South Forest Division

*12/10/23*  
NIRPENDRA NATH  
Project Officer  
Magadh Project

	<i>Parameters</i>	<i>Details</i>
	<p>existence of Coal/ Lignite in the area beyond the vested/allotted geological block boundary/<b>existing mining lease</b> to rule out the issue of encroachment and use of coal bearing area (beyond the vested/allotted block boundary/<b>existing mining lease</b>) in the mining plan.</p> <p>The Project area, Lease area and geological block area in "Ha" shall also be envisaged.</p>	
2.1.9	KML file of the Proposed lease area, Project Area and geological block.	NA
2.1.10	Whether the proposed project area is confined within the allotted block boundary/ <b>existing mining lease</b> , if not, the reason for deviation from allotted block boundary, may be given.	Yes
2.1.11	If the project area extends outside the allotted block boundary/ <b>existing mining lease</b> , confirmation about non-occurrence of coal/lignite in the area under reference needs to be furnished	NA
2.1.12	Type of the Project (Operating / under Implementation) and year of Starting.	Operating
<b>2.2</b>	<b>EXPLORATION, GEOLOGY AND ASSESSMENT OF RESERVE</b>	
2.2.1	Regional geological set up of the area, local geology, structure, stratigraphic sequence, characteristics of the litho-logical units (coal seams /partings/overburden).	The North Karanpura Coalfield forms a part of the east-west trending valley between Hazaribagh plateau in the north and Ranchi plateau in the south. The AswaPahar in the south separates the North Karanpura Coalfield and the South Karanpura Coalfield by an east-west elongated metamorphic patch. However, they are almost interconnected near Bachra and Hindgir village by a narrow tongue of Talchir outcrops. On the eastern side, the North Karanpura Coalfield is separated from the West Bokaro Coalfield by a narrow stretch of metamorphic rocks having several outliers of Talchir Formation. In the west, it is separated from the Auranga Coalfield by a stretch of about 20km wide metamorphic belt.

Surendra Prasad Sur  
Divisional Forest Officer,  
Chatra South Forest Division

22/10/23  
NIRPENDRA NATH  
Project Officer  
Magadh Project

	<i>Parameters</i>	<i>Details</i>
		<p><b>REGIONAL STRATIGRAPHY:</b></p> <p>North Karanpura Coalfield is a large ovate basin covering an area of about 1230 sq km containing complete sequence of Gondwana sediments ranging up to a maximum thickness of 1750 m. All the formations viz., Talchir, Karharbari, Barakar, Barren Measure, Raniganj, Panchet of the Lower Gondwana Group as well as the Mahadeva formation of the Upper Gondwana Group are represented.</p> <p>If the full sequences of the different formations are added up, one would get an impression that the basin contains a maximum thickness of about 2 Km of Strata. Although it is unlikely that all the formations should attain their full thickness in any particular section, the fact remains that the basin contains a very thick pile of sediments. The different formations can be demarcated on Gross Lithological and Paleo-Botanical considerations though most of the units have a Gradual and Gradational passage in to the overlying ones.</p> <p><b>TECTONIC SET UP AND BASIN CONFIGURATION:</b></p> <p>The North Karanpura Coalfield is a Basinal structure particularly in the area North and West of the Pre-Cambrian outcrop. The older formations are exposed along the periphery of the field, while the youngest Mahadeva beds occur in the axial regions. The overall dip amount of the entire coalfield varies from 10° to 12°. Dips in the Rikba Area are fairly high. Very steep dips are recorded locally close to the boundary faults. Precambrian Basement Metamorphic Highs of varying dimensions are seen within the basin near Lurunga-Indratoli, East of Badam, Near Pahra, South of Misrol and Near Serendag-Honhe around Sidpa, East of Hesalong. A large number of Normal Gravity faults affect the Coalfield. At places, sub-horizontal slickensides suggesting Strike-Slip movement are noted. Almost the entire Northern boundary, part of the Southern Boundary is marked by the presence of high magnitude faults. The throw of the faults is maximum near Rikba and in the Rohne area, where the Panchet Formations are seen in juxtaposition with the Precambrian Rocks. The northern boundary with the Precambrian Basement is at places cut by Cross-faults causing off-sets of the Basin margin. All these faults have a General NW-SE to WNW-</p>

22/10/22  
**NIRPENDRA NATH**  
 Project Officer  
 Magadh Project

Surendra Prasad Sahu  
 Divisional Forest Officer,  
 Chattri South Forest Division

	<i>Parameters</i>	<i>Details</i>
		<p>ESE trend with down throw towards North-East. Some of the outliers of Gondwana Sediments are associated with these faults.</p> <p>The Intra Basinal faults, have two preferred alignments. Majority of these faults show the NW-SE trend, while the others are East-West trending. These Intra basinal faults have affected all the formations. Many of the basin marginal cross faults and intra basinal faults are disposed in a step like manner.</p> <p>Statistical Analysis of the Fault trends indicates that about 35% of the faults have NW-SE trend and about 47% of the faults have East-West trend being sympathetic to the trend of the boundary faults. From the study of their relationship, it is evident that the NW-SE trending set is younger</p>
2.2.2	<p><b>Local geology, Structure, Stratigraphic sequence, Characteristics of the litho-logical units (coal seams /partings/overburden):</b></p> <p><b>Geology:</b></p>	<p>The northern part of North Karanpura comprising Magadh and Amrapali blocks with an area of 30 sq. Km each were identified as potential blocks for detailed exploration. Accordingly, detailed drilling in Magadh geological block was taken up by CMPDI in March '83. The drilling data generated for the block by the end of the Dec.'1986 indicated the block is divisible into smaller sub -blocks viz. Magadh (9.04 Sq. Km ) ,Tandwa (7.53 Sq. Km ) ,Saradhu (8.05 Sq. Km ) ,Dumargarh (5.0 Sq. Km ) based on The northern part of North Karanpura comprising Magadh and Amrapali Blocks major faults and nalas. The drilling in the adjoining Dumargarh&amp;Karimati blocks falling further west of Tandwa blocks were taken during 1984 -86 and in 1995.</p> <p>The Magadh block is located between longitude 84° 57'40" and 84° 59' 30" E and latitude 23° 49' 15" and 23°51' 30" N and Tandwa Block is situated between longitude 84° 55' 35" and 84° 57' 40" E and Latitudes 23° 47'40" and 23° 50' 38"N. The Dumargarhblock located between longitude 84° 54'50" and 84° 56' 09" E and latitude 23° 48' 30" and 23° 50' 56" N .The Karimati block is located between longitude 84° 53'40" and 84° 54' 54" E and latitude 23° 48' 40" and 23° 49' 40" N .</p> <p>The detailed exploration in Magadh and Tandwa block were under taken simultaneously by CMPDI during March '1983 to June 1988. The Geological report for Magadh block was submitted in March'89 and Geological report for Tandwa block was submitted in Aug.'89. The</p>

<i>Parameters</i>	<i>Details</i>																																																																											
	<p>detailed exploration in Dumargarh was taken along with Magadh and Tandwa during 1984-1986 and some additional drilling was done in 1995 and Karimati block in which 2 boreholes were drilled by IBM in 1957 was further explored by CMPDI during Jan 1996 &amp; June 1998. The geological report for Dumargarh block was submitted in Feb'1996. The geological report for Karimati block was submitted in Sept' 1998 As Magadh and Tandwa blocks are contiguous, the project report on Magadh (4.5 MTY) comprising area of Magadh and Tandwa geological blocks was prepared in Feb. '89 .The project envisages to mine the reserves to a depth limit of around 75-80 m in both Magadh and Tandwa blocks keeping seam I Bottom as the base seam .</p> <p>Keeping the increasing demand of power grade coal and simple structure in both Magadh , Tandwa ,Dumargarh&amp;Karimati blocks it has now been envisaged to exploit the available reserves in the above area in the proposed Magadh OCP with a rated capacity of 12 MTY up to a depth of around 100-110 m keeping seam-I Bottom as the base seam.</p> <p>The Magadh block is contiguous to Tandwa block in the west and Saradu block in the north west . The boundary between Magadh and Tandwa block has been separated by KhubuadNala . The quarry envisages in the Magadh block is designated as Quarry-1 East and quarry falling in the Tandwa block has been designated as Quarry-1 West .The quarry envisages in the Dumargarh block is designated as Quarry-2 East and quarry falling in the Karimati block has been designated as Quarry-2 West .The quarry boundaries are however ,do not correspond to geological block boundaries which have been delineated based on mining considerations.</p> <p style="text-align: center;"><b>Product Mix Quality</b></p> <p>The product Mix quality of the Magadh OCP will be grade F ( ,Avg. UHV 2861 K Cal/Kg &amp; AvgGrossCv 4068 KCal/Kg ) with corresponding average ash of 38.22.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">seam</th> <th style="text-align: center;">Avg M%</th> <th style="text-align: center;">Avg ash%</th> <th style="text-align: center;">Avg VM</th> <th style="text-align: center;">Avg Cv</th> <th style="text-align: center;">Avg. UHV</th> <th style="text-align: center;">Avg. Grade</th> </tr> </thead> <tbody> <tr> <td>Quarry-1E</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>I Bottom</td> <td style="text-align: center;">4.9</td> <td style="text-align: center;">38.68</td> <td style="text-align: center;">22.0</td> <td style="text-align: center;">4,202</td> <td style="text-align: center;">2,885</td> <td style="text-align: center;">F</td> </tr> <tr> <td>IMid</td> <td style="text-align: center;">4.7</td> <td style="text-align: center;">43.48</td> <td style="text-align: center;">22.6</td> <td style="text-align: center;">3,782</td> <td style="text-align: center;">2,260</td> <td style="text-align: center;">G</td> </tr> <tr> <td>I Top</td> <td style="text-align: center;">5.75</td> <td style="text-align: center;">36.62</td> <td style="text-align: center;">23.1</td> <td style="text-align: center;">4,311</td> <td style="text-align: center;">3,108</td> <td style="text-align: center;">F</td> </tr> <tr> <td>II Bot</td> <td style="text-align: center;">5.7</td> <td style="text-align: center;">37.7</td> <td style="text-align: center;">24.2</td> <td style="text-align: center;">4,166</td> <td style="text-align: center;">2,901</td> <td style="text-align: center;">F</td> </tr> <tr> <td>II Top</td> <td style="text-align: center;">6.0</td> <td style="text-align: center;">35.99</td> <td style="text-align: center;">23.78</td> <td style="text-align: center;">4,280</td> <td style="text-align: center;">3,023</td> <td style="text-align: center;">F</td> </tr> <tr> <td>III</td> <td style="text-align: center;">6.4</td> <td style="text-align: center;">35.9</td> <td style="text-align: center;">23.9</td> <td style="text-align: center;">4,243</td> <td style="text-align: center;">3,058</td> <td style="text-align: center;">F</td> </tr> <tr> <td>IV</td> <td style="text-align: center;">7.1</td> <td style="text-align: center;">32.2</td> <td style="text-align: center;">23.0</td> <td style="text-align: center;">4,493</td> <td style="text-align: center;">3,480</td> <td style="text-align: center;">F</td> </tr> <tr> <td>Product-Mix</td> <td style="text-align: center;">5.4</td> <td style="text-align: center;">38.6</td> <td style="text-align: center;">22.7</td> <td style="text-align: center;">4,108</td> <td style="text-align: center;">2,836</td> <td style="text-align: center;">F</td> </tr> </tbody> </table>						seam	Avg M%	Avg ash%	Avg VM	Avg Cv	Avg. UHV	Avg. Grade	Quarry-1E							I Bottom	4.9	38.68	22.0	4,202	2,885	F	IMid	4.7	43.48	22.6	3,782	2,260	G	I Top	5.75	36.62	23.1	4,311	3,108	F	II Bot	5.7	37.7	24.2	4,166	2,901	F	II Top	6.0	35.99	23.78	4,280	3,023	F	III	6.4	35.9	23.9	4,243	3,058	F	IV	7.1	32.2	23.0	4,493	3,480	F	Product-Mix	5.4	38.6	22.7	4,108	2,836	F
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Parameters		Details					
I Bottom	4.8	38.66	23.6	4,216	2,900	F	
IMid	4.9	41.62	21.6	3,908	2,469	F	
I Top	6.2	35.98	24.2	4,249	3,078	F	
II Top	5.4	43.01	22.7	3,713	2,211	G	
II B	7.8	36.0	25.0	4,050	2,855	F	
II Com	5.7	42.97	22.7	3,678	2,178	G	
IIIB +II Com	6.0	39.5	23.8	3,959	2,615	F	
III+IIT	4.8	44.2		3,695	2,740	F	

Quarry-2E						
I Bottom	6.7	38.4	22.9	3,953	2,703	F
IMid	6.8	39.3	23.7	3,871	2,545	F
I Top	6.8	36.5	23.7	4,125	2,919	F
II Top	6.8	33.8	22.4	4,010	2,745	F
II B	6.8	28.1		4,010	2,745	F
II Com	6.6	35.7	26.7	4,235	3,060	F
III Bot	7.0	28.1		4,890	4,055	E
III Top	7.4	33.6	23.2	4,306	3,232	F
IV	8.2	29.6	24.5	4,546	3,653	E
IVB	7.3	40.8		3,655	2,260	G
IVC	7.9	34.8		4,130	3,005	F
IVD	7.5	34.8		4,190	3,060	F
Product-Mix	6.7	37.36	25.9	4,014	2,809	F

Quarry-2W						
I Bottom	6.1	37.76	23.2	4,128	2,846	F
IMid	5.9	42.61	22.0	3,660	2,200	G
I Top	6.2	39.31	23.3	3,931	2,612	F
IT+IM+IB	6.0	41.07	22.5	3,693	3,226	F
IM+IB	6.0	41.07	22.5	3,693	3,226	F
III +II	6.3	37.63	23.5	4,073	2,825	F
IV	7.1	33.65	23.7	4,381	3,260	F
IVA	5.4	45.2	23.4	3,515	1,915	G
IVB	6.9	35.8		4,180	3,005	F
IVD	6.6	34.0		4,395	3,300	F
Product-Mix	6.2	38.45	22.2	4,021	2,941	F
Product-Mix (Magadh OCP)	6.0	38.22	23.5	4,068	2,861	F

**Details of Dirt -Band :**

Seams in Magadh OCP are highly interbanded in nature. These bands at places form as high as 38 to 40 % (I Middle) of total seam thickness. It is observed that by and large seams considered in the proposed opencast do not contain dirt bands >1m except for some isolated cases. The details of dirt bands in Quarry -1 & Quarry -2 have been summarised in the Table below:

Surendra Prasad Singh  
Divisional Forest Officer,  
Chatra South Forest Division

NIRPENDRA NATH  
Project Officer  
Magadh Project

Parameters				Details			
Details of Dirt Bands							
Seam	Dirt Bands < 1 m			Non-combustible Dirt Bands			Avg Band %
	No.	Thickness	%	No.	Thickness	%	
1	2	3	4	5	6	7	
<b>Quarry -1East</b>							
IV	1-3	0.12-0.38	3.12-9.36	Nil	Nil	Nil	4.97
III	1-6	0.20-0.72	3.68-4.88	Nil-1	Nil-0.33	Nil-5.09	10.42
II Top	1-4	0.15-0.94	7.55-21.17	1-2	0.02--0.07	11.0-14.9	12.6
II BOT	1	0.05-0.18	3.57-12.95	Nil	Nil	Nil	5.2
I TOP	1-5	0.12-1.19	4.16-27.42	Nil-1	Nil-0.19	Nil-2.09	6.23
I MID	2-8	0.31-1.53	9.51-38.2	1	0.1-0.3	1.2-5.28	21.83
I BOT	1-15	0.15-2.85	3.3-34.01	Nil-1	Nil-0.58	Nil-6.79	14.86
<b>Quarry- 1 West</b>							
IV	1-4	0.1-0.68	3.67-28.81	Nil-1	Nil-	Nil	5.15
III TOP	Nil-2	Nil-0.28	Nil-11.57	Nil	Nil	Nil	11.57
III BOT	Nil--1	Nil-0.63	Nil-28.08	Nil	Nil	Nil	23.08
III Com	1-5	0.5-1.22	11.7-20.3	1	0.10-0.77	2.05-12.04	17.17
II Top	2-8	0.31-1.49	10.33-25.04	Nil-1	Nil-0.36	Nil -5.49	21.34
II Bot	1-3	0.07-0.24	6.86-10.34	Nil	Nil	Nil	6.44
III +II TOP	7-15	2.33-2.74	23.07-24.57	1-4	0.52-1.07	5.15-9.60	
III +II	10	3.69	27.15	3	0.66	4.86	38.63
IIIB+ II	3-6	1.25--2.54	15.45-24.85	1-3	0.47-1.12	5.81-10.96	29.38
II	2-8	1.26-1.83	16.49-23.08	1	0.65--0.79	7.44-9.96	25.13
I TOP	1-5	0.05--0.72	1.29-22.78	Nil	Nil	Nil	11.61
I MID	2-8	0.54-2.15	10.82-36.36	1-2	0.06-0.20	1.21-6.45	26.17
I BOT	2-12	0.19-2.15	1-24	Nil	Nil	Nil	13.53
1	2	3	4	5	6	7	
<b>Quarry- 2 East</b>							
IVD	2	0.28	9.3	2	0.2	7.3	16.0
IVC	NIL	NIL	NIL	NIL	NIL	NIL	NIL
IVB	NIL	NIL	NIL	NIL	NIL	NIL	NIL
IV	1-2	0.06-0.49	6.44-10.5	1	0.11	2.97	5.19
IIITOP	1-5	0.08-0.036	8.0-29.8	NIL	NIL	NIL	12.7
IIIBOT	NIL	NIL	NIL	NIL	NIL	NIL	NIL
IIBOT	NIL	NIL	NIL	NIL	NIL	NIL	NIL
II	4	0.97	15.3	1	0.35	5.52	20.8
III+II	1-11	0.16-2.05	8.65-11.41	1-3	0.20-1.21	2.27-10.47	16.8
I TOP	1-5	0.25-1.07	6.44-21.3	NIL	NIL	NIL	10.1
I MID	3-8	1.23-1.54	16.6-26.6	NIL	NIL	NIL	18.4
IM+IB	3-18	0.74-3.81	6.1-24.5	NIL-3	NIL-0.24	NIL-2.01	19.1
I BOT	1-11	0.11-2.04	1.18-21.1	1	0.1	1.12	13.4
IT+IM+IB	3-23	0.74-4.18	6.19-24.5	1-3	0.18-0.36	1-1.91	20.7
<b>Quarry- 2 West</b>							
IVD	3	0.46	20.54	NIL	NIL	NIL	20.54
IVC	1	0.2	10.1	NIL	NIL	NIL	10.1
IVB	NIL	NIL	NIL	NIL	NIL	NIL	NIL
I VA	1	0.2	20.9	NIL	NIL	NIL	20.87
IV	1-5	0.2-1.1	4.31-17.6	1	0.08	1.3	12.97
III +II	2-11	0.7-1.9	5.77-19.8	1-3	0.12-1.21	1.1-10.0	17.5
I TOP	1-5	0.2-1.4	6.44-33.3	NIL	NIL	NIL	16.46
I MID	3-9	0.7-2.8	11.5-38.0	1	0.03-0.1	0.4-1.7	27.83

Surendra Pr. S. S. n. n.  
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 Chitra South Forest Division

29/01/23  
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Parameters				Details																																																																																																	
I BOT	3-10	0.6-2.3	6.52-21.0	1	0.16	2.5	16.51																																																																																														
<p>NB - There are no dirt bands &gt;1m in the proposed Magadh OCP.</p> <p><b>Sequence of coal seam and parting</b>            The sequence of coal seams and partings as established in Magadh OCP (Quarry 1 &amp; Quarry 2) &amp; Magadh, Tandwa, Dumargarh, Karimati Geological blocks are summarised in Table No -10  <u>Table No -10</u></p> <p style="text-align: center;">Sequence of Coal Seams and Parting in Quarry-1</p> <table border="1"> <thead> <tr> <th rowspan="2">Particulars</th> <th colspan="3">Thickness Range(in Metre)</th> <th colspan="3">Thickness Range ( Metre)</th> </tr> <tr> <th>Parting</th> <th>In the Block</th> <th>Quarry - East</th> <th>Seams Parting</th> <th>In the Block</th> <th>General range</th> <th>Quarry 1 West</th> </tr> </thead> <tbody> <tr> <td>V Top</td> <td></td> <td>0.47- 6.22</td> <td>1.5-6.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Parting</td> <td>0.- 11.35</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>V Bot</td> <td></td> <td>0.40- 2.0</td> <td>0.5-1.75</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>V</td> <td></td> <td>5.50- 7.36</td> <td>6-7</td> <td></td> <td>6.14- 6.90</td> <td>6-7</td> <td></td> </tr> <tr> <td></td> <td>Parting</td> <td>94.10- 111.68</td> <td></td> <td>Parting</td> <td>87.67- 104.26</td> <td></td> <td></td> </tr> <tr> <td>IV</td> <td></td> <td>2.16- 5.52</td> <td>3-5</td> <td>3.0- 4.70</td> <td>IV</td> <td>0.58- 3.95</td> <td>1.75-2.75 1.37-2.36</td> </tr> <tr> <td></td> <td>Parting</td> <td>3.60- 27.22</td> <td></td> <td>4.30- 27.22</td> <td>Parting*</td> <td>5.18- 28.20</td> <td>5.18-25.75</td> </tr> <tr> <td>III</td> <td></td> <td>2.20- 9.92</td> <td>4-7</td> <td>3.59- 6.25</td> <td>III</td> <td>3.80- 6.91</td> <td>5-6 3.80-5.61</td> </tr> <tr> <td>III+II T</td> <td></td> <td>10.46- 14.65</td> <td>11-13</td> <td></td> <td>IIIT</td> <td>0.93- 2.42</td> <td>1.25-2.0 1.25-2.42</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Parting**</td> <td>0-7.34</td> <td>0.-7.34</td> </tr> </tbody> </table>								Particulars	Thickness Range(in Metre)			Thickness Range ( Metre)			Parting	In the Block	Quarry - East	Seams Parting	In the Block	General range	Quarry 1 West	V Top		0.47- 6.22	1.5-6.0						Parting	0.- 11.35						V Bot		0.40- 2.0	0.5-1.75					V		5.50- 7.36	6-7		6.14- 6.90	6-7			Parting	94.10- 111.68		Parting	87.67- 104.26			IV		2.16- 5.52	3-5	3.0- 4.70	IV	0.58- 3.95	1.75-2.75 1.37-2.36		Parting	3.60- 27.22		4.30- 27.22	Parting*	5.18- 28.20	5.18-25.75	III		2.20- 9.92	4-7	3.59- 6.25	III	3.80- 6.91	5-6 3.80-5.61	III+II T		10.46- 14.65	11-13		IIIT	0.93- 2.42	1.25-2.0 1.25-2.42						Parting**	0-7.34	0.-7.34
Particulars	Thickness Range(in Metre)			Thickness Range ( Metre)																																																																																																	
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Surendra Chandra Sun in  
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 Chattr South Forest Division

29/01/23  
 NIRPENDRA NATH  
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Parameters					Details			
					III BOT	1.40-2.73	1.5-2.5	1.40-2.73
	Parting	0-39.98		3.05-36.21	Parting***	0-10.82		0-10.82
II TOP		0.37-6.70	1-3	0.40-5.80	IITOP	3.97-7.18	5.5-6.5	3.97-6.56
	Parting	1.22-19.19		1.22-19.19	Parting	0-4.43		0-3.32
II BOT		0.22-2.87	0.6-1.5	0.22-1.14	II BOT	0.64-2.32	1-2	0.64-2.32
					III+IIT	10.10-11.15	10.5	10.1
					III+II	13.59-15.52	14-15	13.59
					III B+II	8.05-12.49	9-12	8.09--10.22
					II	7.64-8.74	7.5-8.5	7.64-8.74
	Parting	0.78-7.35		0.78-5.05	Parting #	1.68-5.66		1.74--5.66
I Top		1.98-8.32		1.98-8.32	I Top	1.70-4.76	3-4	1.70-3.83
	Parting			1.15-6.79	Parting	0.84-5.78		0.84-5.78
I Middle		1.54-10.29	3-6	1.54-5.80	I Middle	1.02-7.99	4-6	1.02-5.97
	Parting	0.50-17.41		0.50-8.96	Parting	0.62-4.27		0.62-4.27
I Bottom		3.85-11.79	5-9	3.85-11.79	I Bottom	5.98-11.60	7-9	6.93-11.60

Sequence of Coal Seams and Parting in Quarry-2

Thickness Range ( Metre)	Thickness Range ( Metre)	Avg Range

Parameters				Details			
Seams	In the Block Dumargarh	Quarry-2 East	Avg Range	Seams	In the Block Krimati	Quarry-2 west	Avg Range
V Top	10.81-17.83		10-15	V Top	7.62-15.70		10-11
Parting	3.12-6.44			Parting	3.20 -16.40		
V Bot	1.05--2.96		1-2	V Bot	0.46-3.97		0.5-1.2
Parting	42.68-87.55			Parting	56.26-70.43		
IVD	0.60-5.20	2.53-3.0	1-3	IVD	0.79-3.91	2.24	2-3
Parting	1.16-6.75	2.41-3.16		Parting	1.97-6.0	3.4	
IVC	0.40-2.81	0.4-1.21	1-1.5	IVC	0.96-2.05	1.58	1-1.5
Parting	6.73-29.95	19.78-21.09		Parting	10.72-14.06	11.48	
IVB	0.27-2.54	0.27-1.23	0.5-1.5	IVB	0.79-2.27	0.8-2.27	0.5-1.5
Parting	3.60-32.71	8.6-17.07		Parting	2.61-15.58	20.47-26.95	
IVA	0-1.33	0.21-0.82	0.3-0.6	IVA	0.24-1.19	0.26-1.15	
Parting	1.06-12.86	1.06-10.6		Parting	4.85-9.38	4.85-9.38	
IV	1.71-4.69	2.52-4.69	2-4	IV	4.64-7.14	4.64-7.14	5-6
Parting*	3.77-25.42	3.77-23.5		Parting		2.61-10.84	
III T	0.19-2.91	0.31-2.42	1				
Parting	2.34-16.19	2.89-9.94					
III BOT	1.32-3.70	1.32-1.4	2-3				
***Parting	1-6.29	2.61					
II T	3.98-8.96	6.03	6-7				
Parting	1-3.55	2.61					

Parameters				Details			
II BOT	0.99-2.94	1.21	1-2				
III +II	6.34-8.35	8.81-13.09	8	III +II	7.26-14.09	7.26-13.72	10-12
Parting #	1.86-8.55	2.24-5.66		Parting #	0.91-8.97	2.0-4.23	
I Top	2.88-7.16	2.88-5.02	3-5		2.56-6.13	2.56-4.65	3-5
Parting	1.0 -3.81	1.92-3.3			0.80-4.12	0.8-4.12	
I Middle	5.07-8.17	5.07-7.7	6-7	19.78-21.09	4.21-7.26	4.65-7.26	5-6
I T+I M	10.36-11.98	10.89-11.98	11-12				
Parting	1-2.95	1.11-2.39		Parting	0.53-4.38	1.21-4.38	
IMid+	8.30-19.33	11.95-18.84	15-18				
IBot							
I Bottom	4.45-10.86	5.14-10.86	7-9	I Bottom	4.18-14.10	4.18-11.78	8-10
IT+IM+IB	14.29	14.29					

\*Also includes parting between IV and III (comb)/III+II(com) /III + II Top.

\*\*Also includes parting between III Top and III Bottom + II Com./ III and II (com) .

\*\*\*Also includes parting between III (Com ) and II (com ) and III Bottom and II Top / II (com) .

.@ Also includes parting between II Bottom and III + II Top (com) .

#### Strike and Dip:

The strike of the formations in the Magadh and Tandwa Blocks are roughly NE-SW which swings to ENE -WSW in the eastern part in the Magadhbloc. The strike in the Dumargarh WNW-ESE& in Karimati Blocks is E-W with local variations. The dip of the formation generally varies from 4<sup>0</sup> to 9<sup>0</sup> towards south in Magadh block and 3<sup>0</sup>-7<sup>0</sup> in Tandwa Block. The dip in Dumargarh Block varies from 3<sup>0</sup>-12<sup>0</sup> (avg 8<sup>0</sup>) in Karimti Block varies from 8<sup>0</sup>-15<sup>0</sup> (avg 11<sup>0</sup>) The local variations in the dip and strike observed in the block is mainly due to rolls and increase and decrease in the intervening partings between the seams.

#### Faults :

Both Magadh and Tandwablocks are characterised by a simple geological structure.

Surendra Prasad Sunari  
Divisional Forest Officer,  
Chatra South Forest Division

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Project Officer  
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	<i>Parameters</i>	<i>Details</i>
		<p>Magadh block has been intersected by two faults (F1 &amp; F2) and the Tandwa block is free from faults. The fault F1 forms the eastern boundary of the Magadh block is a major fault trending WNW -ESE having maximum throw of about 120 m. The fault is responsible for bringing Barakar in juxtaposition with Barren Measures in the down dip side of Magadh block, the other fault F2 is a small oblique fault trending NNE-SSW having a throw of 7 m towards west. The fault is located in the north western part of the block.</p> <p>The Dumargarh block is also less disturbed from geological point of view. Altogether 3 faults have been interpreted. F1 located in the in the southern boundary trends E-W has a throw of 50 -60 m towards north. The fault F2 located in the in the southern eastern corner having NW-SE trends has a throw up to 10 m towards north. The fault F3 located in the in the central part s has a throw of 7-25m. The fault F1 &amp; F2 continues in Karimati, However, the fault F2 of Dumargarh has been nomenclature as F3. The other additional fault F2 of Karimati is located in the central part having a throw of 25 m towards north.</p>
2.2.3	Geological Block Area "Ha"	3000
2.2.4	Status of Exploration of the block	Some additional boreholes shall be required for proving the incrops in Karimati. Provision of additional 3000 m has been made in the project report for proving of incrops and the additional 30 % for indicated reserve falling in dip side of the quarry in Karimati block which could not be taken up due to non-approachability in the forest area.
2.2.5	Area covered by 'detailed' exploration within the block (sq. km)	24.74
2.2.6	Whether entire lease area has been covered by 'detailed' exploration.	No
2.2.7	No. of boreholes drilled within the block	Total of 228 boreholes have been drilled in the blocks covered by geological blocks of Magadh OC - 109 in Magadh, 65 in Tandwa, 32 in Dumargarh and 22 in Karimati blocks.
2.2.8	Whether any further exploration/study is required or suggested and time frame in which it is to be completed	NA
2.2.10	Overall borehole density within the block (no./ sq. km) approx	9
2.2.11	No of Seams available as per GR (Geological Report)	Top to Bottom IV III (comb) III (B) II + III (B)

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*Signature*  
Divisional Forest Officer,  
Chatra South Forest Division

	<b>Parameters</b>	<b>Details</b>																																																																																																										
		III + II (T) II (T) + II (B) II (T) II (B) I (T) I (M) I (B+M+T) I (B)																																																																																																										
2.2.12	Seams not considered for Mining with Reasons	Seam V because Seam V having thickness of 4 to 5 m lies with a parting of around 100 m has not been considered in Magadh OCP.																																																																																																										
2.2.13	Dip of the Seam	7 degree to 12 degree																																																																																																										
2.2.14	Seam wise thickness																																																																																																											
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Sl. No.</th> <th rowspan="2">Particulars</th> <th rowspan="2">Unit</th> <th colspan="2">Quarry-I</th> <th colspan="2">Quarry-II</th> </tr> <tr> <th>West</th> <th>East</th> <th>East</th> <th>West</th> </tr> </thead> <tbody> <tr> <td colspan="7" style="text-align: center;"><b>Thickness of Coal Seams</b></td> </tr> <tr> <td>1</td> <td>I (B)</td> <td>m</td> <td>9.0</td> <td>7.0</td> <td>7.5</td> <td>7.5</td> </tr> <tr> <td>2</td> <td>I (B + M + T)</td> <td>m</td> <td></td> <td></td> <td>14</td> <td></td> </tr> <tr> <td>3</td> <td>I (M)</td> <td>m</td> <td>3.5</td> <td>3.8</td> <td>6.0</td> <td>5.5</td> </tr> <tr> <td>4</td> <td>I (T)</td> <td>m</td> <td>3.0</td> <td>5.0</td> <td>4.0</td> <td>3.5</td> </tr> <tr> <td>5</td> <td>II (B)</td> <td>m</td> <td>1.5</td> <td>1.0</td> <td>1.2</td> <td>-</td> </tr> <tr> <td>6</td> <td>II (T)</td> <td>m</td> <td>5.0</td> <td>3</td> <td>6.0</td> <td>-</td> </tr> <tr> <td>7</td> <td>II (T) + II (B)</td> <td>m</td> <td>8.0</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>8</td> <td>III + II (T)</td> <td>m</td> <td>10.0</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>9</td> <td>II + III (B)</td> <td>m</td> <td>9.0</td> <td>-</td> <td>9.0</td> <td>10</td> </tr> <tr> <td>10</td> <td>III (B)</td> <td>m</td> <td>-</td> <td>-</td> <td>1.5</td> <td>-</td> </tr> <tr> <td>11</td> <td>III (Comb.)</td> <td>m</td> <td>5.0</td> <td>5.0-</td> <td>3.0</td> <td></td> </tr> <tr> <td>12</td> <td>IV</td> <td>m</td> <td>2.0</td> <td>4.0</td> <td>3.5</td> <td>5.5</td> </tr> </tbody> </table>						Sl. No.	Particulars	Unit	Quarry-I		Quarry-II		West	East	East	West	<b>Thickness of Coal Seams</b>							1	I (B)	m	9.0	7.0	7.5	7.5	2	I (B + M + T)	m			14		3	I (M)	m	3.5	3.8	6.0	5.5	4	I (T)	m	3.0	5.0	4.0	3.5	5	II (B)	m	1.5	1.0	1.2	-	6	II (T)	m	5.0	3	6.0	-	7	II (T) + II (B)	m	8.0	-	-	-	8	III + II (T)	m	10.0	-	-	-	9	II + III (B)	m	9.0	-	9.0	10	10	III (B)	m	-	-	1.5	-	11	III (Comb.)	m	5.0	5.0-	3.0		12	IV	m	2.0	4.0	3.5	5.5
Sl. No.	Particulars	Unit	Quarry-I		Quarry-II																																																																																																							
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6	II (T)	m	5.0	3	6.0	-																																																																																																						
7	II (T) + II (B)	m	8.0	-	-	-																																																																																																						
8	III + II (T)	m	10.0	-	-	-																																																																																																						
9	II + III (B)	m	9.0	-	9.0	10																																																																																																						
10	III (B)	m	-	-	1.5	-																																																																																																						
11	III (Comb.)	m	5.0	5.0-	3.0																																																																																																							
12	IV	m	2.0	4.0	3.5	5.5																																																																																																						
2.2.15	Methodology of reserves estimation (also mention if any software package has been used).	<p>Total Excavation method – Total volume of a mine within defined boundary is calculated by total iso-excitation lines as mentioned in total excavation plan of project report. Volume of coal is calculated from isochore plans of coal seams considered for mining. The difference between volume of total excavation and volume of coal gives volume of OB.</p> <p>Sector wise and seam wise/parting wise volumes within mine boundary of both coal &amp; OB are calculated from isochore plan for coal seam &amp; iso-parting plans of</p>																																																																																																										



	<i>Parameters</i>	<i>Details</i>
		<p>overburden/inter-burden. The results of these calculations are compared with the result of total excavation method.</p> <p>Further, these results are also compared with results of sector-wise volume calculated by cross-sectional method. The reserves have been cross checked, later using MINEX software.</p>
2.2.16	Average GCV "KCal/kg"	4064
2.2.17	Gross Geological Reserve of the block "Mte"	1069.53
2.2.18	Net Geological Reserve of the block "Mte"	962.58
2.2.19	Minable Reserve of the block "Mte"	351
2.2.20	Blocked Reserve "Mte"	106.95
2.2.21	Corresponding extractable reserve of the block "Mte"	351
2.2.22	Percentage of Extraction	36%
2.2.23	Reserve already depleted (Base date of Mining Plan)	13.75
2.2.24	Balance Reserve (as on Base Date)	337.25(April 2020)

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**NIRPENDRA NATH**  
 Project Officer  
 Magadh Project

Surendra Prasad Suran  
 Divisional Forest Officer,  
 Chatra South Forest Division

### Chapter 3: Mining

	<i>Parameters</i>	<i>Details</i>
<b>3.1</b>	<b>MINING METHOD</b>	
3.1.1	Existing method of mining if the mine is under operation	
3.1.2	Proposed method of mining with justification on suitability of method of mining	<p><b><u>Rated Capacity</u></b></p> <p>The Expansion Project Report for Magadh OCP has been prepared for a rated capacity of 20.0 MTY(12MTY to 20MTY-incremental 8 MTY). of ROM coal. The rated capacity of 20.0 MTY of coal has been found technically feasible from this mine because of its favourable geo-mining parameters like long strike length (about 9.0 Km.) of the quarry, flat gradient of the seams (about 1 in 10),deployment of higher size equipment, free from major geological disturbances, sufficient mineable reserves etc.</p> <p><b><u>Design Criteria</u></b></p> <p>The following design criteria have been adopted for the mining operations:</p> <p style="padding-left: 40px;">No. of annual working days - 330</p> <p style="padding-left: 40px;">No. of daily shifts - 3</p> <p style="padding-left: 40px;">Duration of each shift - 8 hours</p> <p>The opencast mine would be worked on 3 shifts/ day and seven days/week round the year.</p> <p><b><u>Boundaries of the Mining Block</u></b></p> <p>In this, four geological blocks namely Magadh, Tandwa, Dumargarh, Karimati have been considered for exploitation in the name of MagadhOCP.The total strike length of all the four blocks together will be about 9.0 Km. The entire property along the strike direction has been envisaged to be divided into two quarries i.e. Quarry-1 and Quarry-2.</p> <p>Quarry -1, will include Magadh block and Tandwa block and this quarry will be worked first followed by Quarry-2, which includes Dumargarh and Karimati blocks.</p>

*Sure ultra in soil Sun an*  
 Divisional Forest Office,  
 Chatra South Forest Division

29/10/23  
**NIRPENDRA NATH**  
 Project Officer  
 Magadh Project

	<i>Parameters</i>	<i>Details</i>
		<p>Quarry-1 with a total strike length of 5.10 Km will be worked into two sections i.e. west (2.1 Km) and east (3.0 Km) section. Both the sections will be worked simultaneously with west section working ahead of east section working. Quarry-2, with a total strike length of 3.90 Km will also be worked in two sections i.e. east (1.9 Km) and west (2.0 Km) section. Both the sections will be worked simultaneously with east section working ahead of west section working.</p> <p>The <b>northern floor boundary</b> of the proposed quarry has been fixed along the incrop of seam-I bottom in both quarry-1 and quarry-2 except in the western section of quarry-1 where <b>northern surface boundary</b> has been fixed leaving a surface barrier of 100m from the Ara village in order to avoid the rehabilitation of this village. The <b>eastern floor boundary</b> has been fixed along fault F1 (Saradhu fault) having a throw of about 150m. The <b>western floor boundary</b> has been fixed leaving a surface barrier of 100m from Bhityahinalla. The <b>Southern floor boundary</b> has been fixed along the FRL of 370-385m (on Seam -IB floor), corresponding to a maximum depth of 100-110m. More reserves are available in further dip side of the southern boundary and these reserves may be exploited in Phase-II. No external dumping/surface infrastructure will be formed/constructed in the dip side.</p> <p>In this PR, it has been considered that the Ara village, located beyond the northern surface boundary of quarry no.1, will not be rehabilitated because CCL is facing a lot of difficulties in village rehabilitation process. This village will be surrounded by quarry and other mine infrastructure. So all out effort should be made to rehabilitate this village and the rehabilitation will result in the release of about 2.6M. tes of incrop coal at a stripping ratio of 2.26m<sup>3</sup>/te. This coal may be exploited at a later date after rehabilitation. However, this reserve has not been considered in the Project Report.</p> <p>The mineable reserves, volume of OBR and S.R(as per PR). are as</p>

Surendra Prasad Suman  
 Divisional Forest Officer,  
 Chatra South Forest Division

*22/10/23*  
 NIRPENDRA NATH  
 Project Officer  
 Magadh Project

<i>Parameters</i>	<i>Details</i>						
	follows :						
	<b>Depth (m)</b>	<b>Strike Length (Km)</b>	<b>Coal (M.tes)</b>	<b>OBR (Mm<sup>3</sup>)</b>	<b>S.R.. (M<sup>3</sup>/te.)</b>		
	100-110	9.0	351.00	529.12	1.51		
	<p>More reserves are available in further dip side of the southern boundary. The dip side mine boundaries can be extended to exploit the dip side reserves as phase-II. No external dumping/surface infrastructure will be formed/constructed in the dip side.</p>						
	<b><u>Geological and Mining Characteristics</u></b>						
	<p>The geological &amp; mining characteristics of the proposed Magadh opencast (20.0 MTY) mine are given. A total no. of 11 coal seams is occurring within the above quarriable area. Out of these, Seam-I bottom, seam-II(T) + II (B) Combined, seam-III + II (T) combined and seam-II + III (B) combined are the thickest and most prominent seams The coal seams are dipping at a gradient of 1 in 8 to 1 in 10 towards the south.</p>						
	<b>MINING AND GEOLOGICAL CHARACTERISTICS</b>						
	<b>Sl. No.</b>	<b>Particulars</b>	<b>Unit</b>	<b>Quarry-I</b>		<b>Quarry-II</b>	
				<b>West</b>	<b>East</b>	<b>East</b>	<b>West</b>
	<b>I. Thickness of Coal Seams</b>						
	1	I (B)	m	9.0	7.0	7.5	7.5
	2	I (B + M +T)	m			14	
	3	I (M)	m	3.5	3.8	6.0	5.5
	4	I (T)	m	3.0	5.0	4.0	3.5
	5	II (B)	m	1.5	1.0	1.2	-
	6	II (T)	m	5.0	3	6.0	-
	7	II (T) + II (B)	m	8.0	-	-	-
	8	III + II (T)	m	10.0	-	-	-
	9	II + III (B)	m	9.0	-	9.0	10
	10	III (B)	m	-	-	1.5	-
	11	III (Comb.)	m	5.0	5.0-	3.0	
	12	IV	m	2.0	4.0	3.5	5.5
	<b>II Thickness of OB &amp; Parting</b>						

Parameters		Details				
1	Top OB	m	10.0-50.0	10.0-55.0	10-40	10-40
2	Part. bet.I (B) & I(M)	m	1-4	1-9	1-2	1-4
3	Part. bet.I (M) & I (T)	m	1-6	1-7	2-3	1-4
4	Part. bet.I (T) & II (B)	m	2-6	1-5	2-5	2-4
5	Part. bet. II (B) & II (T)	m	2.0	2-19	2.6	
6	Part. bet. II (T) & III (Comb.)	m	6.0	3-36	3.0	
7	Part. bet. III (Comb.) & IV	m	5-25	4-27	3-23	3-11
<b>III Quarry Parameters</b>						
1	Dip of the seams		7 <sup>0</sup>	7 <sup>0</sup>	8 <sup>0</sup>	12 <sup>0</sup>
2	Strike length	Km	2.1	3.0	1.9	2.0
3	Width	Km	1.4	1.0	1.3	1.2
4	Maximum depth	m	110	110	100	100
5	Area of Excavation	Ha.	274	360	310	236
<p>The strike length of the proposed Magadh OCP is about 9 Km. and the quarry is envisaged to work in two quarries i.e. quarry-1 and quarry-2. Quarry-1 will be worked first followed by Quarry-2. The Mining and Geological characteristics and the mineable reserves as mentioned earlier have been shown quarry wise and section wise.</p> <p>Quarry-1 is envisaged to open first inspite of the SR being higher than that of quarry-2 because of the following reason</p> <p>The land measuring 1438.63Ha. in quarry-1 has already been acquired under sub-section (1) of section 9 under CBA act.</p> <p>It is proposed to make an initial box cut in the western section of quarry-1 because of the following reasons :</p> <p>(a) The stripping ratio of western section (1.50 m<sup>3</sup>/te.) is less as compared to that of eastern section (1.82m<sup>3</sup>/te.).</p> <p>(b) About 5 Km length of Pindarkalkalnala is to be diverted initially in the eastern section before making any excavation.</p> <p>(c) No requirement of forest land during the initial period.</p> <p style="text-align: center;"><b>Mining System</b></p> <p>The mining and geological conditions of the mine are as follows :</p>						

Surendra Prasad Suman  
Divisional Forest Officer,  
Chattri South Forest Division

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Project Officer  
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<i>Parameters</i>	<i>Details</i>
	<p>(a) Multiple seams to be worked.  (b) Moderately flat gradient of 7° - 8° of the coal seams.  (c) Variable thickness of OB/partings.</p> <p>Considering the above mining and geological conditions, shovel-dumper mining system has been envisaged for working this OC mine. The following variants of shovel- dumper combination has been considered to work this mine.</p> <p><b>OB Removal</b></p> <p>Over burden &amp; inter-burden have been proposed to be outsourced and hence HEMM for OB removal have not been provided in this PR.</p> <p>The coal and intervening parting benches would be formed parallel to the coal seams and will be mined by inclined slicing method. The top O.B. benches will be formed horizontally along particular horizons of 15m thick and will be mined by horizontal slicing method. However the O.B. benches immediately above the roof of the top most seams will be formed parallel to the coal seam roof to avoid the formation of triangular rib of O.B. which is likely to mix up with the coal after blasting. The maximum top OB bench height will be maintained at 15m and coal and intervening parting bench height at 10-15m.</p> <p><b>Coal Winning</b></p> <p>Loading and transportation of coal using machines, blast hole drilling in coal and face preparation have been proposed to be outsourced and hence HEMM for coal winning have not been provided in this PR. However, common equipment such as grader, water sprinkler, crane etc. are considered in this project. Further it is proposed to carry out a detail exercise to decide the mode of coal winning compatible with the calendar programme of OB removal</p> <p>Some major system parameters are given below :-</p>

Surendra Prasad Sunan  
Divisional Forest Officer,  
Chatra South Forest Division

22/01/23  
NIRPENDRA NATH  
Project Officer  
Magadh Project

<i>Parameters</i>	<i>Details</i>
	<ol style="list-style-type: none"> <li>1. Maximum Bench Height For O.B - 15m. Coal and intervening parting - 10-15 m.</li> <li>2. Width of the permanent haul road - 30 m.</li> <li>3. Width of the temporary transport ramp - 20 m.</li> <li>4. Usual height of the spoil dump bench - 30 m.</li> <li>5. The width of the active dump bench - 60 m.</li> <li>6. Bench Slope ( working) O.B. bench - 70<sup>0</sup>      Coal bench - 70<sup>0</sup> Dump bench - 37<sup>0</sup></li> <li>7. Overall pit slope (for 150-160m depth) - 42<sup>0</sup></li> </ol>
	<p data-bbox="678 842 971 873"><b><u>Application of Dragline</u></b></p> <p data-bbox="678 926 1463 1755">The deposit is characterized by thin multiple coal seams/sections dipping at a gradient of 4 -9<sup>0</sup>. These coal seams are I Bottom (7-9m), I Middle (3.5-5m), I Top (3.5-4m), II Bottom (1m), II Top (2.5m), III (5-5.5m) and IV (2-4m). The intervening partings between these coal seams are also thin. Parting between IB &amp; IM ranges in thickness between 2-3 m, parting between IM &amp; IT average 3m, parting between IT &amp; IIB ranges in thickness from 3-4m, parting between IIB &amp; IIT varies from 2-10m. The dragline application has been studied and it appears feasible to deploy 1 no. of 24M<sup>3</sup> /96m dragline in the eastern section (Magadh sector) of quarry-I. It will be possible to depolye the same in the parting between seam-II(T) &amp; III and also parting between seam-III &amp; IV. However, dragline can not be deployed in the entire strike length of 9.0 Km of the Magadh OCP. It can handle about 2.7 Mm<sup>3</sup> of OBR out of the total volume of OBR of 19.82 Mm<sup>3</sup>. Hence, the deployment of dragline has not been considered.</p> <p data-bbox="846 1776 1292 1808" style="text-align: center;"><b><u>Calendar Programme of Excavation</u></b></p> <p data-bbox="678 1839 1463 1915">The summarised Calendar Programme of Excavation(for Balance Coal and OB as on April 2020) is given below which has been</p>

*Surendra Prasad Sumari*  
Divisional Forest Officer,  
Chatra South Forest Division

**NIRPENDRA NATH**  
Project Officer  
Magadh Project

<i>Parameters</i>	<i>Details</i>																																																																																				
	<p>formulated based on the adopted sequence of opencast mine field development at optimum conditions of mining operations for the entire life of Magadh opencast mine.</p> <p>The total mineable reserves has been estimated as 337.25M.tes corresponding to a volume of OBR of 501.41 Mm<sup>3</sup> at an average stripping ratio of 1.49 m<sup>3</sup>/te. The rated output of 20.0 MTY would be achieved in 4th year of the quarry operation.</p> <p>The calendar programme of excavation has been formulated based on the requirement of the linked power plant of NK STPP of NTPC &amp; projections by Working group Xth Plan document that had indicated the demand of non-coking coal for the XI Plan as 580 Mt and indigenous supply of non-coking coal from CIL as 445 Mt.</p> <p><b><u>Summarized calendar Programme of Excavation(As on April 2020)</u></b></p> <table border="1" data-bbox="779 1029 1372 1902"> <thead> <tr> <th data-bbox="779 1029 917 1113">YEAR</th> <th data-bbox="917 1029 1031 1113">OBR (Mm<sup>3</sup>)</th> <th data-bbox="1031 1029 1242 1113">COAL (M.tes)</th> <th data-bbox="1242 1029 1372 1113">SR (m<sup>3</sup>/te)\</th> </tr> </thead> <tbody> <tr><td>1</td><td>8.72</td><td>4.50</td><td>1.94</td></tr> <tr><td>2</td><td>12.85</td><td>9.00</td><td>1.43</td></tr> <tr><td>3</td><td>20.57</td><td>17.00</td><td>1.21</td></tr> <tr><td>4</td><td>28.57</td><td>20.00</td><td>1.43</td></tr> <tr><td>5</td><td>31.55</td><td>20.00</td><td>1.58</td></tr> <tr><td>6</td><td>31.94</td><td>20.00</td><td>1.60</td></tr> <tr><td>7</td><td>33.75</td><td>20.00</td><td>1.69</td></tr> <tr><td>8</td><td>32.74</td><td>20.00</td><td>1.64</td></tr> <tr><td>9</td><td>33.39</td><td>20.00</td><td>1.67</td></tr> <tr><td>10</td><td>31.29</td><td>20.00</td><td>1.56</td></tr> <tr><td>11</td><td>30.92</td><td>20.00</td><td>1.55</td></tr> <tr><td>12</td><td>27.49</td><td>20.00</td><td>1.37</td></tr> <tr><td>13</td><td>28.92</td><td>20.00</td><td>1.45</td></tr> <tr><td>14</td><td>30.97</td><td>20.00</td><td>1.55</td></tr> <tr><td>15</td><td>27.41</td><td>20.00</td><td>1.37</td></tr> <tr><td>16</td><td>28.26</td><td>20.00</td><td>1.41</td></tr> <tr><td>17</td><td>29.07</td><td>20.00</td><td>1.45</td></tr> <tr><td>18</td><td>15.96</td><td>11.00</td><td>1.45</td></tr> <tr><td>19</td><td>4.76</td><td>4.94</td><td>1.47</td></tr> <tr><td>20</td><td>4.76</td><td>4.94</td><td>1.47</td></tr> </tbody> </table>	YEAR	OBR (Mm <sup>3</sup> )	COAL (M.tes)	SR (m <sup>3</sup> /te)\	1	8.72	4.50	1.94	2	12.85	9.00	1.43	3	20.57	17.00	1.21	4	28.57	20.00	1.43	5	31.55	20.00	1.58	6	31.94	20.00	1.60	7	33.75	20.00	1.69	8	32.74	20.00	1.64	9	33.39	20.00	1.67	10	31.29	20.00	1.56	11	30.92	20.00	1.55	12	27.49	20.00	1.37	13	28.92	20.00	1.45	14	30.97	20.00	1.55	15	27.41	20.00	1.37	16	28.26	20.00	1.41	17	29.07	20.00	1.45	18	15.96	11.00	1.45	19	4.76	4.94	1.47	20	4.76	4.94	1.47
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 Divisional Forest Officer,  
 Chara South Forest Division

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 NIRPENDRA NATH  
 Project Officer  
 Magadh Project



	<i>Parameters</i>	<i>Details</i>			
		21	4.76	4.94	1.47
		22	2.76	0.94	1.47
		<b>TOTAL</b>	<b>501.41</b>	<b>337.25</b>	<b>1.49</b>
		<p>The stage-wise volumes adopted in the calendar programme is for maximum bench height of 15m in coal bench and 15 m in OB bench. It is very essential that sequence of mining and dumping of overburden shall be executed as per Calendar programme of excavation and dumping plan respectively. Since both OB removal &amp; coal winning has been proposed for outsourcing, bench height &amp; width in coal can be adjusted as per specifications of hired HEMM/equipment and stipulations of DGMS permissions</p> <p style="text-align: center;"><b><u>Drilling &amp; Blasting</u></b></p> <p>Drilling and blasting would be required both in OB and coal benches before excavation by shovels.</p> <p>The ground vibration due to blasting can be controlled by :-</p> <ul style="list-style-type: none"> <li>i) reducing the amount of explosives charged per delay</li> <li>ii) reducing spacing and burden of blast holes,</li> <li>iii) reducing the amount of explosives charged per blast,</li> <li>iv) proper strata movement during blast by using suitable initiating sequence.</li> </ul> <p>Since above parameters are site specific, the exact blasting pattern will be designed after conducting field trials.</p> <p style="text-align: center;"><b><u>Proposed HEMM</u></b></p> <p>Departmental HEMM have been provided as for reclamation work only.</p> <p style="text-align: center;"><b><u>O.B. Dumps</u></b></p> <p>The total volume of OBR is estimated as 501.41 M cum.</p>			
3.1.3	Coal production capacity proposed "Mtpa"	20.0Mtpa			

	<b>Parameters</b>	<b>Details</b>																																																																																																			
3.1.4	Justification for optimization of Coal production capacity	The rated capacity of 20.0 MTY of coal has been found technically feasible from this mine because of its favourable geo-mining parameters like long strike length (about 9.0 Km.) of the quarry, flat gradient of the seams (about 1 in 10), deployment of higher size equipment, free from major geological disturbances, sufficient mineable reserves etc.																																																																																																			
3.1.5	Calendar year from which the production will start	Already started																																																																																																			
3.1.6	Year of Achieving rated production	Fourth Year																																																																																																			
3.1.7	Tentative Coal Production Plan "MT"																																																																																																				
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	- By UG	-																																																																																																			
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Surendra Prasad Sunan  
 Divisional Forest Officer,  
 Chattr South Forest Division

22/10/23  
 NIRPENDRA NAH  
 Project Officer  
 Magadh Project  
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	<b>Parameters</b>	<b>Details</b>
3.1.9	<b>Life of the mine: "Years"</b>	
	- By OC	22
	- By UG	-
	- Overall	22
<b>3.1.10</b>	Whether the proposed external OB dump site is coal/ lignite bearing: If so, whether coal/lignite below waste disposal area is extractable.	NA
<b>3.1.11</b>	Whether negative proving for coal / lignite in the proposed site for OB dump/ infrastructure has been done.	NA
<b>3.1.12</b>	Results of any investigation carried out for scientific mining, conservation of minerals and protection of environment; future proposals.	NA

*Surendra Prasad Suman*  
 Divisional Forest Officer,  
 Chitwan South Forest Division

*Nirpendra Nath*  
**NIRPENDRA NATH**  
 Project Officer  
 Magadh Project

## Chapter 4 : Safety Management

	<i>Parameters</i>	<i>Details</i>
<b>4.1</b>	<b>Safety Management</b>	
4.1.1	<p><b>Important safety aspects:</b> Major Risks and uncertainties to the project viz. Proximity to river, adjacent working, geo-mining disturbances, slope stability and remedial measures suggested.</p> <p>It should also include proposed overall slope of the quarry and OB dump, dump height, strata control, fire and spontaneous heating, gas monitoring, disaster management, danger from inrush of water etc.</p>	<p>Safety of men and machine deployed in the mining area should be properly taken care of irrespective of whether the mining activities are performed by departmental or by outsourcing option.</p> <p>All the regulations &amp; schedules of Coal Mines Regulations 2017 relating to mining in general and opencast mining in particular have to be adhered to and implemented in order to maintain day to day safety as per stature.</p> <p style="text-align: center;"><b>SAFETY ASPECTS FOR OF HEMM / EQUIPMENT</b></p> <p>Special precaution should be taken while deploying workers in the mine. Before employing any person to the mine proper vocation training should be imparted and recommendations of various Safety Conferences should be strictly followed. Some of the major aspects are as follows:-</p> <p>A) For persons:</p> <ol style="list-style-type: none"> <li>i) No persons shall be deployed unless he is trained at VTC and holds VTC Certificates. A record of the same shall be maintained.</li> <li>ii) Records in Form-B and Form-D shall be maintained.</li> <li>iii) Records of driving license of operators shall be kept by competent authority and shall be made readily available for inspection by management.</li> <li>iv) Adequate supervision shall be maintained by competent persons, including officials and technicians.</li> </ol> <p>B) For Machineries: Provisions of Regulation 109, 110, 216 &amp; 217 of CMR 2017 and DGMS Cir. (Tech.) 1 of 1999 should be strictly adhered to along with the following:</p> <ol style="list-style-type: none"> <li>i) All machinery and plant used in connection with working of a mine shall be of good design, sound construction, and suitable material, adequate strength, free from patent defect and properly maintained.</li> <li>ii) The owner, agent and manager shall provide adequate</li> </ol>

	<i>Parameters</i>	<i>Details</i>
		<p>training facilities and ensure proper training of persons employed for operation and maintenance of machinery and plant.</p> <p>iii) No person except an engineer or other competent person under his supervision shall undertake any work on machinery and plant in which technical knowledge or experience is required.</p> <p>iv) All the machineries to be deployed in mines shall be so designed as to afford the operator clear and uninterrupted vision all around.</p> <p>v) Every heavy earth moving machineries, including trucks and tippers, used in mine shall be fitted with adequate safety features or devices as specified by DGMS. All equipment shall be provided with audiovisual alarms, proper light for use at night and fitted with suitable type of the fire extinguishers.</p> <p>vi) Truck mounted drill machines designed for tube well drilling for sources of water shall not be used and only proper type of blast hole drill machine, especially designed for mining purpose, shall be used in the mine.</p> <p>vii) Every heavy earth moving machinery shall be under the charge of a competent person (Operator or Driver), authorized in writing by the Manager.</p> <p>viii) All persons employed or to be employed to operate heavy earth moving machinery shall be trained and their competency shall be evaluated by a Board constituted by the management, who shall be persons who are not connected with imparting of training.</p> <p>ix) A proper record of repair and maintenance along with inspection done by competent authority and defect pointed out shall be maintained and signed by authorized person.</p> <p>x) Only such fitters or mechanics possessing driver's or operator's license, shall be allowed to carry out test-run of heavy earth moving machineries.</p> <p>xi) No person other than the operator or the driver or any person so authorised in writing by the manager shall be allowed to ride on a heavy earth moving machinery</p>

	<i>Parameters</i>	<i>Details</i>
		<p>C) General:</p> <ul style="list-style-type: none"> <li>i) Every person shall strictly adhere to the provisions of the Act and of the rules and regulations and to any order or direction issued by the manager or an official with a view to the safety or convenience of persons not being inconsistent with the Act, rules and these regulations; nor shall he neglect or refuse to obey such orders or directions.</li> <li>ii) Every person shall, immediately before proceeding to work and immediately after terminating work at the end of his shift have his name recorded in the appropriate register.</li> <li>iii) Risk Management Plan of tipper/pay loader shall be made and implemented.</li> <li>iv) All operators/drivers so authorised by the Manager shall observe the Regulation 62 and 63 of CMR 2017 and obey the systematic traffics rules prepared by management</li> <li>v) Before deploying workers, they must be trained and briefed about safety aspects in opencast mine. However, during course of execution of the work, if any accident occurs whether major or minor, the matter shall have to be immediately informed to mine management i.e. Colliery Manager/Agent/GM of Area so that Notices of accidents in accordance of (Reg. 8 of CMR 2017) and Section 23 of The Mines Act 1952 may be given and other necessary steps may be taken in accordance with the Mines Act 1952.</li> <li>vi) Mine authority shall operate transport system in such a way so as to minimize pollution in the mine.</li> </ul> <p><b>STABILITY OF BENCHES, QUARRY HIGHWALLS AND SPOIL DUMPS</b></p> <p>During quarry operations, it is necessary to adopt required mining parameters for the stability of benches, highwalls and spoil dumps. It is also mandatory to examine systematically the fencing of mine workings, landslides and cracks between benches. It is required to maintain well-graded and wide roads on benches keeping the width of working areas sufficient for spreading of blasted rock and movement of the mining and transport equipment.</p>

	<i>Parameters</i>	<i>Details</i>
		<p>During actual mining operation, systematic observations of the condition of benches, high wall slopes and spoil dumps should be carried out and the dimensions be modified if necessary to suit the local conditions. To ascertain the optimum slope angles for stability of quarry benches, highwalls and spoil dumps, scientific study of slope stability along with hydro-geological study of the area needs to be undertaken. During actual mining operation, systematic observations of the condition of benches, high wall slopes and spoil dumps should be carried out and the dimensions be modified if necessary to suit the local conditions.</p> <p>Provisions laid down in Reg. 106 and 108 of the Coal Mines regulation 2017 shall be strictly adhered to for the safety of quarry and OB/ spoil dumps. In addition to this, the following precaution should be considered:</p> <ol style="list-style-type: none"> <li>i) The spoil dump height should not exceed 90m from immediate surface level with an overall slope of 28° or less. In the event of encountering steep floor gradient, floor blasting should be done and the area properly levelled by dozer before spoil dumping.</li> <li>ii) No working or construction should be allowed within the 60m toe of the OB dump.</li> <li>iii) Before dumping the OB on the floor of seam, at least 10m length all along the strike length should be made horizontal at every 50 meter by floor dinting/blasting.</li> <li>iv) Dump should be created in such a way that there is no chance of accumulation of water in and around the base of dump as it will adversely affect the shear strength of the base material of dump. It must be ensured that there is no stagnant water at the toe of dump and the top of the dump.</li> <li>v) The toe and face of the dump should not be eroded or cut at any point of time to avoid slope failure. A suitable toe wall should be created along the dump periphery.</li> <li>vi) Formation of dumping should be done in square or circular or any regular shape as far as possible.</li> <li>vii) Proper drainage system should be provided to bring down rain water by construction of inclined drain on dump face</li> </ol>

<i>Parameters</i>	<i>Details</i>
	<p>and catch drain on all benches.</p> <p>viii) During active period of dump, all rain water should be diverted away from mining site as far as possible.</p> <p>ix) Sump and pumping capacity should be sufficient to accommodate peak surface run-off and seepage of water.</p> <p>x) Gabion wall and garland drain should be constructed and maintained to trap the surface run-off and sludge coming from dump.</p> <p>xi) Plantation and grassing should be done on top and slope of the dump respectively.</p> <p>xii) Regular monitoring is required for development of tension crack, gullies, movement of soil mass, stagnation of water and any other unusual occurrence. In case of dump movement, rate of movement of dump should be monitored. Special attention should be given at curve area/turning area of the dump.</p> <p><b>PRECAUTIONS AGAINST DANGER OF INUNDATION FROM SURFACE WATER</b></p> <ol style="list-style-type: none"> <li>1) Adequate protection against any danger of inrush of surface water into the mine or part shall be provided and maintained to the satisfaction of DGMS, whose decision shall be final.</li> <li>2) The entrance into the mine shall be so designed, constructed and maintained that its lowest point (which means the point at which a body of rising water on surface can enter the mine) shall be not less than 3.0 meters above the highest flood level at that point.</li> <li>3) Every year, during the rains constant watch shall be kept on the flood levels on the surface of the mine and if at any time the levels cross the highest levels earlier recorded, such levels shall be marked by permanent posts along the edges of water and the new highest levels thus observed shall be recorded with the date as the highest flood level on the plans by an actual survey.</li> <li>4) If water dams or reservoirs are built across rivers and water courses on the upstream side of the mine,</li> </ol>



<i>Parameters</i>	<i>Details</i>
	<p>arrangements shall be made for communication between appropriate authorities for the purpose of ascertaining the quantity and timing of water released from the dams which is likely to endanger safety of the mine and arrangement for similar communication shall be made when water level rises on the upstream side which is likely to endanger the mine.</p> <p>5) The highest flood levels and danger levels at least 1.2 meters below the highest flood level, shall be permanently marked at appropriate places on the surface and whenever water rises towards the danger level at any place, all persons shall be withdrawn from the mine sufficiently in advance and for this purpose adequate arrangements of quick communication to all parts of the mine by effective systems shall be provided and maintained.</p> <p>6) No working shall be made in the mine at any spot lying within a horizontal distance of 15 meters from either bank of a river or nala.</p> <p>7) A competent person shall, once at least in every fourteen days during the rainy season and once at least in every thirty days during other periods of the year, examine every protective measure provided under regulations 149, whether in use or not, for their stability, and a report of every such examination shall be recorded. The protective measures and workings shall also be inspected, once at least in every quarter by the Manager personally.</p> <p>8) A careful assessment is to be made against the danger from surface water before the onset of rainy season. The necessary precautions should be clearly laid down and implemented. Agarland drain needs to be provided to drain away the surface rainwater from coming into the mine.</p> <p>9) An embankment, 3.0m above the HFL along the River and nala should be made. Inspections for any accumulation of rainwater, obstruction in normal drainage and weakening in the embankment should be made.</p> <p>10) Standing order for withdrawal of working persons in case of apprehended danger. During heavy rain inspection of</p>

Surendra Pr. Suman  
 Divisional Forest Officer,  
 Chitra South Forest Division

22/01/23  
 NIRPENDRA RAJ  
 Project Officer  
 Magadh Project

	<i>Parameters</i>	<i>Details</i>
		<p>vulnerable points is essential. In case of any danger persons are to be withdrawn to safer places.</p> <p><b>PROTECTION OF EQUIPMENT DEPLOYED AT BOTTOM HORIZONS FROM FLOODING:</b></p> <p>During the heavy monsoon period, the mining operation in the lower-most bench may have to be stopped. Therefore, it is proposed to drown the lower-most bench, which would work as a sump. The water will be pumped out and discharged into the nearby nala/ river after proper sedimentation.</p> <p>For ensuring safety of the equipment while working out bottom horizons with no access to surface profile, the following measures should be taken:</p> <ol style="list-style-type: none"> <li>1) Drivage of initial trenches if any and coal cutting on bottom benches should be done during the dry period of the year.</li> <li>2) Ramps should be made for quick shifting of equipment from bottom horizons, liable to be flooded during monsoon period, to the top horizons.</li> </ol> <p><b>PREVENTION OF ELECTRIC SHOCKS:</b></p> <p>During mining operations, all the statutory provisions of the Indian Electricity Rules 1956, and Indian Standards for installation and maintenance of electrical equipment etc. should be observed.</p> <ol style="list-style-type: none"> <li>1) For protection from electric shocks to persons, all electrical equipment with voltage up to 1000V should be provided with Earth Leakage Relay, which will automatically disconnect electrical circuits.</li> <li>2) Closed mobile substations and switchgears should be mechanically interlocked which exclude the possibility of opening the door when oil switch and air circuit breakers are in operation.</li> <li>3) All metal parts of electrical equipment should be properly earthed to avoid failure of insulation.</li> <li>4) All H.T lines and cables located within the blasting</li> </ol>

*Surendra Prasad Suman*  
 Divisional Forest Officer,  
 Chitraguha Forest Division

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 NIRPENDRA RATHI of 57  
 Project Officer  
 Magadh Project

<i>Parameters</i>	<i>Details</i>
	<p>zones should be disconnected during charging &amp; blasting operations.</p> <p><b>DUST SUPPRESSION &amp; DILUTION OF EXHAUST FUMES:</b></p> <p>Forprecaution against dust, Regulation 143, 144 and 145 of CMR 2017 should be observed. Beside this the following measures should be adopted for dust suppression at all quarry working places, dumps, haul roads, CHP and near other auxiliary mining operations.</p> <ol style="list-style-type: none"> <li>1) Spraying with water on all working faces &amp; haul roads, by special spraying machines or water-sprinkler.</li> <li>2) While drilling holes, it is necessary to use dust extraction devices.</li> <li>3) Installation of local dust suppression and air conditioning devices in cabins of excavators and drilling rigs may be considered.</li> <li>4) Leveling of spoil dump surface.</li> <li>5) Separate dust suppression arrangement should be provided for CHP.</li> </ol> <p>To prevent collection of harmful mixtures in the atmosphere, from the different sections of quarry workings, it is recommended: -</p> <p>To spread out the sources of dust formation and omission of harmful gases throughout the working area of the quarry, the following precautions should be taken:</p> <ol style="list-style-type: none"> <li>1) Drilling &amp; blasting operations should be timed for periods of maximum wind activity during the day.</li> <li>2) Dumpers may be provided with purifiers for exhaust gases.</li> </ol> <p><b>MEASURES TO BE TAKEN FOR FIRE FIGHTING AND FIRE PREVENTION:</b></p> <p>In addition to statutory provisions as laid down in Reg 135, 139 and 140 of CMR 2017, the measures for firefighting and prevention of fires are as follows:</p> <ol style="list-style-type: none"> <li>1) Organisation of special cell for systematic observations to</li> </ol>

Surendra Prasad Suman  
 Divisional Forest Officer,  
 Chatra South Forest Division

12/10/23  
 NIRPENDRA NATH  
 Project Officer  
 Magadh Project

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		<p>examine and prevent fire.</p> <p>2) Removal of spillage of coal on benches and cleaning of coal horizons to prevent cases of coal heating.</p> <p>3) Storage of lubricants and cotton waste in enclosed fireproof containers in working places.</p> <p>4) Provision of fire extinguishers.</p> <p><b>MEASURES TO BE TAKEN WHILE WORKING ABOVE UNDERGROUND GALLERIES:</b></p> <p>In addition to provisions laid down in DGMS Circulars (Tech. 2 &amp; 3 of 1980, Tech. 11/1979), the additional measures for extracting pillars by opencast method are as follows:</p> <p>a) Quarry shall be worked by Heavy Earth Moving Machinery only. No manual operation in the quarry will be done.</p> <p>b) HEMMs, except drilling machines shall not be deployed on the bench where thickness of coal or overburden above the UG galleries, as proved by advance boreholes or other suitable methods, is less than 6m.</p> <p>c) Exposed coal faces (including UG galleries shall be kept covered with fine grained incombustible OB material to prevent breathing of air and control fire to dip side working. This cover shall be removed only at the time of coal extraction.</p> <p>d) Overburden containing carbonaceous material shall not be dumped within 30m of the exposed side of the coal benches. Hot overburden shall be quenched and cooled at dump sites.</p> <p>e) No person shall be allowed at any place in the opencast working where the thickness of overburden and/or coal over any gallery is less than 1.5m.</p> <p>f) Except for the purpose of inspection and support work no person shall be allowed in the underground mine beneath and within 200m of the opencast excavation. The person visiting UG will take all safety precautions for safe working.</p>

Surendra Prasad Suman  
 Divisional Forest Officer,  
 Chattri South Forest Division

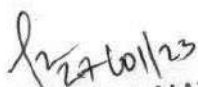
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 NIRPENDRA NATH  
 Project Officer  
 Magadh Project

	<i>Parameters</i>	<i>Details</i>
		<p>g)Blasting in fire area</p> <p>i) No explosive other than slurry and emulsion explosive shall be used.</p> <p>ii) Blasting shall be done with detonating fuse down the hole. Fresh drill holes should be tightly plugged at the mouth.</p> <p>iii) Temperature inside the hole shall be measured by bi-metallic thermocouple heat sensor (before filling with water) and if the temperature exceeds 80oC in any hole, the hole will not be charged.</p> <p>iv) All blast holes shall be kept filled with water. When any hole is traversed by cracks or fissures the hole shall not be charged unless it is lined with an asbestos pipe and the hole filled with water. In addition, bentonite should be used for sealing any cracks at the bottom of the hole.</p> <p>v) Detonating fuse shall not be laid on hot ground without taking suitable precautions.</p> <p>vi) Charging and firing of holes in any one round shall be expeditiously completed and in any case within 2 hours.</p> <p>vii) A parting of at least 2m between the bottom of a short hole and roof of underground gallery shall be left intact.</p> <p>viii)Effective muffling of hot shot holes with old wire rope screens shall be done for prevention of flying hot fragments.</p> <p>ix) No blasting shall be done in crushed or broken ground.</p> <p>x) No person shall be employed within 150m when blasting the heated material.</p> <p>xi) The spacing of hole in the coal/OB benches lying immediately above the galleries shall be so adjusted that the holes do not lie immediately above the galleries in order to ensure that blast holes do not directly fire into the underground working.</p> <p>xii) All holes in the coal/OB benches lying immediately above the galleries shall be charged with water impulses or with moist sand of at least 0.6m in length at the bottom of the hole.</p> <p>xiii) No person including a shot firer shall take shelter within</p>

24/10/23  
 NIRPENDRA NATH  
 Project Officer  
 Magadh Project

Surendra Prasad Suman  
 Divisional Forest Officer,  
 Chhatrapur Forest Division

	<i>Parameters</i>	<i>Details</i>
		<p>100m of the quarry opening. Such shelter shall be of an approved design</p> <p><b>MEASURES TO BE TAKEN WHILE DRILLING BLASTING:</b></p> <p>Following measures should be taken during drilling and blasting operation in the quarry beside the statutory requirements:</p> <ol style="list-style-type: none"> <li>1) Drilling and Blasting in quarry should be done in accordance with the provisions of Mines Act, rules and regulations and based on the Standing Orders for the safe use of explosives.</li> <li>2) Adequate safety measures have to be taken during blasting operation in the quarry so that men/machine are not affected.</li> </ol> <p><b>CONSERVATION</b></p> <p>uitable measures should be taken to minimize coal loss during mining operations. Selective mining of in-seam dirt bands has been proposed. It is proposed not to dump any spoil material over coal bearing area, amenable for mining, at present or even at a future date.</p> <p><b>SCIENTIFIC STUDIES</b></p> <p>The slopes of the quarry and dumps have been proposed on the basis of experience in the adjoining areas. However, to ascertain optimum slope angles for stability of quarry batter and dumps a scientific study need be carried out. Similarly, hydro-geological study of the area is to under taken as none is available at present. Studies should also be carried out to ascertain the pattern of surface drainage, the manner of diversion of water courses to other water courses away from the mining area and the dimension of diversion dams, garland drains and other protective structures to be constructed.</p>
4.1.2	A Commitment from the Company Board that entire mining operation will be carried out as per the Statutory provision given under Mines Act	(To be furnished as a Part of Annexure)

  
**NIRPENDRA NATH**  
 Project Officer  
 Magadh Project

	<i>Parameters</i>	<i>Details</i>
	1952, Coal Mine Regulation 2017 and wherever specific permission will be required the company will approach the concerned authorities.	

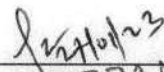
*Surendra Prasad Suman*  
Divisional Forest Officer,  
Chatra South Forest Division

*22/10/23*  
NIRPENDRA NATH  
Project Officer  
Magadh Project

## Chapter 5: Infrastructure Facilities

<i>Parameters</i>	<i>Details</i>
<p>5.1 Mine infrastructure required e.g. Equipment maintenance planning, Office buildings, Workshop, Power supply arrangement, Water supply etc.</p>	<p style="text-align: center;"><b><u>Buildings</u></b></p> <p><b><u>Residential Buildings</u></b></p> <p>The manpower requirement for this project is estimated as 467 and 257 houses would be required at 55% housing satisfaction. The total capital expenditure on residential buildings amounts to Rs.905.77 lakhs. It is proposed to construct these houses at the township located at the proposed site in Sheregarha village to the north of the proposed opencast project.</p> <p><b><u>Service Buildings</u></b></p> <p>Provision has been made in this report for the construction of a GM/P.O. Office, Store, Electrical Sub-station, Magazine and Excavation Workshop suitable for the repair and maintenance of 170T/85T Dumper and other HEMMs deployed in this Project. Other welfare buildings like first aid centre, rest shelter, dispensary, Primary, school, officers' club bank building, post office, shopping centre etc. have also been provided. The total capital expenditure on service buildings amounts to Rs.661.19 lakhs.</p> <p><b><u>Roads &amp; Culverts</u></b></p> <p><b><u>Approach Road to Project</u></b></p> <p>There is an existing Kutchra road from Tandwa to Saradhu, which needs to be strengthened and widened. Cost for 17 Km road from Tandwa to Magadh block has been provided. The estimated capital investment for approach road amounting to Rs.901.45 lakhs.</p> <p><b><u>Colony Road</u></b></p> <p>The length of the colony road inside the township has been estimated as 5.0 Km. Estimated capital investment of Rs.61.80 lakhs for colony roads along with culverts.</p> <p><b><u>Haul Road</u></b></p> <p>The length of haul road has been estimated as 10 Km. The total estimated capital expenditure on haul road amounts to Rs.2920.17 lakhs.</p>

*Surendra Prasad Suman*  
 Divisional Forest Officer,  
 Chatra South Forest Division

  
**NIRPENDRA NATH**  
 Project Officer  
 Magadh Project



Approach Road to Magazine

The estimated capital investment for 3.0 KM long Approach road to Magazine is Rs. 75.66 lakhs.

Approach Road to Colony

The approach road to colony has been estimated as 5Km and the estimated capital expenditure is Rs.264.22 lakhs.

Strengthening and Widening of Piparwar-Tandwa Road

The existing PWD road connecting Piparwar to Tandwa needs strengthening and widening. A lump sum amount has been provided for this. Half of this amount has been charged to Magadh OCP and remaining half has been charged to Amrapali OCP.

Bridges

A lump sum amount of Rs.402 lakhs has been provided for the construction of bridges over river.

No of villages for Rehabilitation					
SI No	villages	House	House-hold	% age assumed for rehabilitation	Total
1	Saradhu	569	569	50	285
2	Devalgarha	18	18	100	18
<b>Sub Total-Magadh East OCP;Chatra Dist.*</b>					<b>303</b>
3	Chamatu	140	157	50	70
4	Phurbasia	202	206	50	103
5	Ganeshpur	319	333	100	333
6	Ara	189	190	100	189
<b>Sub Total-Magadh West OCP;Latehar Dist.*</b>					<b>695</b>
<b>Total PAF</b>		<b>1437</b>	<b>1473</b>		<b>998</b>

\*-As informed by CCL

5.2 Power supply & illumination

The proposed Magadh OCP is located in a green field area. Another new project, Amrapali, will also be located near this block. The maximum power demand for these two opencast projects will be about 40MVA. For meeting this, huge power demand, no immediate source of power supply is available nearby these mining projects. The nearest source of power is DVC's 132/33KV, 2x50 MVA sub-station, which is situated at Piparwar at a distance of about 25 Km from these two projects. But there is also no scope of availability of drawing power to meet

Surendra Prasad Suman  
Divisional Forest Officer,  
Chatra South Forest Division

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NIRPENDRA NATH  
Project Officer  
Magadh Project  
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the integrated demand of 50 MVA (approx.) for these two proposed projects and also other infrastructure.

For over-coming the above stated power supply constraint, it is proposed to establish one no. 132/33KV, 2x50 MVA sub-station, which will be centrally located from the proposed Amrapali and Magadh mining projects and Proposed Regional 33KV switching station, at Magadh&Amrapali. Provision of initial power supply has been made from existing Piparwar 33KV switching station of CCL as there is no other alternative. Hence, the switching station at Piparwar shall have to be extended by two numbers of feeders for drawing power at 33KV by erecting one number of 33KV double circuit overhead transmission line upto Amrapali and Magadh Projects. Power will be received at 33KV by individual through an independent feeder.

The cost involved for construction of the proposed 132/33KV sub-station, Regional 33KV switching station, incoming 132 KV OH line and 33KV overhead transmission line from Piparwar 33KV switching station of CCL and extension of 33KV switching station at Piparwar, will be equally shared by the surrounding projects.

Maximum Demand & Energy Consumption:

The estimated maximum demand and annual energy consumption at optimum production level in OCP after considering power factor improvement by static capacitors and thus :

- Load in operation : 12.63 MW
- Maximum power demand: 7.869 MVA
- Initial power factor : 0.72
- Improved power factor : 0.96

To meet the requirement of power demand of Magadh opencast project, there would be 3 nos. of 33/6.6KV Sub-stations namely Sub-station no.1, Sub-station no.2 & Sub-station no.3. The installed transformer capacity of Sub-station No.1 would be 2x16MVA, The capacity of Sub-station 2 & 3 would be 2x16 MVA and 2x10 MVA respectively.

Power Cost

Based on current DVC tariff, annual power bill would be of the order of Rs. 13.997 Crores for the 10th Year of quarry operation as detailed in table

*12/29/23*  
**NIRPENDRA NATH**  
Project Officer  
Magadh Project

Annual Power Bill

Tariff : Rs. 3.20/KWh

Power Consumers	Annual Power Consumption (KWh x 10 <sup>6</sup> )	KWh per tonne of coal production KWh/te	Power charges per tonne of coal production (Rs.)
Coal	39.88	1.994	6.38
OB			
Common	3.86	0.193	0.62
<b>Total</b>	<b>43.74</b>	<b>2.187</b>	<b>7.00</b>

Power Factor

To maintain a high system power factor of around 0.96 even during maximum demand hours, two sets of 6.6KV capacitors each having a capacity of 2526 KVAR are to be installed in the 6.6KV switch board of sub-station no.1. The capacitor banks shall have the facility to connect and disconnect required number of units depending upon the loading pattern of sub-stations. The capacitor bank shall be provided with automatic control facility.

Illumination

For general illumination high pressure sodium vapour lamps 400W shall be mounted on suitable supports fixed along quarry periphery. The permanent type of illumination in haul road, and inside quarry shall also be done by 400W/250W HPSV lamps. These lights are to be supplied from 230V (L-L) system.

Haul roads from quarry to workshop etc. will also be illuminated by 400/250W HPSV light fittings.

Provision for mobile lighting towers have also been made for illumination in the working of quarry. The tower consists of 4x1000W metal helide fittings with 6KVA DG set mounted on a trolley and a mast of 18m height. The lighting tower can also take power from normal power supply system.

5.3 Drainage & Pumping; Assessment of Volume of Water for Pumping,

The following data has been taken into consideration for arriving at the size of the pumps:-

- (a) Maximum annual rainfall : 1926.16 mm
- (b) Maximum rainfall in a day : 162.40 mm
- (c) Expected Life of the mine : 26 years
- (d) Percentage probability (approx.) : 3.74

*[Signature]*  
NIRPENDRA NATH  
Project Officer  
Magadh Project

Surendra Prasad Sun m.  
Divisional Forest Officer,  
Chatra South Forest Division

<p>Pumping Capacity and Pump Selection</p>	<p>(e) Depth of the mine : 110 m  (f) Maximum probable rainfall in a day in monsoon period from the probability curve for 3.57% probability : 160 mm  (g) Run-off Co-efficient considered:  (i) For mined out area = 0.9  (ii) For area beyond excavation = 0.7  (iii) For internal dumped area = 0.4</p> <p>(h) Inflow of water to the mine due to natural seepage and underground precipitation. 10% of water accumulate-ed in mine.  (i) The rainfall data has been adopted as recorded at :  : Bachra in N.K Area &amp; I M D ,Hazaribagh.</p> <p><b>PUMPING CALCULATIONS</b></p> <p>Eastern sector:  The calculation has been done taking into consideration the entire area of the mine:-</p> <table border="1" data-bbox="451 829 1388 1260"> <tr> <td>(a)</td> <td>Area of Excavation</td> <td>:</td> <td>3.370 Sq.Km.(approx)</td> </tr> <tr> <td>(b)</td> <td>Internal dumped area</td> <td>:</td> <td>2.314 Sq.Km.(approx)</td> </tr> <tr> <td>(c)</td> <td>Area beyond excavation</td> <td>:</td> <td>0.125 Sq.Km.(approx)</td> </tr> <tr> <td>(d)</td> <td>Probable water accumulation on the day of maximum rainfall</td> <td>:</td> <td>326032 Cu.m.(approx)</td> </tr> <tr> <td>(e)</td> <td>Adding 10% for seepage and precipitation on total make of water</td> <td>:</td> <td>32603 Cu.m.</td> </tr> <tr> <td>(f)</td> <td>Assuming 20 hours, pumping per day pumping capacity required to pump out the total make of water in six days.</td> <td>:</td> <td>2989 Cum./hour</td> </tr> </table> <p><b>SELECTION OF PUMPS</b>  On the basis of the calculation and providing 50% standby pumping capacity, the following pumps have been provided:-  Eight nos. of 540 Cum./hr.x150m head pumps and four nos. of 300 Cum./hr. x150m head pumps have been selected.</p> <p>Western Sector :  The calculation has been done taking into consideration the entire area of the mine:-  (a) Area of Excavation : 2.480 Sq.Km.(approx)  (b) Internal dumped area : 1.464 Sq.Km.(approx)  (c) Area beyond excavation: 0.104 Sq.Km.(approx)  (e) Probable water accumulation on the day of maximum rainfall: 251744 Cu.m.(approx)  (f) Adding 10% for seepage and precipitation on total make of water: 25174 Cu.m.  (g) Assuming 20 hours, pumping per day pumping capacity required to pump out the total make of water in six days.  : 2308 Cum./hour</p>	(a)	Area of Excavation	:	3.370 Sq.Km.(approx)	(b)	Internal dumped area	:	2.314 Sq.Km.(approx)	(c)	Area beyond excavation	:	0.125 Sq.Km.(approx)	(d)	Probable water accumulation on the day of maximum rainfall	:	326032 Cu.m.(approx)	(e)	Adding 10% for seepage and precipitation on total make of water	:	32603 Cu.m.	(f)	Assuming 20 hours, pumping per day pumping capacity required to pump out the total make of water in six days.	:	2989 Cum./hour
(a)	Area of Excavation	:	3.370 Sq.Km.(approx)																						
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(e)	Adding 10% for seepage and precipitation on total make of water	:	32603 Cu.m.																						
(f)	Assuming 20 hours, pumping per day pumping capacity required to pump out the total make of water in six days.	:	2989 Cum./hour																						

Surendra Prasad Sun in  
Divisional Forest Officer,  
Chatra South Forest Division

*[Signature]*  
NIRPENDRA NATH  
Project Officer  
Magadh Project

		<p><b>SELECTION OF PUMPS</b></p> <p>On the basis of the calculation and providing 50% standby pumping capacity, the following pumps have been provided: -</p> <p>Six nos. of 540 Cum./hr.x150m head pumps and four nos. of 300 Cum./hr. X 150m head pumps have been selected.</p> <p><u>Main Pump</u> Eight nos. of 540 Cum./hr.x150m head pumps and four nos. of 300 Cum./hr. x 150m head pumps have been selected for eastern sector and six nos. of 540 Cum./hr.x150m four nos. of 300 Cum./ hr.X 150m head pumps have been provided for western sector to dewater the mine.</p> <p>For initial years of mine operations when the depth of the mine will be low, eight nos. of 300 cum/hr x 100m head and six nos.150cum/hr x 60 m head pumps havealso been provided.</p> <p><u>Diesel Pumps</u> Five 300 cum/hr x 100 m and four nos. of 150 Cum./hr x 60 m head diesel pumps have been provided for emergency requirement.</p> <p><u>Face Pumps</u> Ten nos. of face Pumps of 50 Cum./hr.x 45m head have been provided to pump out the water accumulated near the working faces.</p> <p><u>Slurry Pumps</u> Six nos. of Slurry Pumps of 250 Cum./hr. x 45 m head have been provided to pump out the slurry accumulated near the working faces.</p> <p><u>Priming Pumps</u> Twelve nos. of 50 cum x 16 m head face pumps have been provided to prime the higher capacity main pumps.</p> <p><b>SELECTION OF DELIVERY RANGES:</b> The delivery ranges have been selected on the basis of the pumping capacity during probable maximum rainfall and velocity of flow within the reasonable limit. The delivery ranges for different capacity of pumps have been selected as 300 mm, 250mm, 200mm and 150mm, 125mm diameter and for priming and face pumps 100 mm of internal diameters of pipes as per manufacturer's standard.</p>
5.4	Coal	The proposed coal handling system has been envisaged on the surface to handle 20.0

Surendra Prasad Surin  
Divisional Forest Officer  
Chitra South Forest

*12/10/23*  
NIRPENDRA NATH  
Project Officer  
Magadh Project

<p>Handling Arrangement: Brief detail of the CHP/ Mode of Dispatch, Coal quality and Coal staking and handling arrangement</p>	<p>MTY of ROM Coal. The quality of the coal is of power grade and it will be taken by Tandwa STPS but a substantial quantity will be despatched to other places through railway wagon. The ROM coal shall be crushed down to (-) 50 mm size before it is despatched.</p> <p><b><u>System Capacity :</u></b></p> <p>The system capacity of the coal handling plant has been designed in such a way so that it can cater fluctuations in the coal production within an overall rated production of 20.0 MTY from the mine. Circuit consisting of Primary &amp; Secondary sizers and allied equipment of output capacity of 2500 TPH and collecting conveyor system of 2250 TPH have been envisaged. A set of conveyor have been provided to carry crushed coal. Four such circuits comprising of crushing &amp; conveying of coal have been envisaged so that three circuits will be in operation and one circuit may be kept as stand-by. Storage capacity of the bunker has been kept as 2 x 30,000 Te. Each of these two bunkers will be linked with two sets of conveyors having capacity of 2500 TPH each. The capacity of silo for wagon loading has been kept as 2x4000 Te.</p> <p><b><u>System description of CHP as per Project Report :</u></b></p> <p>The CHP will have the following functional units as shown in Key Plan Drg. No: RI-III / Mech / 002314.</p> <ul style="list-style-type: none"> <li>• Receiving</li> <li>• Primary Crushing up to (-) 200 mm</li> <li>• Secondary Crushing up to (-) 50 mm</li> <li>• Storage &amp; reclamation</li> <li>• Rapid loading with SILO</li> <li>• Dust suppression, Extraction, fire-fighting etc. &amp; other Auxiliary facilities.</li> <li>• Belt weighing.</li> </ul> <p><b><u>Plant Description:</u></b></p> <p>The necessary control over fragmentation of coal will be exercised in the quarry itself by designing suitable blasting parameters. Heavy duty sizers of 2500 TPH capacity have been envisaged to crush ROM coal from (-) 1200 mm to (-) 50 mm size. For this four numbers of primary Sizers and four numbers of secondary sizers of similar capacity have been provided. The ROM coal will be unloaded into the receiving hoppers of primary sizers to crush coal up to (-) 200 mm and it is fed to Secondary sizers through</p>
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Surendra Prasad Suran  
Divisional Forest Officer,  
Chatra South Forest Division

*29/01/23*  
NIRPENDRA NATH  
Project Officer  
Magadh Project

belt conveyor to reduce size of coal up to (-) 50 mm for despatch. The coal will be reclaimed by apron feeder and fed to primary sizers for crushing to specified size of (-) 200 mm. Crushed coal of (-) 200 mm will be collected by the conveyor installed underneath the primary sizers and to carry for secondary sizing (-) 50 mm by the secondary sizers.

Suitable measures for coal transportation have been considered, accordingly width of belt conveyor have been selected as 1600 mm. The crushed coal collected by underneath conveyor will feed it to the elevating conveyor for onward transportation. The elevating conveyor will have two circuits in which coal from any Sizer can be fed. The elevating conveyors will carry coal to ground bunker. The capacity and size of reclaim and loading conveyors have been selected to match the desired loading rate of Rapid loading System in combination with Silo.

Provision has been made for two numbers of self-flowing ground bunker having capacity of 30,000 Tonnes each. Each ground bunker has two nos. of tripper conveyor installed over it. The elevating conveyor carries the crushed coal (-) 50 mm size and discharge on tripper conveyor installed over the bunkers for spreading of coal in bunker. The tripper conveyor will uniformly spread the crushed coal in the bunkers. Arrangement of tripper conveyor will be such that it can move from one end to other to discharge the coal into the bunker in the form of layers, so that proper blending of coal takes place. Since the height of fall of coal mass is very high, so a suitable cascading arrangement at any terminal point of the bunker will be provided to avoid the impact of free fall of coal mass on the bowl face of the bunker. Continuous bin level indicators will be provided to gauge the level of coal in the bunkers. Suitable measures will be taken for the smooth flow of (-) 50 mm coal at bunkers / chutes / hoppers. The bunker opening is fitted with plough feeders with a capacity of 2500 TPH for reclaiming crushed coal for onward transportation to reclaim conveyor. Three number of plough feeders have been provided in each ground bunkers. Out of three, two will be working and one will be kept as stand by. Sufficient space will be provided for repair, maintenance of the plough feeders. A motorized hoist will be used for handling feeders and its components.

### **RAILWAY SIDING**

The proposed Magadh OCP is located in a green field area and at present there is no arrangement for coal evacuation from this OCP. The coal production of 20.0 MTY from Magadh OCP is proposed, out of which 10.0 MTY of coal to be linked to Tandwa STPS of NTPC, located at a distance of about 10 Km from the mine site and rest coal (about 10.0 MTY) will be linked for other consumer. Hence, for the transportation of coal from this mine have been envisaged with two MGR off-take of coal with rapid

*Surendra Prasad Suran*  
Divisional Forest Officer,  
Chatra South Forest. Jy. 1. 11

*12/01/25*  
**NIRPENDRA NATH**  
Project Officer  
Magadh Project

loadout system alongwith coal handling plant.

One off-take system is proposed by Tandwa STPS having a railway siding with MGR loop which is to be constructed and commissioned by NTPC, will be a dedicated and cost will be borne by NTPC.

Other siding will also be MGR loading which will cater the need of other consumers of central coalfields limited and such cost of only this siding has been considered.

The siding would take-off from Bukuru station of the Proposed Arterial (Tori-Shivpur-Hazaribagh) Railway Siding at a distance of about 26 Km from Tori Station. The length of the proposed alignment taking off from Bukuru station of main Arterial railway siding line to the Magadh OCP is about 12 Km. which includes link portion and yard portion with MGR bulb from proposed Bukuru Railway station to Magadh.

An emergency provision will be made to inter-link both MGR system so that loading of rakes will be made by both silos & RLS to any consumer wagons for loading and despatching of coal from this project.

Daily requirement of Box/N wagons and no. of trains are as below for other consumer:

Daily volume of loading in tonne	Daily requirement of No. of Box/N wagons	Daily No. of trains to be run	
		In single unit of 58 Box/N rake	In long unit of 116 Box/N rake
34000	580	10	5

5.5	Coal washing and the proposed handling/disposal of rejects	NA	
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*22/10/23*  
**NIRPENDRA NATH**  
 Project Officer  
 Magadh Project



**Chapter 6 : Land Requirement**

<i>Parameters</i>		<i>Details</i>																																																																												
6.1	<b>LAND REQUIREMENT</b>																																																																													
6.1.1	Total Land requirement for the mine in "Ha"	<b>Total Land Use</b>																																																																												
		<b>Particulars</b>		<b>Area in Ha.</b>																																																																										
		Quarry Area		1146																																																																										
		External Dump		166.91																																																																										
		Safety Zone		159.68																																																																										
		Other use		14.8																																																																										
		Infrastructure Area		106.34																																																																										
		<b>Total Area in Ha</b>		<b>1593.73</b>																																																																										
		<p>The project area falls into two districts, Chatra and Latehar. 495.92 Ha of project area falls in Chatra Dist. and 1097.81 Ha in Latehar Dist of Jharkhand.</p> <p align="center"><i>Chatra District</i></p> <table border="1"> <thead> <tr> <th></th> <th>Land in Ha</th> <th>Notified Forest</th> <th>GMJJ</th> <th>Non Forest</th> </tr> </thead> <tbody> <tr> <td>Quarry</td> <td>345.89</td> <td>55.57</td> <td>150.52</td> <td>139.8</td> </tr> <tr> <td>OB Dump</td> <td>27.8</td> <td>0</td> <td>4.99</td> <td>22.81</td> </tr> <tr> <td>Conveyor Corridor</td> <td>3.56</td> <td>0</td> <td>0.58</td> <td>2.98</td> </tr> <tr> <td>Road</td> <td>2.71</td> <td>0</td> <td>0.65</td> <td>2.06</td> </tr> <tr> <td>safety</td> <td>5.04</td> <td>5.04</td> <td>0</td> <td>0</td> </tr> <tr> <td>Green belt</td> <td>110.92</td> <td>9.14#</td> <td>49.55</td> <td>52.23</td> </tr> <tr> <td>Total</td> <td>495.92</td> <td>69.75</td> <td>206.29</td> <td>219.88</td> </tr> </tbody> </table> <p><i>#1.52 Ha of Notified forest subtracted from Green Belt as well as external dump as its part not taken in this application (Kundi village 243 part plot)</i></p> <table border="1"> <thead> <tr> <th>Sl No</th> <th>Type of Land</th> <th>Total Land</th> <th>Magadh East OCP- Dist. Chatra</th> <th>Magadh West OCP- Dist. Latehar</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Notified Forest</td> <td>381.22</td> <td>69.75</td> <td>311.47</td> </tr> <tr> <td>2</td> <td>GMJJ</td> <td>280.5</td> <td>206.29</td> <td>74.21</td> </tr> <tr> <td>3</td> <td>Sub Total (Forest)</td> <td>661.72</td> <td>276.04</td> <td>385.68</td> </tr> <tr> <td>4</td> <td>Non Forest</td> <td>932.01</td> <td>219.88</td> <td>712.13</td> </tr> <tr> <td>5</td> <td>Total Land</td> <td>1593.73</td> <td>495.92</td> <td>1097.81</td> </tr> </tbody> </table> <p><i>*1.52 Ha of Notified forest subtracted as its FRA not granted (Kundi village 243 part plot).</i> Source-Plan supplied by Project.</p>								Land in Ha	Notified Forest	GMJJ	Non Forest	Quarry	345.89	55.57	150.52	139.8	OB Dump	27.8	0	4.99	22.81	Conveyor Corridor	3.56	0	0.58	2.98	Road	2.71	0	0.65	2.06	safety	5.04	5.04	0	0	Green belt	110.92	9.14#	49.55	52.23	Total	495.92	69.75	206.29	219.88	Sl No	Type of Land	Total Land	Magadh East OCP- Dist. Chatra	Magadh West OCP- Dist. Latehar	1	Notified Forest	381.22	69.75	311.47	2	GMJJ	280.5	206.29	74.21	3	Sub Total (Forest)	661.72	276.04	385.68	4	Non Forest	932.01	219.88	712.13	5	Total Land	1593.73	495.92	1097.81
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6.1.2	During mining Land use details:																																																																													
	Type	Land use (Proposed)	Land Use	Land Use (Post Closure)																																																																										
				Agricul	Plant	Water	Public/	Forest	Undist	Total																																																																				

Parameters		Details							
		(End of Life)	tural land	ation	Body	Company Use	Land (Returned)	urbed	
Excavation Area	1146								0
Backfilled Area		634		634					634
Excavated Void		512				512			512
Without plantation									0
Top Soil Dump									0
External Dump	166.91	166.91		166.91					166.91
Safety Zone	159.68	159.68		159.68					159.68
Haul Road between quarries									0
Road diversion									0
Diversion/ below River/Nala/canal	14.8	14.8				14.8			14.8
Settling pond									0
Road & Infrastructure area	106.34	106.34				106.34			106.34
Other Use									0
Garland drains									0
Embankment									0
Green Belt									0
Water Reservoir near pit									0
UG entry									0
Undisturbed/ Mining right for UG									0
Resettlement									0
Pit head power plant									0
Water harvesting									0
Agricultural land									0
<b>Total</b>	<b>1593.73</b>	<b>1593.73</b>	<b>0</b>	<b>960.59</b>	<b>0</b>	<b>633.14</b>	<b>0</b>	<b>0</b>	<b>1593.73</b>
6.1.3	Surface features over the block area								
6.1.4	No. of villages/Houses to be shifted		998 PAF(Approx.)						
6.1.5	Population to be affected by the project								
6.1.6	Proposed Rehabilitation programme		It is proposed to Rehabilitate all the PAF on the land identified by project.						
<b>6.2</b>	<b>DETAILS OF LEASE</b>								
6.2.1	Status of Lease								
6.2.2	Existing Lease Area "Ha"								
6.2.3	Period for which Mining Lease has been granted/is to be renewed/ is to be applied		NA						

22/10/23  
NIRPENDRA NATH Page 52 of 57  
Project Officer  
Magadh Project

	<i>Parameters</i>	<i>Details</i>
	for.	
6.2.4	Date of expiry of earlier Mining Lease, if any	
6.2.5	Whether the lease boundary/ required boundary is same as mentioned in the allotment order	
6.2.6	Lease Area (applied/ required) as per the Mining Plan under consideration (Ha)	
6.2.7	Whether the applied lease area falls within the allotted block	
6.2.8	Area (Ha) of lease which falls outside the delineated Block Boundary/Existing Mining Lease	
6.2.9	<b>Details of outside area:</b>	
	- Whether forms part of any other coal block	
	- Whether it contains any coal/lignite reserves	
	- Purpose for which it is required, e.g. roads/ OB dumps/ service buildings/ colony/ safety zone/ others (specify)	NA
6.2.10	<b>Whether some part(s) of the allotted block has not been applied for mining lease.</b>	
	- Total area in Ha of such part(s).	
	- Total reserves in such part(s). (Mt)	
	- Brief reasoning for leaving such part(s)	

Surendra Prasad Suran  
 Divisional Forest Officer,  
 Chatra South Forest Division

21.11/23  
 NIRPENDRA NATH  
 Project Officer  
 Magadh Project

### Chapter 7: Environmental Management

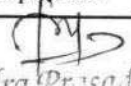
7.1	<p><b>Commitment from the project proponent that the company will comply Environment and Forest Condition stipulated in the respective clearances</b></p>	<p>In order to carry out the proposed mining activity in an environmentally sustainable manner, suitable environmental protection measures shall be taken up at different stages of project operation and post closure. A brief detail of activities to be covered in environmental management along with capital provision has been enclosed.</p> <p>In addition to this, few environmental protection measures have been suggested as a part of mine closure activities.</p> <p><b><u>CAPITAL EXPENDITURE ON ENVIRONMENTAL PROTECTION MEASURES</u></b>(Amount in Rs.Lakhs)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">1 Cost of rehabilitation</td> <td style="text-align: right;">523.95</td> </tr> <tr> <td>2 Cost of compensatory afforestation</td> <td style="text-align: right;">3840.85</td> </tr> <tr> <td>3 Cost of restoration</td> <td style="text-align: right;">1726.77</td> </tr> <tr> <td>4 Cost of Anti-pollution measures in mine &amp; Industrial area</td> <td style="text-align: right;">485.69</td> </tr> <tr> <td>5 Cost of Anti-pollution measures in township</td> <td style="text-align: right;">351.87</td> </tr> <tr> <td>6 Other provisions</td> <td style="text-align: right;">121.39</td> </tr> <tr> <td>7 Compensation for Tenancy Land</td> <td style="text-align: right;">2174.65</td> </tr> <tr> <td>8 TOTAL CAPITAL</td> <td style="text-align: right;">9225.17</td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	1 Cost of rehabilitation	523.95	2 Cost of compensatory afforestation	3840.85	3 Cost of restoration	1726.77	4 Cost of Anti-pollution measures in mine & Industrial area	485.69	5 Cost of Anti-pollution measures in township	351.87	6 Other provisions	121.39	7 Compensation for Tenancy Land	2174.65	8 TOTAL CAPITAL	9225.17		
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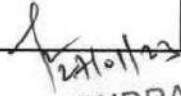
Suren Dra Prasad Sunan  
 Divisional Forest Officer,  
 Chatra South Forest Division

  
 27/10/23  
**NIRPENDRA NATH**  
 Project Officer  
 Magadh Project

### Chapter 8 : Progressive & Final Mine Closure Plan

	<i>Parameters</i>	<i>Details</i>			
<b>8.1</b>	<b>Abandonment Cost and Financial Assurance</b>				
<b>8.1.1</b>	<b>Abandonment Cost: Cost of Activities to be taken up for closure of the mine</b>				
	S. No.	Activity	Weighted % of Mine Closure Cost		
			Progressive	Final	Average
	A	Dismantling of Structure	0	8.5	4.25
		Service building			
		Residential Building			
		Industrial Structure			
	B	Safety & Security	6.5	3.2	4.85
		Random rubble masonry/concrete wall			
		Toe wall around dump/Gabion wall			
		Barbared wire fencing			
		Fencing/boundary wall, fencing around water body			
		Garland drains			
	C	OB Dump Reclamation			
	C A	Technical Reclamation	60.5	60.5	60.5
		Re□ handling of OB			
		Levelling by Dozer			
		Grading			
		Levelling and grading of high wall slopes & OB Dump			
	C B	Biological Reclamation & Plantation	15	11.7	13.35
		Top soil Management			
		Grassing of OB dump			
		Plantation around virgin Area , safety zone , green belt, over external Dump and internal			
		Plantation post care (including manpower)			
		Plantation over cleared area obtained after dismantling			
	D	Land scaping of the open space in leasehold area for improving its esthetic. Drain, Pipe lines, Peripheral road,gates, View points, cemented steps on bank Development of Agriculture land	4	5.5	4.75
	E	Environment mitigation & management	12	1.5	6.75
		Air Quality ( Water tanker , Sprinkler & other Control measures)			
		Water Quality ( ETP & STP etc operating cost)			
		Manpower Cost and supervision			

  
**Surendra Prasad Sun** in  
 Divisional Forest Officer,  
 Chatra South Forest Division

  
**NIRPENDRA NATH** Page 55 of 57  
 Project Officer  
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Parameters		Details		
F	Post Closure Monitoring	0	3.2	1.6
	Air Quality			
	Water Quality			
	Power Cost			
	Manpower Cost and supervision			
G	Entrepreneurship Development (Vocational/skill development training for sustainable income of affected people )	1	0.5	0.75
H	Miscellaneous & Other measures like Golden Handshake, one time financial grant, alternative jobs, other services etc.	1	5.4	3.2
Total		100	1	100

### 8.1.3

**Financial Assurance: Amount to be deposited in Escrow account as a security against the mine activities to be carried out for the closure of the mine.**

The mine closure plan of Magadh OCP (20 MTPA) was approved by CCL Board in 201 with an estimated mine life of 26 Years (As on April 2012). Till date, 4787.31 Lakhs ha already been deposited in the escrow account of Magadh OCP (20 MTPA).

This Mining Plan only involves truncation of the project area as per approved PR. There no deviation from the approved calendar plan PR is proposed in this mining Plan. Hence the balance life of mine is considered as 22 Years

ESCROW ACCOUNT	
Magadh OCP	
Project Area (Ha)	1593.73
Escrow Amount per Ha. For OC Project as on April, 2019 (lakhs/ Ha)	9
WPI as on April 2019	121.1
WPI as on April 2020	119.2
Escrow Amount per Ha. For OC Project as on Dec 2020 (lakhs/ Ha)	8.86
Current value of corpus as on Dec 2020	14118.53
Amount deposited in the Escrow Account (As on 30.03.2020)	4787.31
Balance Corpus for which provision is to be made	9331.22
Balance Life of mine	22
Annual corpus (Balance corpus / Balance life, in Rs. Lakh)	424.15
<b>Year</b>	<b>Amount in Lakh (Rs.)</b>
1	424.15
2	445.36
3	467.63
4	491.01
5	515.56
6	541.33

Surendra Prasad Suman  
Divisional Forest Officer,  
Chatra South Forest Division

NIRPENDRA NATH  
Project Officer  
Magadh Project

**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(Forest Conservation Division)**

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**Indira Paryavaran Bhawan**  
Aliganj, Jor Bagh Road  
New Delhi-110 003  
**Dated: 28 April, 2023**

To,

**The Principal Secretary (Forests),**  
Government of Jharkhand,  
Ranchi.

**Subject: Proposal for the non-forest use of 192.36 ha (Forest land – 57.29 ha and Jungle Jhari 135.07 ha) of forest land for Magadh East Opencast mining project in favour of M/s CCL, Chatra South, Jharkhand –reg.**

Madam/Sir,


I am directed to refer to the State Government of Jharkhand's letter No. Van Bhumi-26/2022-862 V.P. dated 06.03.2023 on the above subject submitting information as sought vide Ministry's letter dated 07.12.2022 and to say that examination of said proposal in the Ministry revealed the following shortcomings:

- i. The KML file of 96.72 ha forest land which has been diverted earlier along with Mine lease boundary of Sanghamitra OCP and 13.04 ha approved forest land of Magadh OCP which is overlapping/included in the Sanghamitra OCP is required for detailed analysis of the proposal.
- ii. The justification for transferring the forest area from Magadh OCP to Sanghamitra OCP along with the details of approval obtained for the same shall be submitted.
- iii. The details of land-use as per approved mining plans of respective mining leases involved in the proposal shall be submitted. The State Govt shall ensure that the landuse proposed now is in conformity to the proposed landuse in the approved mining plans. A comparative analysis in this regard shall be submitted.
- iv. It has been observed that the user agency is applying for diversion of forest land within 1593.73 ha mining lease area in piecemeal. The complete KML file of the project area i.e. 1593.73 ha along with the status of approval and present landuse of forest land in the Sanghamitra OCP shall therefore be submitted. A justification for submitting part proposals shall also be provided.
- v. The KML file indicating various components as per proposed land use in the instant proposal shall also be submitted.
- vi. The State Govt has intimated that the compliance of the stipulated conditions by the User agency in case of earlier approvals is not up to the mark. In this regard, the details of the action taken by the State Govt for ensuring the compliance of the conditions shall be submitted.

- vii. The undertaking to bear the cost of implementation of wildlife management plan has not been submitted by the User agency which shall be provided..
- viii. The State has now reported the violation of FCA,1980. In this regard the detail of the forest area utilized for Non-forestry purpose without prior approval of the central govt. along with the time period of violation shall be submitted.
- ix. A report on action as taken by the State Forest Department against against the violation of Forest (Conservation) Act, 1980 shall be submitted.
- x. Detailed report including nature of violation, chronology, total area under the violation of the FCA,1980 along with Shape/KML file shall be submitted.
- xi. As per the information received, the condition no. 18 of the Stage-II approval dated 18.10.2010 for diversion of 96.72 ha forest land has not been complied, which needs justification Moreover, a copy of Wild life Management Plan approved by the CWLW shall be submitted.
- xii. The State Govt. shall clarify whether the Green Zone now proposed in the proposal is different from the Safety Zone or otherwise.
- xiii. The State Government shall furnish details of steps taken by the State Forest Department to rectify the lapses happened in the past regarding the implementation of WLMP of 96.72 ha proposal in the past.
- xiv. As reported by the State Govt. the settlements within the proposed area are old. In this regard the state shall intimate whether the settlements are encroachment or otherwise. The future plan to evict or rehabilitate as the case may be shall also be submitted.

In view of the above, the State Government is requested to submit the information/documents, as indicated above, for further necessary action in the matter.

Yours faithfully

  
(Suneet Bhardwaj) 28/04/23

Assistant Inspector General of Forests

**Copy to:**

1. The PCCF & HoFF, Government of Jharkhand, Ranchi;
2. The Regional Officer, Integrated Regional Office, Ranchi;
3. The Nodal Officer (FCA), Government of Jharkhand, Ranchi;
4. User Agency;
5. Monitoring Cell, FC Division, MoEF&CC, New Delhi.