

BEFORE THE NATIONAL GREEN TRIBUNAL, KOLKATA

O. A. No. 63 of 2023 (EZ)

Anup Kumar		Applicant
	Versus	
State of Jharkhand & Ors.		Respondent

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Filed by: -

Surendra Kumar
 Advocate
 Jharkhand State Pollution Control Board



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BEFORE THE NATIONAL GREEN TRIBUNAL, KOLKATA

O. A. No. 63 of 2023 (EZ)

Anup Kumar **Applicant**
Versus
State of Jharkhand & Ors. **Respondent**

Affidavit on behalf of Jharkhand State Pollution Control Board in compliance of order dated 11/07/2023.

I, Yatindra Kumar Das, son of Late K.K.Das presently posted as the Member Secretary, Jharkhand State Pollution Control Board, H.E.C, Dhurwa, Ranchi and am duly authorized and here by solemnly state and affirm as follows :-

1. That, at present, I am working and posted as the Member Secretary, Jharkhand State Pollution Control Board, H.E.C, Dhurwa, Ranchi and as such,

I am well acquainted with all the facts and circumstances of this case.

Authorised under Notaries Act 1956 & Notary Rules 1956 by Govt. of Jharkhand Ranchi (India)

Rel.No. 1367
10 AUG 2023



2. That, I have gone through the order dated 11/07/2023 passed by the Hon'ble NGT, EZB, Kolkata and has understood the contents therein.

3. That, I have been authorized to swear this affidavit on behalf of the Jharkhand State Pollution Control Board (JSPCB) by the Competent Authority. Further it is stated that I have gone through the relevant files and records in the present case.

4. That, it is humbly stated and submitted that in light of the direction issued by the Hon'ble NGT, Principal Bench, New Delhi in order dated 24/05/2023 in O. A. No. 158/2023 in the matter of Anup Kumar Versus State of Jharkhand accordingly, the Jharkhand State Pollution Control Board vide Ref. No. B-1596 dated 13/06/2023 has nominated the Regional Officer, Regional Office - Cum - Laboratory, Hazaribagh of JSPCB as the Nodal Officer on behalf of the JSPCB and has informed the other committee members about the same.



Photocopy of the Board's Letter No. B-1596 dated

13/06/2023

is enclosed

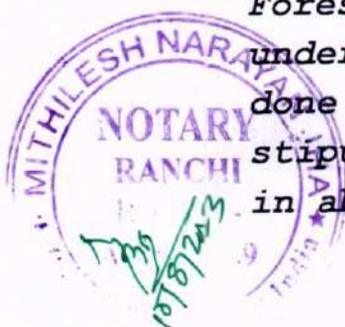
herewith as **Annexure - 'A'** .

5. That, it is humbly stated and submitted that the inspection of the said site in question was carried out by the Committee members in presence of Sri Birendra Kumar, AGM, Environment, NTPC on 24/07/2023. The Inspection Report of the same was submitted by the Regional Officer, Regional Office - Cum - Laboratory, Hazaribagh of JSPCB vide Letter No. 833 dated 07/08/2023. The recommendations of the Committee are reproduced herein for the sake of brevity: -

"Recommendation -

a) *The committee has observed that the mining operation was carried out in violation of the condition no 07 of Stage - 1 FC and condition no 08 of the stage II FC dated 17.09.2010. So, the penalty as decided by the Competent Authority should be deposited in time.*

b) *That the mining operation is being carried out by NTPC within 1026.438 hectares of forest land transferred by the Ministry of Environment, Forest and Climate Change, Government of India under certain conditions. Mining hence should be done only in confirmation to the conditions as stipulated by the competent Authority(ies) and not in abruption."*



Photocopy of the Letter No.
833 dated 07/08/2023 is
enclosed herewith as
Annexure - 'B'.

6. That, it is humbly stated and submitted that the Hon'ble NGT, EZB in its order dated 11/07/2023 was pleased to direct the Jharkhand State Pollution Control Board to provide the addresses of Triveni Sainik Mining Company and National Thermal Power Corporation against whom allegations have been made in the O.A.. The Regional Officer, Regional Office - Cum - Laboratory, Hazaribagh of JSPCB has provided the addresses as desired by the Hon'ble Tribunal vide his letter no 833 dated 07/08/2023 which is as below: -

a) M/s Triveni Sainik Mining Company,

At + P.O. - Langatu, Barkagaon,

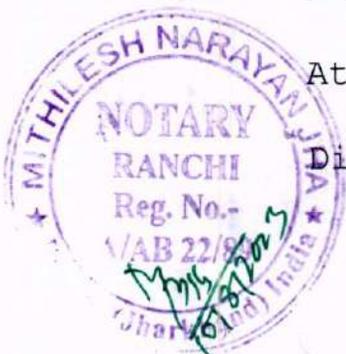
Distt. - Hazaribagh - 825311 (Jharkhand).

b) M/s Pakri Barwadih Coal Mining Project,

NTPC Limited,

At - Sikri Site Office, P.O. - Barkagaon,

Distt. - Hazaribagh - 825311 (Jharkhand).



Photocopy of the Letter No. 833 dated 07/08/2023 is enclosed herewith as Annexure - 'B'.

- 7. That, this Counter Affidavit is filed bonafide and in the interest of justice.
- 8. That the statement made in forgoing paragraphs are true to my knowledge in annexure are true copy of its original.

7 affidavit known

DEPONENT

VERIFICATION:

Verified at Ranchi on this the day of August, 2023 that the averments & facts stated herein above are true and correct to my knowledge and belief and nothing material has been concealed therefrom.

7 affidavit known

DEPONENT

NO. 1367
10 AUG 2023

NOTARY RANCHI
MITHILESH NARAYAN JHA
Reg. No. - A/AB 22/89
Ranchi (Jharkhand) India

10/8/2023

Notarized Under Notaries Act 1956
Notaries Rules 1956 by Govt. of
Jharkhand (Ranchi)



JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004
Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401847/2400979/2400139

'A'
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By Email

Hon'ble NGT Matter
Time Bound (Urgent)

Ref. No. B-1596

Ranchi, Dated..13/06/2023..

From,

Yatindra Kumar Das,
Member Secretary.

To,

The Deputy Director General of Forests,
Integrated Regional Office,
MoEF&CC, Ranchi.

The Regional Director,
Regional Directorate,
CPCB, Kolkata.

The Divisional Forest Officer,
Hazaribagh.

Sub: - Compliance of the directions issued by the Hon'ble NGT, Principal Bench, New Delhi in order dated 24/05/2023 in O. A. No. 158/2023 in the matter of Anup Kumar Versus State of Jharkhand- Regarding.

Sir,

With reference to the subject noted above, I am directed to inform that the Hon'ble NGT, Principal Bench, New Delhi has issued certain directions on dated 24/05/2023 in O.A. No.158/2023 in the matter of Anup Kumar Versus State of Jharkhand(Copy enclosed). The relevant portion of which is as below: -

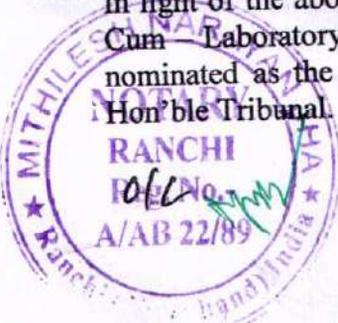
- "2. The complaint is that in Barwadih Coal Project of Hazaribag in Jharkhand, illegal mining is being carried out by certain Proponents namely Triveni Sainik Mining Company and National Thermal Power Corporation, in violation of Orders of Hon'ble Supreme Court, without obtaining any clearance from Forest Department though the land is in Forest area and despite several complaints, concerned authorities have not taken any action in the matter.**
- 3. Looking to the facts in the complaint, in our view, a substantial question relating to environment due to implementation of Scheduled Enactments under NGT Act, 2010 has arisen. However, before taking any further action in the matter we find it appropriate to obtain a factual report for the purpose whereof we constitute a joint committee comprising State PCB, Regional Officer MoEF & CC, Divisional Forest Officer Hazaribagh and CPCB.**
- 4. State PCB shall be the nodal agency for coordination and compliance of this order.**
- 5. The committee shall visit the site, collect relevant informations and submit factual report within two months.**
- 6. The said report shall be submitted by Joint Committee before Eastern Zone Bench, Kolkata through Registrar, by email,**"

In light of the above, Sri Ashok Kumar Yadav, Regional Officer, JSPCB Regional Office - Cum Laboratory, Hazaribagh (7250218115; Email: - jspcb_hazaribagh@rediffmail.com) is nominated as the Nodal Officer from JSPCB for compliance of the order passed by the Hon'ble Tribunal.

Thanking you.

Yours sincerely,
Sd/-

(Yatindra Kumar Das)
Member Secretary



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Memo No. B-1596

Ranchi, dated. 13/06/2023

Copy to: Sri Ashok Kumar Yadav, Regional Officer, JSPCB Regional Office - Cum - Laboratory, Hazaribagh for information and it is, hereby, directed to coordinate with the Committee and ensure needful action so that the directions of the Hon'ble Tribunal is complied at an earliest.

o/c

(Yatindra Kumar Das)
Member Secretary



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झारखण्ड राज्य प्रदूषण नियंत्रण पर्वद,

क्षेत्रीय कार्यालय-सह-प्रयोगशाला, पी०टी०सी० चौक, मटवारी रोड, हजारीबाग।

पत्रांक..... 833

दिनांक..... 07/08/2023

From,

A. K. Yadav
Regional Officer.

To

The Member Seretary,
Jharkhand State Pollution Control Board, Ranchi.

Sub. Regarding inspection of site of **M/s NTPC, Pakri – Barwadih, Coal Mines Project in the light of NGT OA no. 158 / 2023 (PB).**

Sir,

With reference to the above subject this is to inform you that the inspection report prepared by the committee on 24.07.2023 is being enclosed.

The O.A. No. 158/2023 (PB) and The O.A. no. 63/2023 (EZ) are the same case.

It is pertinent to mention here that the Hon'ble NGT has asked to mentioned addresses of M/s NTPC Ltd. and M/s Thriveni Sainik Mining Company which are as below.

1. M/s Thriveni Sainik Mining Company
At + P.O. – Langatu, Barkagaon,
Distt. – Hazaribagh 825311. (Jharkhand)
2. M/s Pakri Barwadih Coal Minig Project, NTPC Ltd.
At – Sikri Site Office, P.O. – Barkagaon,
Distt. – Hazaribagh 825311. (Jharkhand)

This is for your information & necessary action.

Encl. :- A/a

Your Faithfully


(A. K. Yadav) 07/08/2023
Regional Officer



Inspection Report of M/s NTPC, Pakri-Barwadih Coal Mining Project

On the complaint raised by Shri Anup Kumar, Human Right Worker, resident of 387, Jaridih Bazar, Purvi Panchayat, Bermo, Bokaro, (State of Jharkhand) a Joint Committee comprising of the following members has been formed by the Hon'ble NGT, Principle Bench, New Delhi vide O.A. no. 158/2023 dated 24.05.2023 -

- 1. Member from Jharkhand State Pollution Control Board (JSPCB)
- 2. Member from Regional Office, MoEF&CC
- 3. Divisional Forest Officer, Hazaribagh
- 4. Member from Central Pollution Control Board (CPCB)

As per the Hon'ble NGT order the site inspection has been done by the following Joint Committee Members on 24.07.2023 along with the Shri Birendra Kumar, AGM, Environment, NTPC and his team:-

- 1. Md. Saba Alam Ansari, DFO, Hazaribagh (West) Forest Division.
- 2. Mr. Toufic Aslam, Scientist - C, CPCB, Kolkata.
- 3. Mr. Ashok Kumar Yadav, RO, JSPCB, Hazaribagh.
- 4. Mr. Anand Prakash, Researh Investigator (Forestry), MoEF&CC, RO-Ranchi.

❖ **Brief Facts -**

- 1. The Ministry of Coal, GoI had allocated Pakribarwadih Coal Mining Project (PBCMP) to NTPC Ltd in North Karanpura Coal fields vide its allotment letter no. 13016/29/2003-CA dated 11.10.2004. Allotment letter is enclosed as Annexure - 01.
- 2. The mining plan was approved by Ministry of Coal vide its letter ref. no. 13016/29/2003-CA (Part) dated 25.08.2006 and the revised mining plan was approved dated 07.03.2016. Pakri Barwadih Coal Mining Project covers a total area of 4695 Ha. As per approved Mining Plan the entire coal block has been divided into three mining pits namely East Quarry, West Quarry and North-West Quarry. Copy of mining plan approval letter is enclosed as Annexure - 02.
- 3. The Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India, accorded the Environment Clearance (EC) for mining in 3319.42 Ha of land out of the total area of 4695 Ha including Eastern Quarry and Western Quarry vide its letter ref. no. J-11015/692/2007-IA.II (M) dated 19.05.2009. Copy of EC is enclosed as Annexure - 03. Specific condition no. (iv) of the Environment Clearance is as under: -

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"Mining shall be carried out as per statute from the streams/nallahs flowing within the lease. Embankment to be constructed shall be based on peak flow data and shall be at least 3m above the HFL. The slope of the embankment shall be at least 2:1 towards the ML and shall be stabilized with plantation. The CWPRS would be engaged for the design and study of realignment of the drains / nallahs flowing across the ML and creation of embankment, and also obtain approval of the State Government for diversion of the nallahs"

- 4. In this project, Stage-I and Stage-II Forest Clearance (FC) has been accorded to NTPC Ltd. for its Pakribarwadih Coal Mine Project by MoEF&CC, GoI for 1026.438 Ha of Forest Land vide letter ref. no. F.No. 8-56/2009 dated 11.05.2010 and Stage-II dated 17.09.2010 subject to certain conditions. Copy of Stage-I & Stage-II FC is enclosed as Annexure - 04. The Condition no 7 of FC Stage-I & condition no 8 of FC Stage-II is reproduced herewith which is as under:

"The user agency will take up programme for at least 50 m green belt along the sides of the pakwa nallah and dumuhani nallah from the initial years under the supervision of the state forest department."

It is obvious that NTPC was supposed to mine areas, barring 50m each side of the Dumuhani Nala flowing through the middle of the lease area. But, it is here to highlight that Final FC approval came later than the EC and hence, EC condition should not be prospectively be cited to negate an FC condition.

- 5. Representative of NTPC informed that in compliance with above said EC condition, CWPRS (Central Water and Power Research Station) was engaged for design and study for realignment of the drains/nallas flowing across the Mine Lease. Report of the same was submitted by CWPRS to NTPC in February 2011. Copy of the CWPRS Study report is attached as Annexure - 05.
- 6. On perusal of the Report submitted by the CWPRS, it is found that Dumuhani Nala is a seasonal nala which is flowing across the middle of mine lease and terminates in Khora Nala at the southern end of the block boundary. The map submitted by NTPC also shows that most of the catchment area of Dumuhani Nala is under mining lease area. This is also mentioned in page number 11 of the report of CWPRS, Pune.
- 7. As per specific condition no. iv of EC, and based on study report of CWPRS permission was granted for realignment of the Dumuhani Nala by Water Resource Department, Govt of Jharkhand, Ranchi vide its office order ref. Letter No.: 2/PMC/ND-171/2012-224 dated 19.03.2013. Permission copy is enclosed as Annexure - 06. But this permission was not used by NTPC to approach



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MoEF&CC to reconsider the above mentioned imposed condition of FC (Para - 4) in time.

- 8. The User Agency (NTPC) has submitted a representation dated 09.10.2018 for amendment in condition no 7 of Stage-I Forest Clearance and condition no 8 of Stage-II Forest Clearance.
- 9. In light of the MoEF&CC letter no.8-56/2009-FC (Vol) dated 07.07.2022, a site inspection has been carried out on 28.10.2022 by the AIGF, RO, Ranchi, MoEF&CC along with the representatives of state Forest Department and project proponents:-
 - i. Shri R.N. Mishra, DFO Hazaribagh West
 - ii. Shri Shailendra Kumar, IFS, Hazaribagh West
 - iii. Shri Satyam Srivastava, Head of Project, NTPC
 - iv. Shri Birendra Kumar, AGM (Environment), NTPC

The recommendation of RO, Ranchi is as below:

"The extant case was discussed in the REC meeting in light of the violation done by the user agency in the adjacent/contiguous area of the same mining lease.

REC members took serious note of the apathetic attitude of project proponent towards the conditions on which the very Forest Clearance was accorded towards the mining in forests.

Therefore, REC unequivocally recommended that the extant proposal of project proponent in the same lease area should only be considered after the penalty of Rs 818982060/- (Rupees Eighty One Crore Eighty Nine Lakh Eighty Two Thousand and Sixty only) is realized from user agency for violating the FC conditions and creating fait-accompl situation at the site against the guidelines of Hon'ble Supreme Court of India also."

The report was submitted vide RO letter no.FP/JH/MIN/38798/2019/717 dated 25.11.2022. Copy enclosed as Annexure - 07

- 10. In light of the MoEF&CC letter no.8-56/2009-FC Pt dated 07.03.2023, a site inspection has been carried out by the sub-committee consisting of the following members on 17.03.2023:-

- 1) Deputy Director General of forests IRO, Ranchi
- 2) Assistant Inspector General of Forests IRO Ranchi
- 3) Divisional Forest Officer, Hazaribagh (West) Division, Jharkhand



- (29)
- 4) Dr. Anshumali, Professor & Head, Department of Environment science and Engineering, IIT(ISM), Dhanbad-826004, Jharkhand (Technical Expert member of the Sub-Committee)

The recommendation of the Sub-committee is as below: -

- 1) A team of specialists from field of soil Engg, agriculture Engg, Hydrology, GIS & amp; Geology may be constituted under chairpersonship of DFO who shall continuously study the area for assessing the impact of on-going mining on various environmental/ecological parameter and shall submit finding report to IRO annually.
- 2) U/A shall generate drone survey Data on spatial and seasonal status of Khorra Nalla & Pakwa Nalla watersheds for having first-hand information on the current status of the Khorra and Pakwa Nalla watershed parallel to the ongoing mining activities. The data hence collected shall help user agency to design and develop green belt under super vision of Forest Department, For this purpose a reported institute, preferably located in the state, may be engaged for data collection, processing and interpretation in effective and exclusive manner. The institute can also be requested to study the entire region of 10 km from the lease boundaries for temporal land use and its changes.
- 3) Study of river-aquafer interaction using non-invasive geo-physical technique in 10 km radius of NTPC Pakribarwadih Coal mine site. The study may help in delineation of groundwater potential zones, ground water variation in these zones and may help in water budgeting to the surrounding.

The report of the sub-committee was submitted vide RO letter no.FP/JH/MIN/38798/2019/1014 dated 03.04.2023. Copy enclosed as Annexure - 08

11. The FAC, Gol has considered the said proposal of modification in condition of Stage-II approval and violation of FC Act: Diversion of 1026.438 ha of forest land for coal mining Pakribarwadih Project in favour of M/s NTPC Ltd. in Hazaribag West Forest Division in Hazaribag District of Jharkhand on 25.04.2023. The Decision of the Advisory Committee is as under: -

"The Committee had detailed discussion and deliberation with the Nodal Officer (FCA), Jharkhand and Regional Officer, IRO Ranchi. After going through the facts of the proposal and submissions made by the Regional Officer, IRO Ranchi, the

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Committee recommended to modify the condition no. 8 in Stage-II approval as under:

"The user agency shall restore and conserve the Khorra Nalla (west) and Pakwa Nalla (east) watersheds on priority basis under supervision of the forest department and expert hydrologists/agencies and develop their watershed status as per the Survey of India toposheet no. 73 E/I. A greenbelt of 100 meters on either side of both Khorra Nala and Pakwa Nalla shall be maintained".

The Committee further observed that in total disregard to the conditions of approval the user agency has mined out the area and changed the course of the Dumuhani nala which was actually required to be protected and maintained as green belt. Keeping this in view the Committee recommended that the penalty shall be imposed for violation committed over the forest area (1026.438 ha) without approval equal to five times the normal NPV plus simple interest of 12 % from the date of actual violation committed till the deposition of penalty shall be imposed."

The MoM of the Advisory Committee is attached as Annexure - 09.

- 12. In view of the above decision the Forest Conservation Division, MoEF&CC, GoI vide its Letter No. 8-56/2009-FCpt dated 25th May, 2023 has issued a letter in which condition no. 8 of the stage -II FC approval dated 17.09.2010 has been modified which is as follows: -

"The user agency shall restore and conserve the Khorra Nalla (west) and Pakwa Nalla (east) watersheds on priority basis under supervision of the forest department and expert hydrologists/agencies and develop their watershed status as per the Survey of India toposheet no. 73 E/I. A greenbelt of 100 meters on either side of both Khorra Nala and Pakwa Nalla shall be maintained".

The MoEF&CC, GoI Letter No. 8-56/2009-FCpt dated 25th May, 2023 is attached as Annexure - 10.

Conclusion: - As the request for modification in condition no 07 of Stage - I FC and condition no 08 of Stage - II FC was observed after 8 years of Stage - II approval. It means the mining operation at the area in question was carried out in violation and has been done intentionally by the project proponent (NTPC).

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◆ **Recommendation -**

- a) The committee has observed that the mining operation was carried out in violation of the condition no 07 of Stage - I FC and condition no 08 of the stage - II FC dated 17.09.2010. So, the penalty as decided by the Competent Authority should be deposited in time.
- b) That the mining operation is being carried out by NTPC within 1026.438 hectares of forest land transferred by the Ministry of Environment, Forest and Climate Change, Government of India under certain conditions. Mining hence should be done only in confirmation to the conditions as stipulated by the competent Authority(ies) and not in abruption.

Toufic Aslam
 04.08.23
 (Toufic Aslam)
 Scientist-C, CPCB, Kolkata

Anand Prakash
 4/8/23
 (Anand Prakash)
 Research Investigator, RO,
 Ranchi, MoEF&CC

A
 (Ashok Kumar)
 RO, JSPCB, Hazaribagh

Saba Alam
 4/8/23
 (Md. Saba Alam Ansari)
 DFO, Hazaribagh (West)
 Forest Division



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ANNEXURE-I

No. 13016/29/2003-CA
Government of India
Ministry of Coal and Mines
Department of Coal

New Delhi, the 11.10.2004

To
The Chairman & Managing Director,
National Thermal Power Corporation Ltd.,
NTPC Bhawan, Scope Complex,
7 Institutional Area, Lodhi Road,
New Delhi.

Subject :- Allotment of Pakri Barwadih Coal block in favour of National Thermal Power Corporation Ltd. to undertake coal mining for exclusive use of coal in their power plants.

I am directed to refer to your letter No. 01/CMCW/MOC/067-623 dated 9.8.2004 on the subject mentioned above and hereby convey the 'in principle' consent of the Government of India to the working of Pakri Barwadih coal block by the National Thermal Power Corporation Limited within the provision of Central Government Company dispensation under Section 3(3)(a) (i) of the Coal Mines (Nationalisation) Act, 1973 subject to the following conditions :-

- i) Coal mining shall be carried on by NTPC or a separate company to be created with NTPC's participation provided such separate company is a Central Government company with coal mining as an object in its Memorandum of Association. This condition is necessitated under S. 3(3)(a)(i) of the Coal Mines (Nationalisation) Act, 1973 which allows coal mining to a Central Government Company.
- ii) Coal linkages from CIL/SCCL would not be disturbed in any way with coal mined from Pakri Barwadih block. NTPC shall continue to honor its commitment towards long term linkage from these nationalized coal companies to their thermal power stations through FSAs.
- iii) All coal mined from the block, including any middlings or rejects etc, if washing is resorted to, shall be used in NTPC power plants. No coal will be disposed off in any other manner, whatsoever without prior permission, in writing, of the Department of Coal.
- iv) NTPC would plan for both Open cast and underground mining in Pakri Barwadih coal block so as to extract the reserves below 300 meters as well at a later date.
- v) NTPC will do coal mining in accordance with the provisions of the Coal Mines (Nationalisation) Act 1973, the MMDR Act, 1957, the Contract Labour (Regulation & Abolition) Act, 1970 and in compliance with all other mineral, environmental and labour laws and regulations governing the Indian Coal Industry.

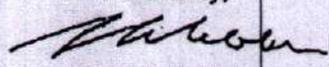
MITHILESH NARAYAN
NOTARY
RANCHI
Reg. No.-
A/AB 22/89
Banchi (Charkhand) India

vi) The mining lease will be executed in the name of the NTPC or such separate Government company which may be formed with equity participation by NTPC

vii) Violation of any of the conditions imposed above on the separate Government Company in mining and disposing of Barwadih coal block will render the mining lease liable for cancellation

viii) NTPC may approach the CMPDIL to obtain the geological payment of necessary exploration cost and obtain a mining lease per the provisions of the MM (D&R) Act, 1957.

Yours faithfully,



(S. K. Kakkar)
Under Secretary



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BY SPEED POST (34)
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Durga

ED(PB,OB,MD)
GM(CM-Engg.)
10-03

REF (PWL)

No 13016/29/2003-CA-I (Part)
Government of India
Ministry of Coal

Shastri Bhawan, New Delhi,
Dated: the 16th March, 2016

To,

The Chairman-cum-Managing Director,
M/s. National Thermal Power Corporation,
NTPC Bhawan, SCOPE Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110003.

Mr. K. S. ...
G.M. CBRR
G.M. PBTS
1.13

Subject : Approval of Revised Mining Plan and Mine Closure Plan (1st Revision) [January 2016] for Pakri Barwadih coal block, Distt. North Karanpura Coalfields, District : Hazaribagh, Jharkhand of M/s. National Thermal Power Corporation (NTPC).

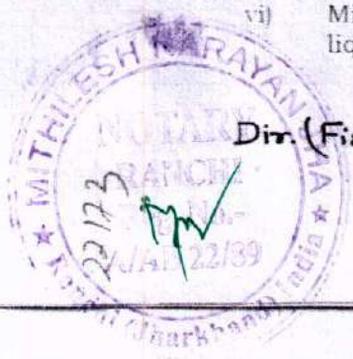
Sir,

I am directed to refer to NTPC's letter Nos.CC:CM: ENGG: 7010: MP: 82 dated 03.04.2015 and CC:CM: ENGG: 7010: MP: 89 dated 16.09.2015 regarding submission of Revised Mining Plan and Mine Closure Plan (1st Revision) for Pakri Barwadih coal block and to say that the same was considered by the Standing Committee in its meeting held on 17.02.2016 and the approval of the Central Government thereon is hereby conveyed under Section 5(2)(b) of the Mines & Minerals (Development & Regulation) Act, 1957 subject to the following conditions:-

- i) The mining company shall take all necessary precautions regarding safety of mine workings and persons deployed therein;
- ii) Mining Lease of this block shall not encroach into any other adjacent block;
- iii) Mining company shall get the external dump area beyond the incrop of seam explored before dumping of OB in this area;
- iv) The cost of abandonment for carrying out the closure activities envisaged in the Mine closure plan is indicative; the actual cost for carrying out the activities at the time of final closure may be higher. The actual cost of abandonment will have to be borne by the project proponent for carrying out the closure activities;
- v) Mining company shall get the balance area explored in detail by getting the additional drilling done either by CMPDIL or under the supervision of CMPDIL within 4 years of the approval of mining plan and till than no overburden shall be dumped over the area;
- vi) Mining company shall submit mining plan for underground mining for liquidation of beyond 300 m coal reserve of the block;

Dir. (Fin.) - For kind information please.

10-03



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- vii) The approval of mining plan is without prejudice to the requirement of approvals from competent/prescribed authority under the relevant rules/regulations, etc.
- vi) This approval may be revoked if a legal cause of action is brought against the allocatee in the light of legal proceedings including judgment of court or result of lawful investigation by the authority empowered in this behalf.

2. Two copies of the approved Revised Mining Plan and Mine Closure Plan (1st Revision) [January 2016] for Pakri Barwadih coal block duly signed by the Competent Authority are returned herewith with the request that a copy of the same may be submitted to the State Government concerned for necessary action and also a photocopy of the approved said plan be sent to the Coal Controller for monitoring the block.

Yours faithfully,

Encl : As above

[RISHAN RYNTATHIANG]

Under Secretary to the Government of India

Tel : 23073936

Copy to :-

1. The Coal Controller, Office of Coal Controller, 1, Council House Street, Kolkata.
2. The Under Secretary, CPAM Section, Ministry of Coal for information and record.



36

Pl

No. 13016/29/2003-CA-I
Government of India
Ministry of Coal

New Delhi, the 25th August, 2006.

To

The Chairman-cum-Managing Director,
National Thermal Power Corporation Limited,
NTPC Bhawan,
SCOPE Complex, Lodhi Road,
New Delhi - 110 003.

Handwritten notes:
B7/10/2006
10/9/06
Congrats
Vankarshah
DLO

Subject : Approval of Mining Plan in respect of Pakri-Barwadih coal mining block (June, 2006) of NTPC Limited.

Sir,

I am directed to refer to your letter No. NTPC:CM:MP:2006:180106 dated 18.01.2006 submitting mining plan of Pakri-Barwadih coal mining block for approval of the Central Government and to state that the mining plan of Pakri-Barwadih coal mining block has been considered and the approval of the Central Government thereon is hereby conveyed under Section 5 (2) (b) of the Mines & Minerals (Development & Regulation) Act, 1957 subject to the following conditions :-

- i) The Mining Company shall achieve the 15 Mty production level from the opencast operation by 12th year.
- ii) As regards part of coal block that has also been allotted to ONGC for Coal Bed Methane extractions, the conditions laid down in the allotment letter shall be fully complied with.
- iii) The approval of the mining plan is without prejudice to the requirement of approvals from competent/prescribed authority under the relevant rules/regulations etc.

2. Two copies of the approved mining plans duly signed by the competent authority are returned herewith with the request that a copy of the approved mining plan may be submitted to the concerned State Government for necessary action and also a photocopy of the approved mining plan may be sent to the Coal Controller for monitoring of the block.

Yours faithfully,

Handwritten signature
(V.S. Rama)

Under Secretary to the Govt. of India.

Encls. As above.

Handwritten notes:
cm
14/8/06
14/8/06
14/8/06

Stamp:
M. K. SHESH NARAYAN JHA
RANCHI
Reg. No. A/AB 22/89
14/8/06

5.2.11. Nallahs namely Khora, Dumuha, Pakwa Nalla, Hardara are traversing through the block.

It is proposed to construct a catchment canal from the northern periphery of the block as per the diversion study report prepared by CWPRS, Pune. The above drain shall also serve the purpose of catchment canal for rainwater and runoff from northern hills.

Lathorva nalla which flows from western side of PB NW quarry shall not be diverted but realigned/straightened if necessary emboldened to carry additional load of diverted Khora Nalla.

Before restart of exploitation of East Quarry reserves Hardara Nalla shall be diverted in the periphery of PB East Quarry which shall meet its own course further downstream within the block boundary.

General slope for diverted channel shall be kept as 1 in 500-1000, side slopes shall be kept limited to 2H to 1V and free board shall be maintained to 1.5m.

It is amply clear from the above that all nallas flowing through the blocks and interfering with the production regime shall be diverted preferably to the northern fringe of the block to free up the locked reserves so as to ensure minimum or no sterilization of coal.

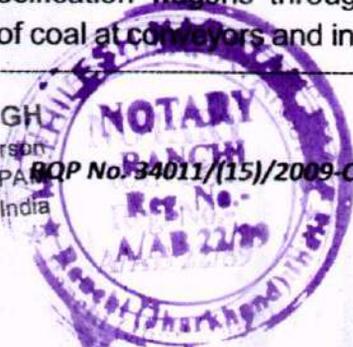
5.2.12. There shall not be any barrier between PB NW, PB West, PB East quarries hence no coal shall be sterilized. Reserves are blocked only in the barrier left against the adjacent mines and batters which shall be governed by prevailing design standards.

5.2.13. Detailed exploration of regionally explored area below planned Dump-C where underground mining is proposed shall be carried out and finished before commencement of actual dumping operations in such a manner not to jeopardise the underground mining operations.

5.2.14. ROM coal transportation shall be effected by dumper brought up to receiving hopper of primary Crusher. Coal shall be reduced up to (-) 50mm size by the deployment of Primary and Secondary crushing units. Crushed coal from West and East Quarry shall be fed by mine end conveyor system either to stock yard having stacking & reclaiming system or directly to 14 km Cross Country conveyor transporting coal from mine to Silo at Bandag railway siding.. Within mining lease (-) 50 mm coal shall be transported from PB NW to stacking and reclaiming system by trucks.

5.2.15. Loading silos of concrete construction, shall load the coal in the Railway 60T/other specification wagons through Rapid Loading System, weighment arrangement of coal at conveyors and in motion weigh bridges shall be provided

Sanjiv Kumar Singh
Chapter V - Mining
Recognised Qualified Person
No. 34C/(15)/2009-CPAM
Ministry of Coal, Govt. of India



BQP No. 34011/(15)/2009-CPAM dated 27.09.10.

Page V-4

Amenure - 03
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No.J-11015/692/2007-IA.II(M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
C.G.O. Complex,
New Delhi -110510.

Dated: 19th May 2009

To
Shri A.B.Haldar
Additional General Manager (CM),
M/s National Thermal Power Corporation Ltd.,
Engineering Office Complex,
A-8A, Sector 24, NOIDA - 201301

Sub: Pakri Barwadhi Coal Mine Project (15 MTPA) of M/s National Thermal Power Corporation Ltd. (NTPC) Ltd. located in villages Barkagaon, Itij, Chiruadih, Urub, Chepa, Kalan, Nagri, Jugra, Sinduari, Churchu, Carahara; Sonbarsa, Pakri-Barwadhi, Chepa-Khurd, Deora-Kalan, Lakura, Langatu, Keri, Dadikalan, Tehsil Barkagaon, District Hazaribagh, Jharkand - environmental clearance - reg.

Sir,

This has reference to letter No. CC/CM&CW/MoEF/01 dated 27.06.2007 along with application for environmental clearance and subsequent letters dated 16.08.2007, 14.03.2008, and 17.03.2009 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It has been noted that the project is for opening a new coal mine - Pakri-Barwadhi Opencast Coal mine Project of 15 million tonnes per annum (MTPA) rated capacity for its linked Thermal Power Station. The existing project consists of Phase-I of 39 years and comprises of opencast operations only and would be restricted to the explored lease area of 3319.42 ha. Of this area, 643.9 ha is forestland, 1950.51 ha is agricultural land, 159.64 ha is barren and wasteland, 435 ha is grazing land, 101.22 ha is human settlements and 29.15 ha includes roads and seasonal nala. In addition, an area of 68.58 ha is being acquired outside the ML at a distance of 2 km from the ML for township comprising 150 dwellings. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10-km buffer zone. Barkagaon Reserve Forest is situated within the core zone and in the buffer zone. Forestry clearance has been applied for. There are endangered fauna such as Sloth Bear reported in the study area. Elephant has not been reported from the area. A monolith found within the core zone is not a centrally protected monument. Ghagri nadi flows south of the ML at a distance of 1.5 km from west to east. Hahro nadi flows at a distance of 1.5km south of ML from SW to northern direction. It is proposed to modify the natural drainage by diversion and realignment of the nalas and by construction of an embankment. Of the total mining lease area, 25 ha is for topsoil dump, 632 ha is for external OB dump, 1785 ha is quarry area, 31 ha is for roads, 18 ha is for infrastructure and 797 ha is undisturbed area. The project involves R&R of 17 villages. A land of 141.70 ha is being acquired as R&R site in villages Dhenga and Lakura on the eastern side of the Block. Detailed R&R has been prepared for Phase-I consisting of 7 villages and involving a total 2221 PAPs - Chirudih (10), Itiz (125), Nagadi (125), Arhara (202), Pakri-Barwadhi (634), Dadikalan (665), Chepakalan (460). An area outside the mining area where infrastructure will be located also involves an R&R of a total 1068 land oustees which would also be completed in Phase-I. The balance 10 villages - Sinduari, Sonbarsa, Churchu, Jugra, Chepakhurd, Keri, Langatu, Deoriakhurd, Urub, Barkagaon are to be taken up for R&R in subsequent phases and are under survey.

Mining will be opencast by mechanised method involving shovel-dumper and involves drilling and blasting. Rated capacity of the mine is 15 (MTPA). Mineral transportation of coal from the mine to CHP would be by closed conveyors and by rail link to the linked TPP. Railway siding would be provided with Silo Loading System. Ultimate working depth of the mine would be 300m below ground level (bgl). Water table in the study area during pre-monsoon is in a range of 4.24m -14.64 m and in a range of 1.52- 8.54m during post-monsoon. Peak water requirement is 4576 m3/d of



→ ED (CM&CW) :- for kind information pl.

A.B.Haldar
25/5

which 526 m3/d is for domestic consumption to be met from ground water, and the of the remaining 4050 m3/d, 3400 m3/d would be from mine pit water and 650 m3/d from recycled water. An estimated 2118 Mm3 of OB will be generated over the life of mine (39 years) of which 1238 Mm3 would be from western quarry (first 25 years) and 860 Mm3 would be from eastern quarry (25th - 39th year). Of the 1238 Mm3 of OB from the western quarry, 595 Mm3 of ob would be dumped externally in two external OB dumps (A and B) and 643 Mm3 would be stored in external dump C. Max. height of the 3 dumps would be 90m. The entire OB of 860 Mm3 from eastern quarry would be backfilled over an area of 665 ha and reclaimed into grazing land (223 ha) and agricultural land (442 ha) at the post mining stage. Ultimate working depth is 300m. Life of mine at the rated capacity of 15 MTPA is 39 years. Public Hearing was held on 16.04.2007. Mining Plan has been approved for 15 MTPA on 25.08.2006. Capital cost of the project is Rs. 4500 crores.

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned Pakri Barwadih Coal mine Project of M/s NTPC Limited of a production capacity of 15 MTPA in a total lease area of 3319.42 ha under the provisions of Section 12 of the Environmental Impact Assessment Notification, 2006, and subsequent amendments thereto and under MOEF Circulars there under subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

- (i) The environmental clearance is restricted to Phase-1 of 39 years of opencast operations involving 3319.42 ha of ML area only for which exploration has been completed.
- (ii) No mining operations shall be undertaken in the forestland within the ML until clearance has been obtained under the provisions of FC Act, 1980.
- (iii) The monolith found within the core zone shall not be disturbed by the mining operations and a minimum 500m distance along with thick green belt would be maintained between the eastern quarry and the monolith. A road would be created upto the monolith a park created around it so that the monolith could be visited.
- (iv) Mining shall be carried out as per statuette from the streams/nallahs flowing within the lease. Embankment to be constructed shall be based on peak flow data and shall be at least 3m above the HFL. The slope of the embankment shall at least 2:1 towards the ML and shall be stabilised with plantation. The CWPRS would be engaged for the design and study of realignment of the drains/nalas flowing across the-ML and creation of embankment, and also obtain approval of the State Government for diversion of the nalas
- (v) Topsoil should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt.
- (vi) OB should be stacked at earmarked three external OB dumpsite within ML area of a maximum height of 90m. A minimum of 500m shall be maintained and thick green belt developed between the habitation and OB dumps particularly that of Barkhagaon. The option of raising the level of grazing land created after backfilling the quarry by 10m or so shall be examined so to reduce the overall OD dump height. Slope stability tests may be undertaken and the feasibility of backfilling depending on the type of cost effective technology available at that stage shall be re-examined. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office located at Bhubaneshwar on yearly basis.
- (vii) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilised



for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly.

Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provided adequate retention period to allow proper settling of silt material.

(viii) Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.

(ix) The main haul road of 6 km within the core zone shall be metalled. A 3-tier avenue plantation shall be developed along the main approach roads and haul roads. Mineral transportation from CHP to Railway siding shall be by closed belt conveyor of a length of 7km. The railway siding shall be provided with Silo Rapid Loading System.

(x) Drills should be wet operated only.

(xi) Controlled blasting should be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.

(xii) No additional groundwater (bore well) shall be used for mining operations. Additional water if any required for the project shall be used from recycled water or mine discharge water or rainwater collected in rainwater harvesting pits within the CML.

(xiii) Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity should be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected should be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring. Rainwater structures shall be erected in the core and buffer zone, in case monitoring indicates a decline in water table.

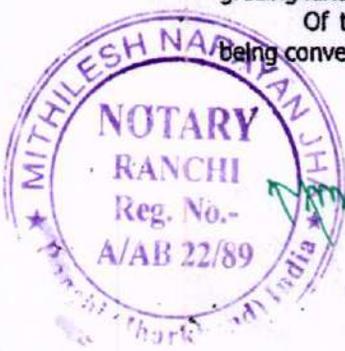
(xiv) The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.

(xv) Sewage treatment plant of adequate capacity shall be installed in the colony. ETP should also be provided for workshop and CHP wastewater. Treated wastewater meeting prescribed norms only shall be recycled for mining operations to the extent possible and permitted to be discharged in to the natural water courses only if it meets the prescribed standards.

(xvi) The total area that shall be brought under afforestation at the time of mine closure shall not be less than 1199 ha which includes reclaimed topsoil soil dump area (25 ha), external OB dump (632 ha), backfilled area (524 ha), along ML boundary, embankment and undisturbed area, along roads and infrastructure, green belt (18 ha), and in township outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.

(xvii) A Progressive Mine Closure Plan shall be implemented by reclamation of 524 ha, of the total quarry area of 1785 ha, which shall be backfilled and afforested by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha. Of the total reclaimed backfilled area, 223 ha shall be grazing land and 442 ha shall be agricultural land for utilisation of the villagers.

Of the balance 1261 ha of quarry area, an area of 596 ha of decolaed area/vold being converted into a water reservoir shall be gently sloped and the the upper benches of



the reservoir shall be terraced and stabilised with plantation and the remaining 665 ha is for public use for Phase-2 of the project.

- (xviii) Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.
- (xix) A detailed R&R Plan for the life of the project comprising land losers, homestead losers and land and homestead losers, including tribals to be displaced from the project area shall be prepared and implemented in a stipulated time-frame. Phase-I of the R&R comprising of 2221 PAPs shall be implemented within one year. The compensation shall be not less than that specified in the National R&R Policy. Provision shall also be made in the R&R Plan to take care of the land less labourers and the tribals. The total expenditure on R&R shall not be less than Rs. 700 crores, which includes land acquisition (Rs. 30 crores) and R&R (350 crores). Alternate livelihood and skill development programmes and schemes shall be implemented as part of R&R and CSR.
- (xx) The project authorities shall carry out a pre-mining socio-economic survey based on the UNDP Human Development Report and monitor the socio-economic status once every three years and maintain records thereof and report in their Annual Report, the socio-economic impact of R&R and CSR activities.
- (xxi) For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bhubaneswar.
- (xxii) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.

B. General Conditions

- (i) No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made.
- (iii) Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring SPM, RPM, SO2, NOx and heavy metals such as Hg, Pb, Cr, As, etc. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.
- (iv) Fugitive dust emissions (SPM and RSPM and heavy metals such as Hg, Pb, Cr., As, etc) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points shall be provided and properly maintained.
- (v) Data on ambient air quality (SPM, RSPM, SO2, NOx and heavy metals such as Hg, Pb, Cr, As, etc) shall be regularly submitted to the Ministry including its Regional Office at Bhopal and to the State Pollution Control Board and the Central Pollution Control Board once in six months.



- (vi) Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.
- (vii) Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.
- (viii) Vehicular emissions shall be kept under control and regularly monitored.
- (ix) Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
- (x) Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.
- (xi) A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.
- (xii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhopal.
- (xiii) The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.
- (xiv) A copy of the will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- (xv) State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
- (xvi) The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at <http://envfor.nic.in>. The compliance status shall also be uploaded by the project authorities in their website and regularly updated at least once in six months so as to bring the same in the public domain. The data shall also be displayed at the entrance of the project premises and mines office and in corporate office.

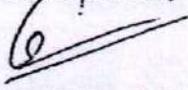
3. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

4. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.

5. The above conditions will be enforced *inter-alia*, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their Regulations and Rules. The proponent shall ensure to provide for the costs incurred for taking up



remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.


(Dr. T. Chandini)
Director

Copy to:

1. Secretary, Ministry of Coal, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Jharkand, Secretariat, Ranchi.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandrashekarpur, Bhubaneswar - 751023.
4. Chairman, Jharkand State Pollution Control Board, T.A. Division Building (Ground Floor), H.E.C., Dhurwa, Ranchi - 834004.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. District Collector, Hazaribagh, Government of Jharkand.
8. Monitoring File 9. Guard File 10. Record File



F. No. 8-56/2009 - FC
Government of India
Ministry of Environment & Forests
(FC Division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi - 110510
Dated: 11th May, 2010

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

Sub: Diversion of 1026.438 ha of forest land for coal mining from Pakribarwadih Project in favour of M/s. NTPC in Hazaribagh West Forest Division in Hazaribagh district of Jharkhand.

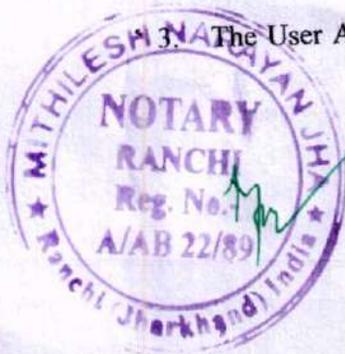
Sir,

I am directed to refer to the State Government's letter no. 3/VanBhumi-75/2009/2458/VP dated 06.08.2009 on the subject mentioned above seeking prior approval of the Central Government under section-2 of the Forest (Conservation) Act, 1980, and to say that the proposal has been examined by the Forest Advisory Committee constituted by the Central Government under section-3 of the said Act.

After careful examination of the proposal of the State Government, the Central Government hereby conveys the recommendations of the Forest Advisory Committee for diversion of 1026.438 ha of forest land for coal mining from Pakribarwadih Project in favour of M/s NTPC in Hazaribagh West Forest Division in Hazaribagh district of Jharkhand subject to fulfillment of the following conditions:

- (i) The Compensatory Afforestation (CA) will be raised and maintained over double the degraded forest land i.e. $1026.438 \times 2 = 2053$ ha at the cost of User Agency.
 - (ii) The User Agency will submit the details of area identified for Compensatory Afforestation on SOI topsheet of 1:50,000 scale.
 - (iii) The User Agency shall transfer the cost (incorporating the current wage structure) of raising and maintaining Compensatory Afforestation to the Adhoc CAMPA through State Forest Department.
2. The State Government shall charge the Net Present Value of the forest area diverted under this proposal from the User Agency as per the Judgement of the Hon'ble Supreme Court of India dated 28.03.2008 & 09.05.2008 in IA No. 566 in WP (C) No. 202/1995 and as per the guidelines issued by this Ministry vide letter No. 5-3/2007-FC dated 05.02.2009 in this regard.

3. The User Agency shall furnish an undertaking to pay the additional NPV, if so



determined, as per the final decision of Hon'ble Supreme Court of India.

4. All the funds received from the User Agency under the project shall be transferred to Ad-hoc CAMPA in account number CA 1587 of Corporation Bank, Block-11, CGO Complex, Phase-1, Lodhi Road, New Delhi - 110 510.
5. The following activities shall be undertaken by the User Agency under supervision of the State Forest Department at the project cost:
 - (i) Proper mitigative measures to minimize soil erosion and choking of streams shall be prepared and implemented.
 - (ii) Planting of adequate drought hardy plant species and sowing of seeds to arrest soil erosion.
 - (iii) Construction of check dams, retention/toe walls to arrest sliding down of the excavated material along the contour.
6. The User Agency will ensure the dumping of OB as per the plan and will submit the duly approved phased Reclamation plan along with the compliance report.
7. The user agency will take up programme for at least 50 m greenbelt along the sides of the Pakwa nallah and Dumuhani nallah from the initial years under the supervision of the State Forest department.
8. The coal evacuation will be done through high speed conveyer of 20 meter width running at a height sufficient to allow all tall wild animals including elephants. The installation of such system will be undertaken under the supervision of the CWLW of the State.
9. The User agency will undertake comprehensive soil conservation measures at the project cost.
10. The period of diversion under this approval shall be twenty (20) years or coterminous with the mining lease subject to possession of valid lease by User Agency under the MMDR Act, 1957.
11. The State Govt. to review the proposed rehabilitation policy to reconsider the R&R issues of landless people in the light of the R&R policy of Orissa with respect to landless and also compare with the draft R&R of the Govt. of India. The revised R&R package should be submitted along with compliance report.
12. The user agency will assist the State Government in conservation and preservation of flora and fauna of the area in accordance with the plan prepared by the Chief Wildlife Warden of the State.
13. The forest land shall not be used for any purpose other than that specified in the proposal.



- 14. No labour camps shall be set up inside the forest area.
- 15. The user agency shall provide fuel wood preferably alternate fuel to the labourers working at the site to avoid damage / felling of trees.
- 16. The user agency will obtain Environmental clearance and any other clearances required for such project before the final approval.
- 17. The user agency will obtain the clearance under the provisions of ST&OTFD (Recognition of Forest Rights) Act, 2006 before the final approval and will submit certificate towards the settlement of all claims and rights over the proposed forest land under the Act, along with the compliance report, as per the advisory dated 03.08.2009 issued by MoEF.
- 18. Any other condition that the CCF (Central), Regional Office, Bhubaneswar, may impose from time to time for protection and improvement of flora and fauna in the forest area, shall also be applicable.
- 19. The forest land thus diverted shall be non-transferable. Whenever the forest land is not required, it shall be surrendered to the State Forest Department under intimation to this Ministry.

After receipt of the compliance report on fulfillment of the conditions mentioned above, the Central Government shall consider the handing over of forest land for non-forest purposes under section-2 of the Forest (Conservation) Act, 1980.

Yours faithfully,

(C.D. Singh)

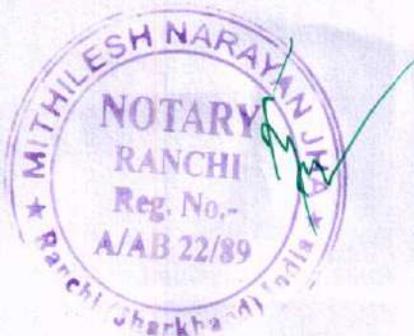
Sr. Assistant Inspector General of Forests

Copy to:-

1. The Principal Chief Conservator of Forests, Government of Jharkhand, Ranchi.
2. The Nodal Officer (FCA), O/o the PCCF, Government of Jharkhand, Ranchi.
3. The Chief conservator of Forest (Central), Eastern Regional Office, Bhubaneswar.
4. User Agency for information.
5. Monitoring cell.
6. Guard File.

(C.D. Singh)

Sr. Assistant Inspector General of Forests



47

F. No. 8-56/2009-FC
Government of India
Ministry of Environment and Forests
(F.C. Division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi - 110 510.
Dated: 17th September, 2010

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

Sub:- Diversion of 1026.438 ha of forest land for coal mining from Pakribarwadih Project in favour of M/s. NTPC in Hazaribagh West Forest Division in Hazaribagh district of Jharkhand.

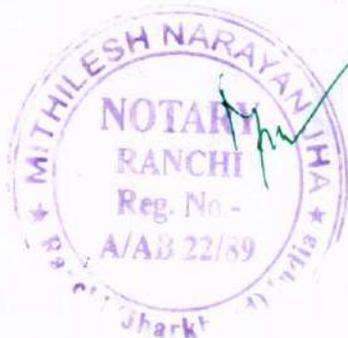
Sir,

I am directed to refer to the State Govt. letter no. 3/VanBhumi-75/2009/2458/VP dated 06.08.2009 on the subject cited above seeking prior approval of the Central Government under the Forest (Conservation) Act, 1980. After careful consideration of the proposal by the Forest Advisory Committee constituted under section-3 of the said Act, in-principle approval was granted vide this Ministry's letter of even number dated 11.05.2010 subject to fulfillment of certain conditions. The State Government has furnished compliance report in respect of the conditions stipulated in the in-principle approval and has requested the Central Government to grant final approval.

In this connection, I am directed to say that on the basis of the compliance report furnished by the State Government vide letter no. dated 16.08.2010, approval of the Central Government is hereby granted under section-2 of the Forest (Conservation) Act, 1980 for diversion of 1026.438 ha of forest land for coal mining from Pakribarwadih Project in favour of M/s. NTPC in Hazaribagh West Forest Division in Hazaribagh district of Jharkhand subject to fulfillment of the following conditions:

1. Legal status of forest land shall remain unchanged.
2. a Compensatory afforestation shall be raised and maintained by the State Forest Department at the project cost.
b Fencing, protection and regeneration of the safety zone area shall be done at the project cost. Besides this, afforestation on degraded forest land, to be selected elsewhere, measuring one and a half times the area under safety zone, shall also be done at the project cost.
c Wherever possible and technically feasible, the User Agency shall undertake afforestation measures in the blanks within the lease area, as well as along the roads outside the lease area diverted under this approval, in consultation with the State Forest Department at the project cost.

Further
copy.



3. Following activities shall be undertaken by the User Agency under the supervision of the State Forest Department at the project cost:
 - (i) Proper mitigative measures to minimize soil erosion and choking of streams shall be prepared and implemented.
 - (ii) Planting of adequate drought hardy plant species and sowing of seeds to arrest soil erosion.
 - (iii) Construction of check dams, retention / toe walls to arrest sliding down of the excavated material along the contour.
 - (iv) The areas shall be reclaimed keeping in view the international practice of stabilizing the dumps by grading / benching so that angles of repose (normally less than 28 at any given place) are maintained.
 - (v) The top soil management plan should be strictly adhered to.
4. The forest land shall not be used for any purpose other than that specified in the proposal.
5. The User Agency shall furnish an undertaking to pay the additional NPV, if so determined, as per the final decision of Hon'ble Supreme Court of India.
6. The approval under the Forest (Conservation) Act, 1980 is subject to the clearance under the Environment (Protection) Act, 1986.
7. The user agency will make arrangement for free supply of coal to labourers and staff working on the project site so as to avoid any pressure on the adjacent forest areas.
8. The user agency will take up programme for at least 50 m greenbelt along the sides of the Pakwa nallah and Dumuhani nallah from the initial years under the supervision of the State Forest department.
9. The coal evacuation will be done through high speed conveyer of 20 meter width running at a height sufficient to allow all tall wild animals including elephants. The installation of such system will be undertaken under the supervision of the CWLW of the State.
10. The State Govt. to implement the rehabilitation policy of the State with respect to landless as submitted with the compliance report.
11. The user agency will assist the State Government in conservation and preservation of flora and fauna of the area in accordance with the plan prepared by the Chief Wildlife Warden of the State.
12. The forest land shall not be used for any purpose other than that specified in the



proposal.

13. No labour camps shall be set up inside the forest area.
14. The user agency shall provide fuel wood preferably alternate fuel to the labourers working at the site to avoid damage / felling of trees.
15. The period of permission for lease under the Forest (Conservation) Act, 1980 will be for 20 years or co-terminus with the mining lease subject to possession of valid lease by User Agency under the MMDR Act, 1957.
16. Demarcation of mining lease area will be done on the ground at project cost using four feet high reinforced cement concrete pillars with serial numbers, forward & back bearings and distance from pillar to pillar.
17. Mining / reclamation schedule shall be implemented by the user agency at their cost as per Environmental Management Plan / phased reclamation programme. The annual report about the progress of reclamation should be submitted to the CCF (Central), Bhubaneshwar.
18. The user agency shall also take up study on soil erosion / soil flow from the overburden areas with the help of GIS in consultation with the forest department.
19. The user agency shall take up the de-silting of the village tanks within five km area from the mine lease boundary as a Corporate's social responsibility so as to mitigate the impact of siltation of such tanks if any.
20. Any other condition that the Chief Conservator of Forests (Central), Regional Office, Bhubaneshwar may impose from time to time in the interest of conservation, protection or development of forests.

Yours faithfully,

(C.D. Singh)

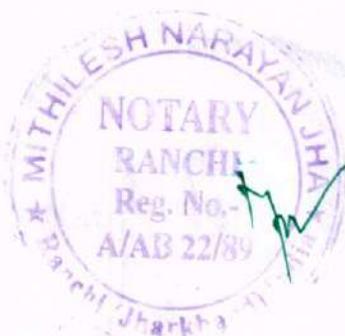
Sr. Assistant Inspector General of Forests

Copy to:-

1. The Principal Chief Conservator of Forests Government of Jharkhand, Ranchi.
2. The Nodal Officer, Office of the PCCF, Government of Jharkhand, Ranchi.
3. The Chief Conservator of Forest, Regional Office, Bhubaneshwar.
4. User Agency for information.
5. Monitoring cell of the FC section
6. Guard file.

(C.D. Singh)

Sr. Assistant Inspector General of Forests

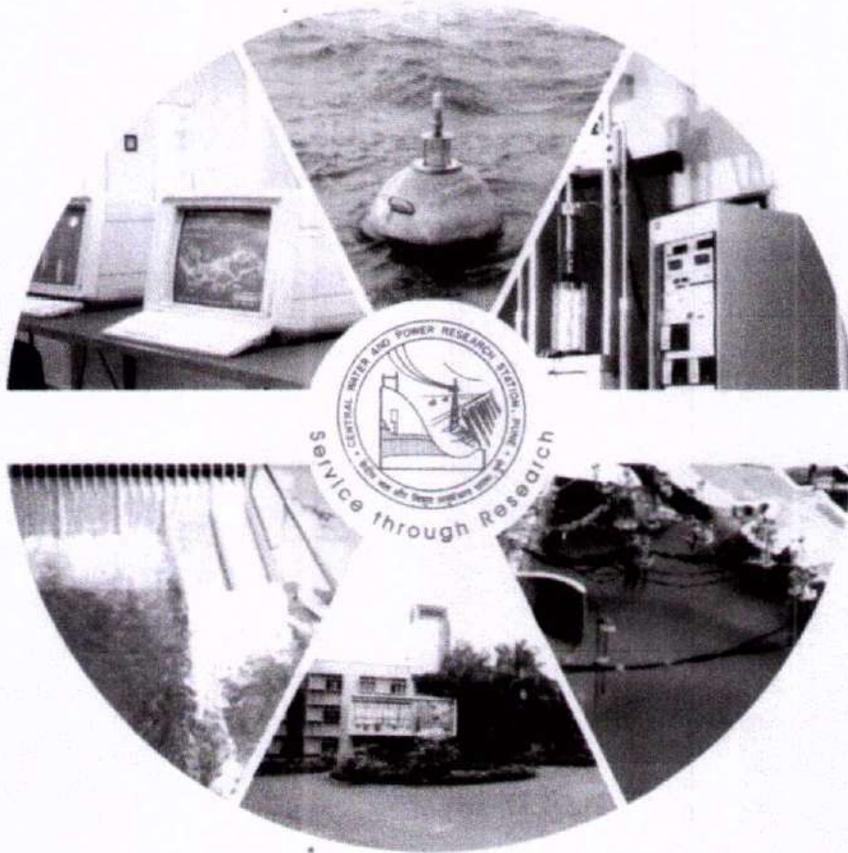


Government of India
Ministry of Water Resources



भारत सरकार
जल संसाधन मंत्रालय

Annexure-05
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केन्द्रीय जल और विद्युत अनुसंधान शाला
CENTRAL WATER AND POWER RESEARCH STATION

TECHNICAL REPORT NO. 4813
FEBRUARY 2011

**FLOOD ROUTING STUDIES FOR PAKRI BARWADIH COAL
MINING AREA NEAR BARKAGAON, HAZARIBAGH, JHARKHAND**



Dr. I D GUPTA
DIRECTOR

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**GOVERNMENT OF INDIA
CENTRAL WATER AND POWER RESEARCH STATION
PUNE - 411 024**

**HYDROLOGY AND WATER RESOURCES ANALYSIS/
RIVER ENGINEERING LABORATORY**

**TECHNICAL REPORT NO.4813
FEBRUARY 2011**

**FLOOD ROUTING STUDIES FOR PAKRI BARWADIH COAL MINING
AREA NEAR BARKAGAON, HAZARIBAGH, JHARKHAND**



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REPORT DOCUMENTATION SHEET

Technical Report No: 4813

Date: February 2011

Title: FLOOD ROUTING STUDIES FOR PAKRI BARWADIH COAL MINING AREA NEAR BARKAGAON, HAZARIBAGH, JHARKHAND

Officers Responsible for Conducting the Studies: Shri. S. Govindan, Joint Director, Shri. V. G. Bhave, Chief Research Officer, Smt. Neena Isaac, Chief Research Officer, Smt. Snehal Tayade, Research Assistant

Name and Address of Organization Conducting the Studies

Surface Water Hydraulics / HAPT Division
Hydrology and Water Resources Analysis / River Engineering Laboratory
Central Water and Power Research Station, Khadakwasla, Pune 411024

Name and Address of Organization Conducting the Studies

M/s. National Thermal Power Corporation (NTPC) Limited, Engineering Office Complex, Plot No. A-8A, Sector-24, Noida 201301 (U.P.)

Synopsis

Coal Mine Blocks near Pakri Barwadih and Chattibariattu villages are being explored by NTPC as a process backward integration. The block has an area of about 4626 ha and has three nalas flowing through block boundary. It was noticed that the mine plan would be disturbed by the central nala. Studies were referred to CWPRS for deciding the alignment and cross sections of diversion channel and subsequently, remodeling of the eastern and western nala. A review of the dam capacity proposed on eastern and western nala has been taken with respect to mining requirements. Alignments of cross sections of diversion channel have been suggested. Storage capabilities of check dams proposed by Jharkhand Irrigation Department were reviewed and necessary arrangements for augmentation of the deficit to meet mining requirements and losses on account of evaporation and seepage are also suggested.

Keywords: Coal Mine Block, Diversion Channel Cross Section and Alignment



FLOOD ROUTING STUDIES FOR PAKRI BARWADIH COAL MINING AREA NEAR BARKAGAON, HAZARIBAGH, JHARKHAND

Summary

Coal is an important resources required for uninterrupted generation of power through thermal plant. At present, the resource is supplied by agencies like Coal Authority of India and eastern and western coal fields. M/s. National Thermal Power Corporation (NTPC) is entering the area of coal extraction as a process of backward integration. Initially coal mining blocks near Pakri Barwadih and Chattibariattu villages are being taken up as per the sanction from the competitive authority. Studies were referred to CWPRS to review the drainage pattern in Pakri Barwadih coal mining block in line with coal extraction plan and propose diversion of nala intervening the mining operation.

The site inspection of the coal mine block was carried out along with NTPC officers from Noida and Hazaribagh. The data requirement in the form of Longitudinal section, cross section and catchment area of existing nala was supplied by NTPC and Jharkhand Irrigation Department. In addition, data from published literature was also used in this study.

It was noticed during the site inspection that gauge and discharge are not observed on any of the nala and rain gauge station is not installed in the coal mining block. Accordingly, it was decided to estimate design discharge from the catchment area of each nala using synthetic hydrograph as per the manual prepared by CWC, New Delhi / RDSO, Lucknow.

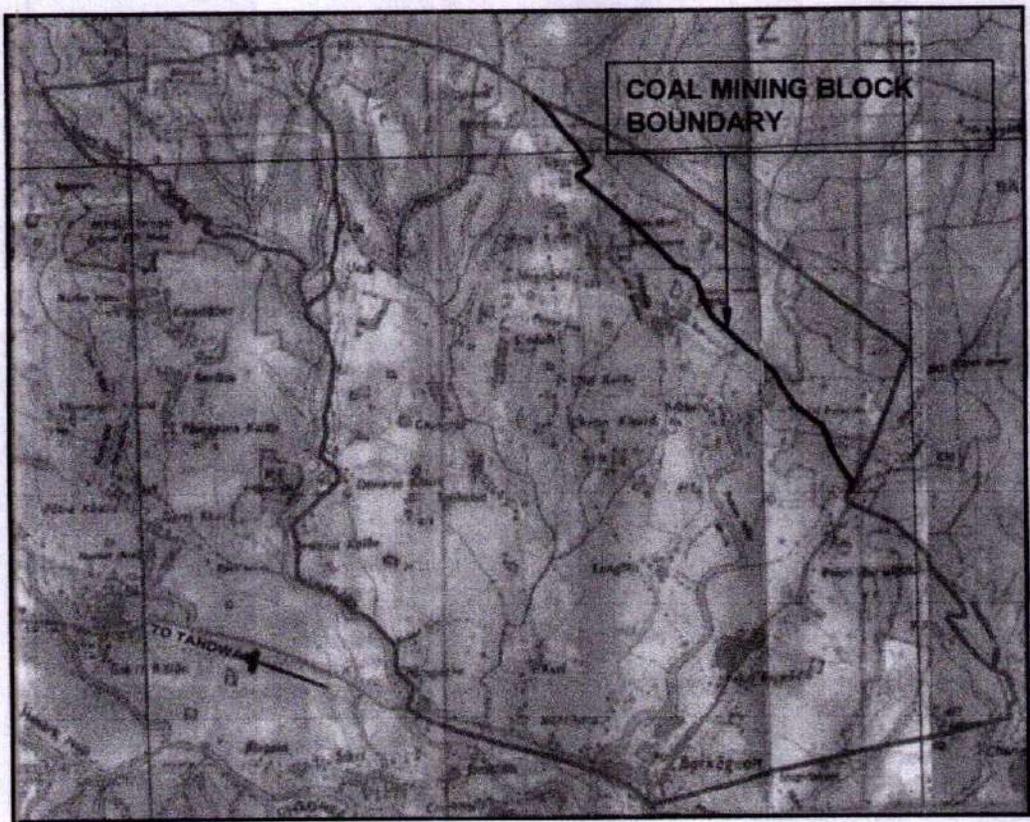
Catchment area maps as supplied by Jharkhand Irrigation Department were used to derive the parameters of synthetic unit hydrograph and estimation of travel time for catchment in these nalas. Design storm ordinates corresponding to time of travel of each nala were derived as per CWC manual. Storm hydrograph for each nala was derived through convolution of net rainfall ordinates with unit hydrograph ordinates. The peak flow of each nala was used for deriving the design discharge for deriving water surface profile.

The coal mine block is spread over an area 4626 ha. There are three nalas viz. western, central and eastern originating on the hill slope towards the northern boundary. These flow northwest direction before outfalling into Haharo Nadi. It was noticed that the central nala would be obstructing the mining operation and it is, therefore, necessary to divert



the flows in central nala upto adjoining eastern and western nala. It is proposed to divert the nala near the northern boundary and pass the flow to eastern and western nala. Different alignments of diversion channel were discussed with NTPC officials and the alignment that would yield minimum height of fall was finalized. The cross section of diversion channel corresponding to design discharge of 60 cum/s and 8 cum/s under unlined scenario were derived.

A review of check dam storage capacity was taken with respect to water requirement for mining operations supplied by NTPC. It was noticed that there would be a deficit in storage capacity of about 0.05 mcum. Necessary augmentation arrangements to meet the deficit and losses on account of evaporation and seepage are suggested.



PAKRI BARWADIH COAL MINING BLOCK NEAR HAZARIBAGH, JHARKHAND



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TECHNICAL REPORT NO. 4813

FEBRUARY 2011

**FLOOD ROUTING STUDIES FOR PAKRI BARWADIH COAL MINING AREA NEAR
BARKAGAON, HAZARIBAGH, JHARKHAND**

1. INTRODUCTION

1.1 Coal is an important input component required for uninterrupted functioning of any thermal power plant. As of date, coal is being supplied by the government owned/operated and managed units like Coal Authority of India and Eastern/Western Coal Fields. M/s. National Thermal Power Corporation (NTPC) Limited has adopted the process of backward integration in order to ensure continuous supply of coal to their thermal power plants spread all over the country. Accordingly, necessary steps are being taken with competent authority and NTPC is endeavouring to enter coal mining activity. Initially, some blocks in the State of Jharkhand near Pakri Barwadih, Chattibariattu and Kerandari villages are being investigated for commencing the operation of coal mining. Three nallas viz. western nala (Khora/Lathorwa), central nala (Dumuhani) and eastern nala (Pakwa) traverse through Pakri Barwadih coal mining block and outfall into Haharo River near Barkagaon village. The eastern and western nallas originate upstream of the coal mining boundary on north side. It is proposed to transfer flow of the central nala near northern boundary of block through eastern and western nala, depending on the actual ground elevations. CWPRS was requested to undertake the following studies for Pakri Barwadih coal mining block.

- i) Estimation of flood discharge of nallas in Pakri Barwadih coal mining block.
- ii) Mathematical model studies for flood routing along nallas in Pakri Barwadih block under pre and post project scenario.

The studies have been carried out at CWPRS and the details are described in this report.



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2. STUDY AREA

2.1 The coal mining activity in Pakri-Barwadih block is spread over a total area of 4626 ha situated between $85^{\circ} 9' E$ to $85^{\circ} 15' E$ and $23^{\circ} 51' N$ to $23^{\circ} 56' N$ (Figure 1).

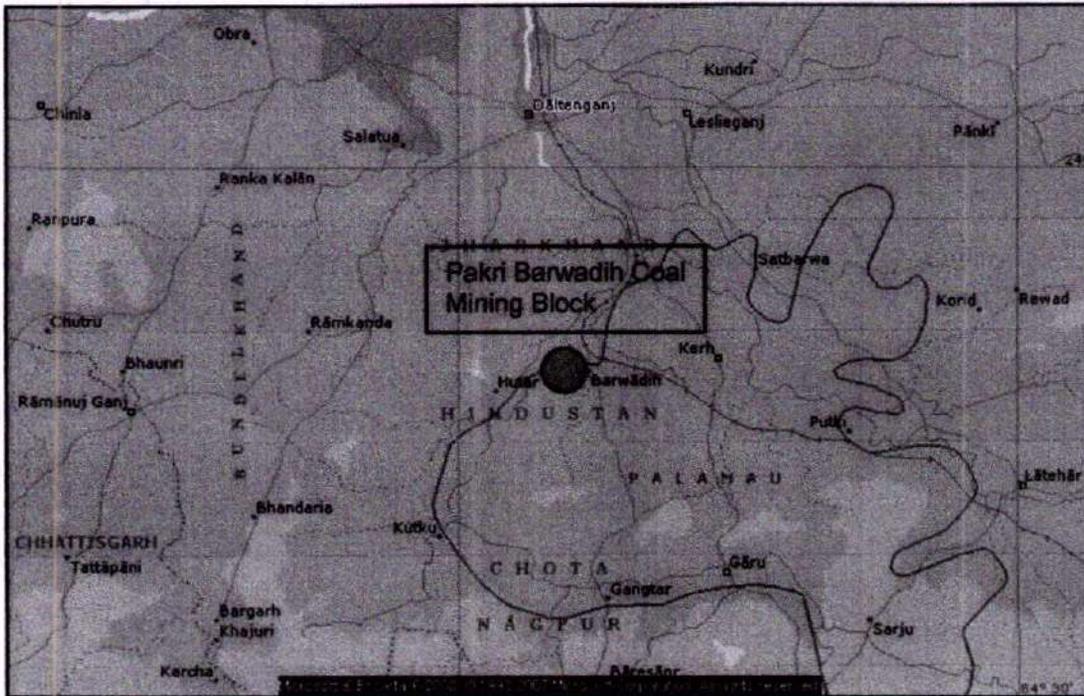


FIGURE 1: LOCATION MAP OF PAKRI BARWADIH BLOCK

The block is located at a distance of about 30 km from Hazaribagh and 120 km from State Capital Ranchi. It is proposed to carry out the coal mining activity in three major steps. Initially coal mining will be commenced at western pits WP1, WP2 and WP3 near northern boundary for a period of 5 years. The waste would be dumped in the area marked as 'DUMP A' and 'DUMP B'. Thereafter, the activity will gradually progress towards southern boundary while passing through western pit WP4, eastern and other pits upto a period of 25 to 30 years (Figure 2).



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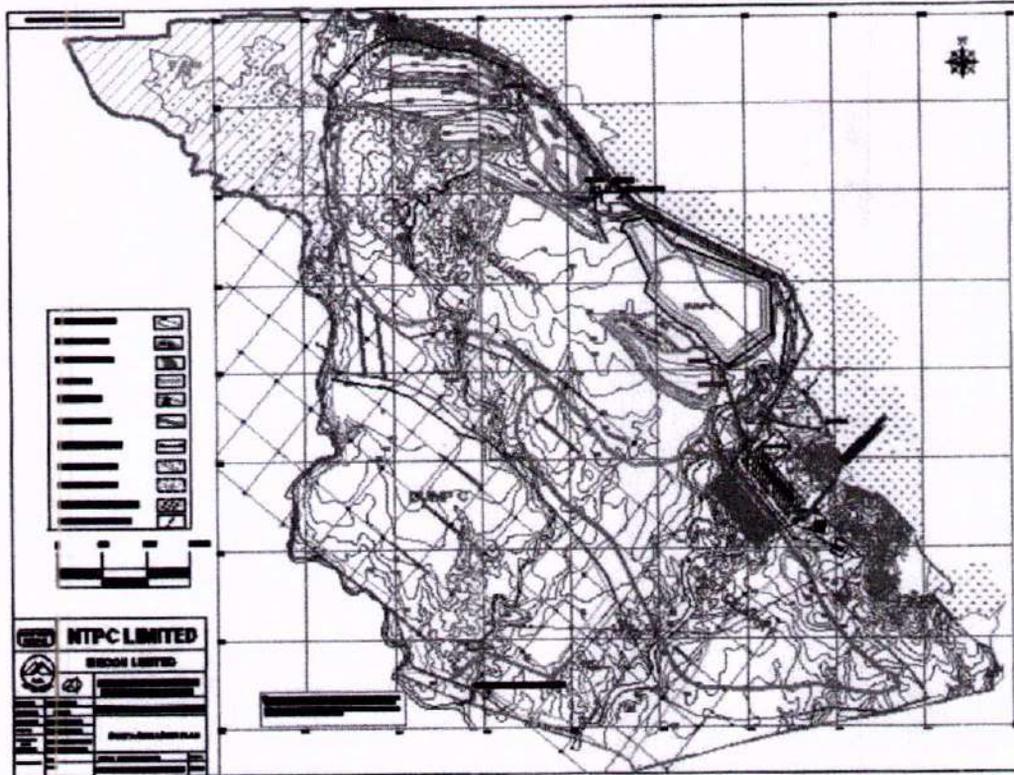


FIGURE 2: SURFACE MASTER PLAN OF PAKRI BARWADIH BLOCK

2.2 The study area has dendritic pattern of drainage. The principal drainage channel of the area is Haharo Nadi, which originates in the hills southwest of the lease area. The western part of the study area is drained by the Ghaghra Nadi, which receives a number of streams such as Kukkurduba Nala, Patra Nadi and Hendraj Nadi. Ghagra Nadi joins the Haharo Nadi south of the proposed core zone. The drainage of the area is controlled through a network of small streamlets with a general southward flow direction. Most of these streamlets are of seasonal nature. Khora Nala drains the northwestern part of the lease area. Khora Nala joins Lathorwa Nala which runs along the western boundary of the proposed lease area to join the Haharo Nadi about 1 km south of the proposed lease area. The northern part of the proposed lease area is drained by the Dumuhani Nala, which runs southwards nearly through the centre of the proposed lease area to join the Lathorwa Nala just south of the proposed lease area. The eastern part of the lease area is drained by the Pakwa Nala, which joins the Haharo Nadi south of the lease area. Haharo Nadi flows southwards. About 5 km south of the proposed lease area, the Haharo Nadi receives the Badamahi Nadi flowing in from the east. Haharo Nadi flows



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southwards to join the Damodar River System. Ghaghra Nadi, Haharo Nadi and Badamahi Nadi are reported to be perennial rivers.

2.3 Three different nalas viz Khora/Lathorwa (Western), Dumuhani (Central) and Pakwa (Eastern) Nala traverse through the coal mining block. The table below gives the particulars of three nalas. Catchment areas of the nalas are shown in Figure 3.

Sl. No.	Name of the Nala	Length of Nala (km)	Catchment area (Sq. km)
1	Western	18.35	54.86
2	Central	-	25.64
3	Eastern	18.75	51.92

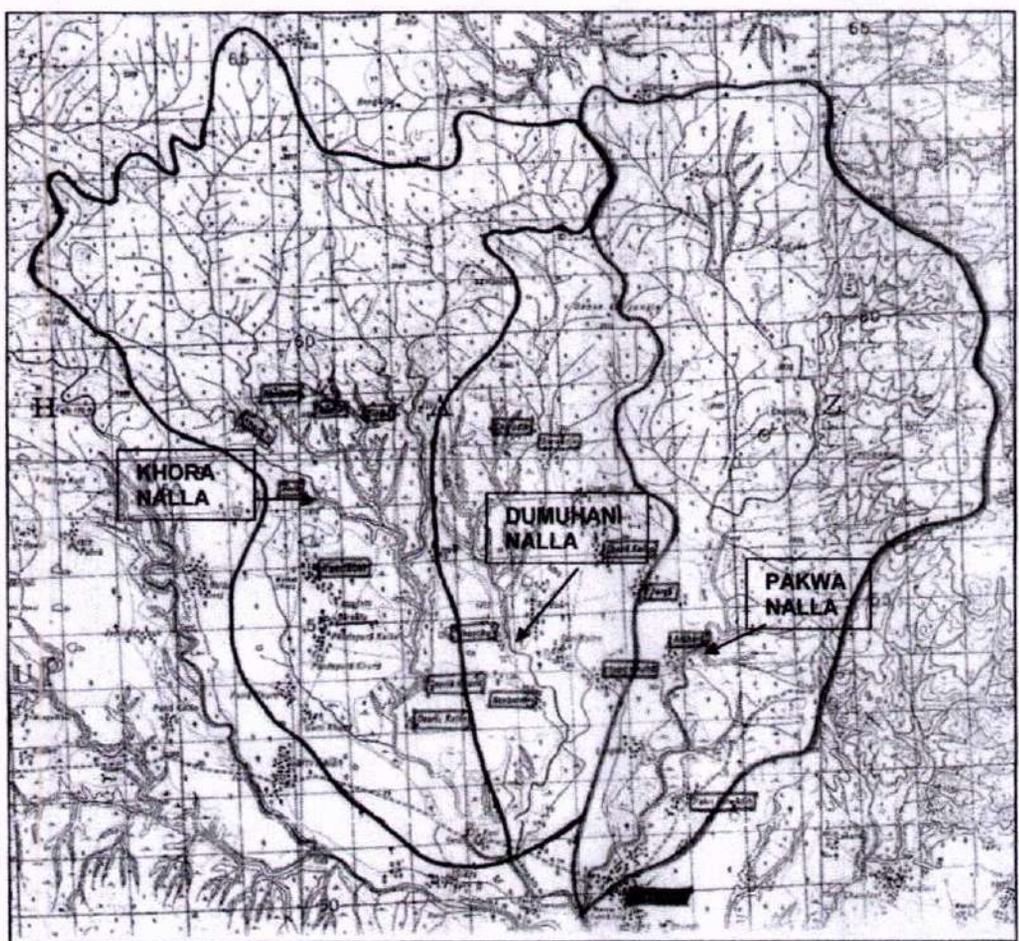


FIGURE 3: CATCHMENT AREA MAP



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2.4 Central nala originates at a small distance upstream of the northern boundary of the coal mining block and traverses towards south. The mining activity would be carried out in such a way that the catchment area of the central nala will go on reducing towards south. Water entering the central nala from the upper catchment at the northern boundary of the coal mining block would be transferred through canals constructed near the boundary of the mining block to eastern and western nala. Precipitation falling within the mining block from the catchment area of central nala would be pumped to the eastern and western nala progressively. All the three nalas rise in the hills on northern side of the coal mining block and flow towards south. The nalas pass through steep falls in the range of 5 to 10 m, spread over a length of about 600 to 800 m.

2.5 Investigations for locating the check dam on eastern and western nalas have been carried out by the Jharkhand Irrigation Department and six sites each on Khora nala and Pakwa nala have been identified. These are shown as CD 1 to CD 6 in Figures 4 and 5 for Khora and Pakwa nala respectively.

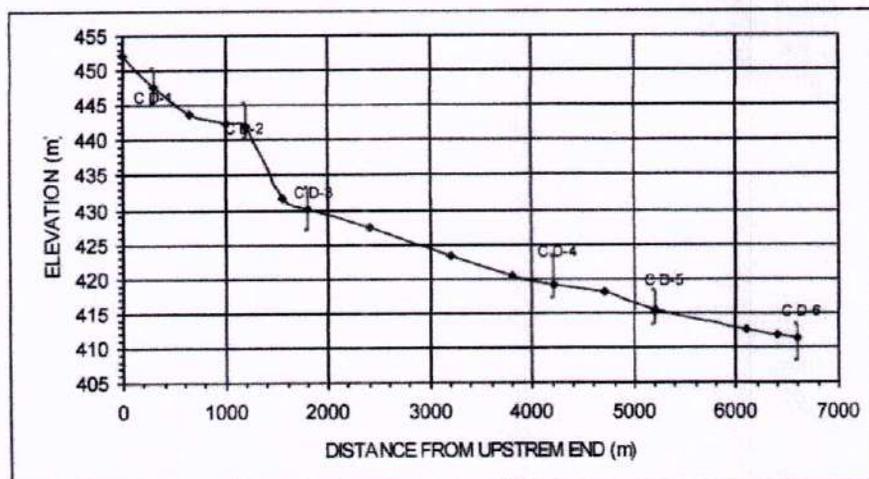


FIGURE 4: LONGITUDINAL SECTION OF KHORA NALLA



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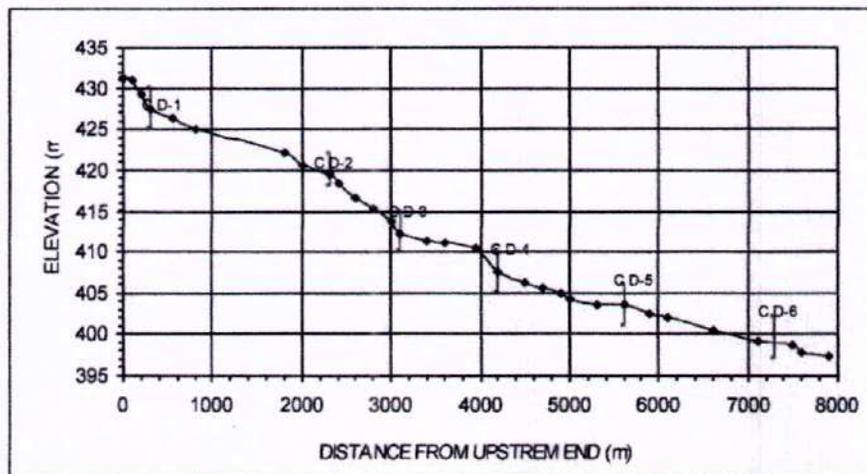


FIGURE 5: LONGITUDINAL SECTION OF PAKWA NALLA

3. DATA USED

The list of data requirement for the studies was communicated to NTPC. In addition, attempts have been made to gather available information/data in published literature. The data given below have been used in the present studies.

- a) L-section and cross section of Khora and Pakwa nalas as supplied by Jharkhand Irrigation Department.
- b) Toposheets of area surveyed in 1928 and 1978
- c) Isohyetal maps published by CWC/RDSO.
- d) Report on Hydrogeology.
- e) Report on Environmental Impact Assessment.
- f) Pumping discharges at different locations in the coal mining block.
- g) Water requirement of coal mining block to be drawn from nalas

4. METHODOLOGY

4.1 Joint inspection of the site was carried out in June 2006 when representatives from NTPC, Noida, NTPC, Hazaribagh and CWPRS were present. It was noticed during the inspection that the nalas are located in a remote area and no gauging site is located in the study area. It was discussed and finalized that the data on L-section and cross sections of the nala would be supplied to CWPRS. Further no rain gauge is located in the coal mining block and



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data of the rain gauges from the adjoining area or available information in the published literature containing regional studies has to be used. Accordingly it is proposed to carry out present studies in the following steps:

- Development of synthetic unit hydrograph as per guidelines issued by CWC.
- The derivation of design storm corresponding to 100 year return period.
- Estimation of storm hydrograph for catchment of eastern and western nalas.
- Derivation of maximum discharge in each nala.
- Review of check dam capacity
- Routing of flood in eastern and western nala
- Derivation of maximum discharge in rain water catchment canal
- Deriving alignment and cross section of rain water catchment canal

5. ANALYSIS OF DATA AND RESULTS

5.1 Estimation of Unit Hydrograph

5.1.1 The catchment area map for western and eastern nala supplied by Jharkhand Irrigation Department were used and basin characteristic like length of the main stream and representative bed slope of the main stream upto the outfall were estimated using the guidelines given by CWC. The other parameters of the unit hydrograph were derived for both western and eastern nalas. These are given in Table 1.

TABLE – 1
PARAMETERS OF UNIT HYDROGRAPH

Parameter	Name of Nala	
	Khora	Pakwa
Catchment Area (sq. km)	54.86	51.92
Length of Stream (km)	18.35	18.75
Peak Flow (cu.m/s)	33.45	27.87
Time of Peak (hr)	3.33	3.73
Base Time (hr)	14.00	16.00
W ₅₀ (hr)	4.11	4.65
W ₇₅ (hr)	2.26	2.52
W _{R50} (hr)	1.58	1.74
W _{R75} (hr)	0.96	1.05
Storm Duration (hr)	3.00	4.00



5.1.2 The unit hydrograph for Khora and Pakwa nalas were developed. These are presented in Figures 6 and 7 respectively.

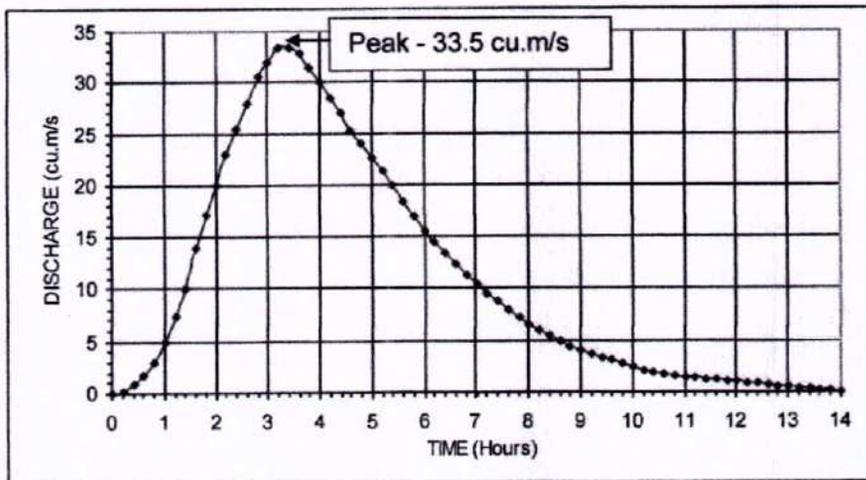


FIGURE 6: UNIT HYDROGRAPH FOR KHORA NALLA

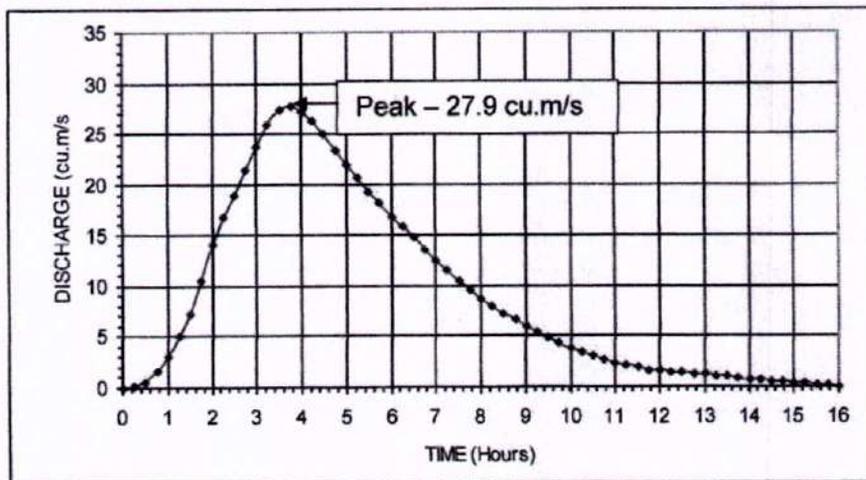


FIGURE 7: UNIT HYDROGRAPH FOR PAKWA NALLA

5.2 Derivation of Storm Hydrograph

5.2.1 As per the guidelines of CWC, storm duration of nala has been estimated as 3 hours for Khora nala and 4 hours for Pakwa nala. The net rainfall ordinates, estimated after deducting loss at the rate of 0.25 cm/hr, are given in Table below:



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Time (hour)	Net rainfall (cm) for catchment of	
	Khora Nala	Pakwa Nala
1	9.6	10.8
2	2.3	02.5
3	1.2	01.2
4	-	00.6

The storm hydrograph was derived using the convolution type process between storm rainfall and the unit hydrograph ordinates. Base flow at appropriate rate was added and storm hydrograph for Khora and Pakwa nalas were derived. The ordinates of storm hydrograph are given in Table 2.

TABLE - 2
ORDINATES OF STORM HYDROGRAPH

TIME (Hours)	DISCHARGE(cu.m/s)	
	KHORA NALLA	PAKWA NALLA
0	2.47	2.34
1	14.12	9.75
2	96.97	69.32
3	274.58	215.90
4	402.73	344.87
5	380.84	386.46
6	291.98	326.89
7	203.16	255.80
8	136.04	190.92
9	87.39	135.24
10	54.47	93.75
11	34.68	61.23
12	22.15	40.03
13	15.00	27.53
14	8.45	20.50
15	3.07	14.28
16	2.47	8.27
17	2.47	3.26
18	2.47	2.56
19	2.47	2.34



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Plots of the hydrograph for Khora and Pakwa nalas are presented in Figures 8 and 9 respectively.

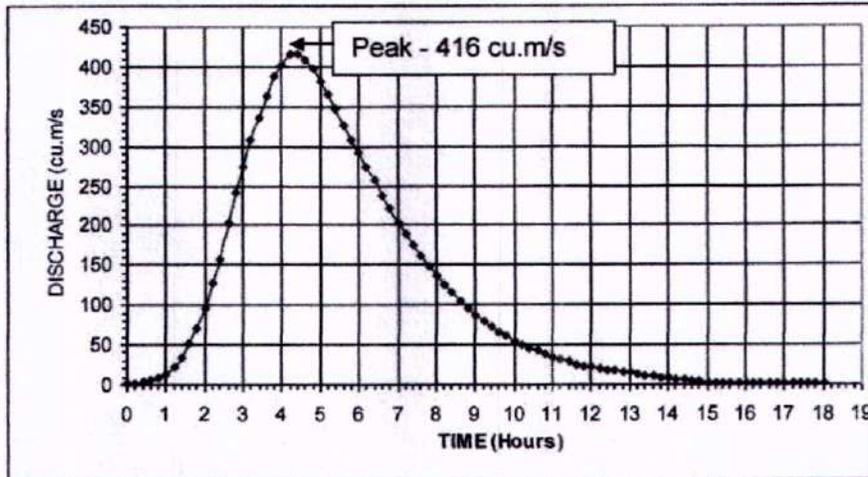


FIGURE 8: STORM HYDROGRAPH FOR KHORA NALLA

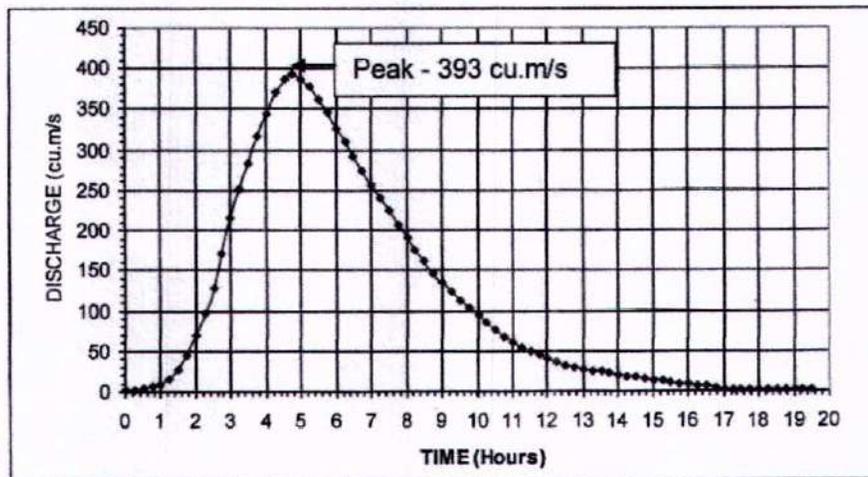


FIGURE 9: STORM HYDROGRAPH FOR PAKWA NALLA

5.3 Estimation of Maximum Discharge

5.3.1 The maximum discharge that is expected to pass through Khora and Pakwa nalas include the following components:

- o Discharge from own catchment.



- o Transferred discharge from central nala at the entry of nala near northern boundary.
- o Pumping discharge from the coal pits.

5.3.2 It is pertinent to indicate here that information on catchment characteristics of central nala were not supplied by NTPC / Jharkhand Irrigation Department and the peak storm discharge for the catchment from central nala was derived from the available information on eastern and western nala. Thus, catchment area of central nala is measured from the map supplied by Jharkhand Irrigation Department as 25.6 sq.km and maximum flood discharge was derived as 207.8 m³/s on the pro rata of catchment area from Khora nala. It is further added that as the coal mining activity would progress towards south, the catchment of central nala would be converted into coal mines and the discharge from catchment area would get converted to the pumping discharge. Accordingly, flood to be transferred from central nala to eastern and western nala would have different values depending on the mining stages in different pits. Initially it is assumed that half of the discharge from central nala would be transferred to eastern and western nalas.

5.3.3 A sum of all these components would lead to likely discharge that would be experienced by each of the nala. It is necessary to route this discharge through each nala to assess the adequacy of cross section to pass the discharge. The details of maximum discharge for each nala are given below:

Sl. No	Discharge Component	Discharge (m ³ /s) for	
		Khora	Pakwa
1	Peak flow of storm hydrograph	415.8	393.3
2	Rain water catchment discharge	103.9	103.9
3	Pumped discharge	001.2	001.2
4	Total	520.9	498.4
	Say	521.0	500.0

5.3.4 It can be seen from above table that maximum discharge in western nala is 521 m³/s and that in eastern nala is 500 m³/s. These values have been considered as design discharge to assess the adequacy of cross section of each nala.



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5.4 Flood Routing Along Nala

5.4.1 Different models are available for routing of flows through channel network. The capabilities of different models were reviewed and HECRAS - 3.1.3 model developed by US Army Corps of Engineers was selected for the present studies. Necessary topographic data in the form of L-section and cross section of nalas were used to define the channel geometry. Roughness co-efficient of 0.04 was specified based on the prevailing conditions of nalas observed during site inspection and comparing these conditions with the standard values.

5.4.2 Upstream boundary for each nala was defined by design discharge derived above and normal flow condition governed by Manning's equation was specified for the downstream boundary. Three different flood discharge as 400 m³/s, 500 m³/s and 600 m³/s were specified at the upstream end and water surface profiles were generated. These are presented in Figures 10 and 11 for Khora and Pakwa nalas respectively. Left and right bank levels as made available by Jharkhand Irrigation Department are also superimposed in these figures as LOB and ROB respectively.

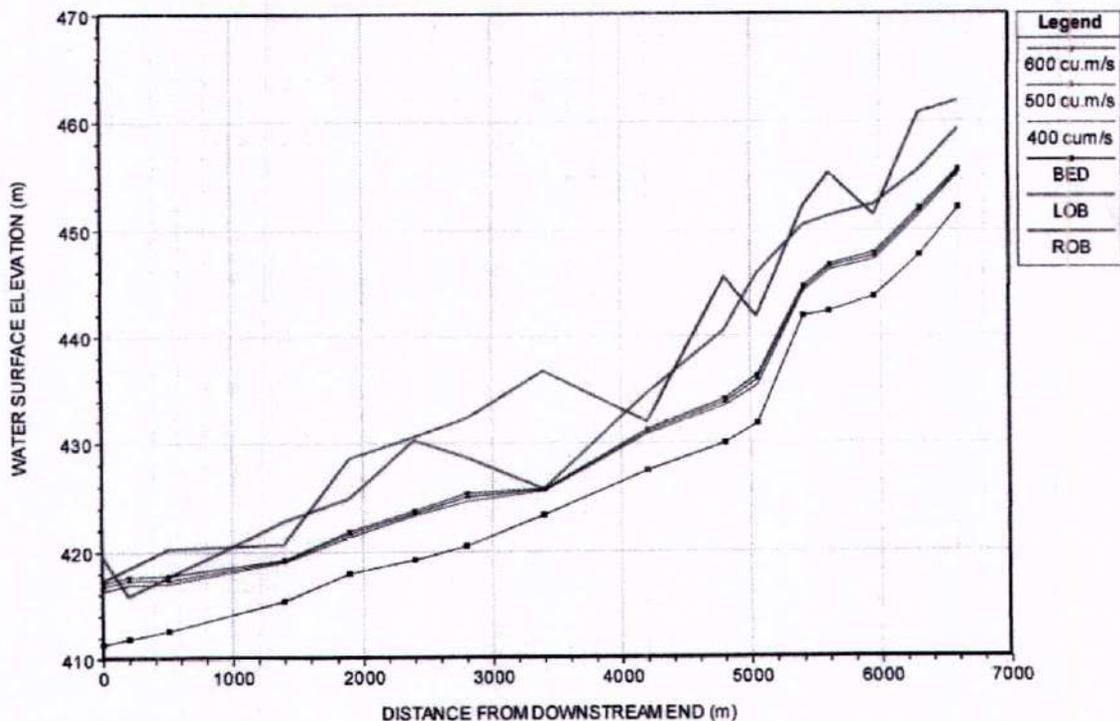


FIGURE 10: WATER SURFACE PROFILES FOR KHORA NALLA



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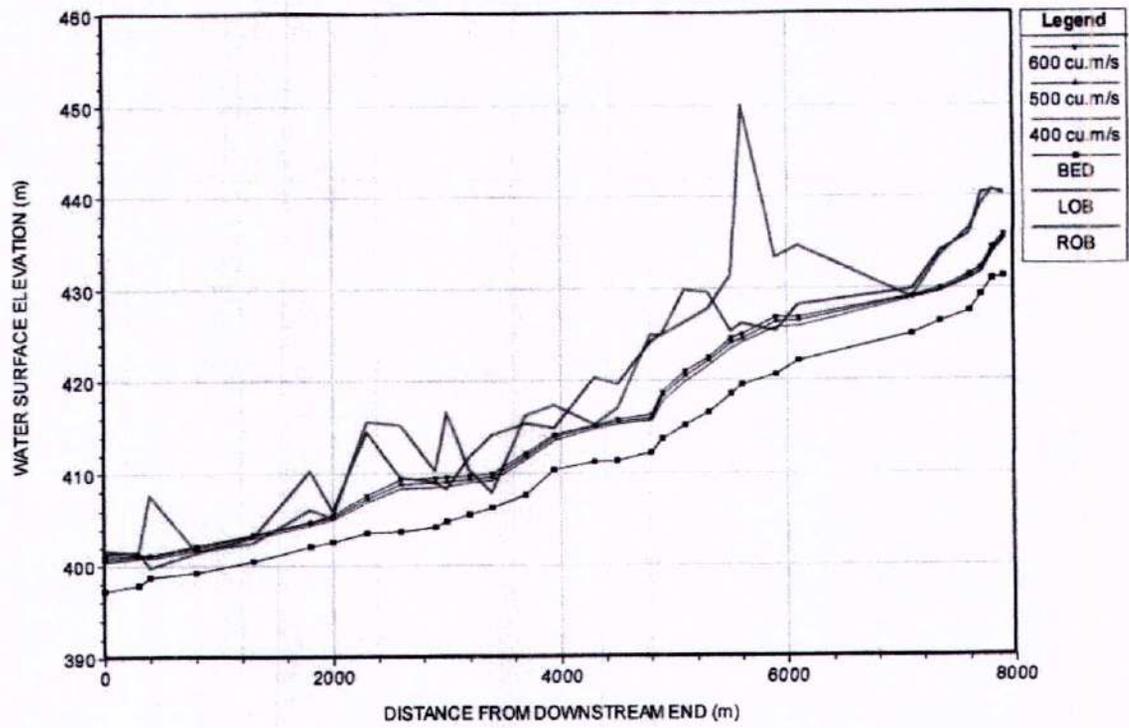


FIGURE 11: WATER SURFACE PROFILES FOR PAKWA NALLA

5.5 Changes in Alignment and Location of Nalas

5.5.1 Attempts were made to ensure that there is no change in the alignment and location of all three nalas in coal mining block. Two Survey of India topo sheets containing positions of the nalas in 1928 and 1978 were used to extract the positions of nalas. These positions were superimposed. The results are shown in Figure 12.

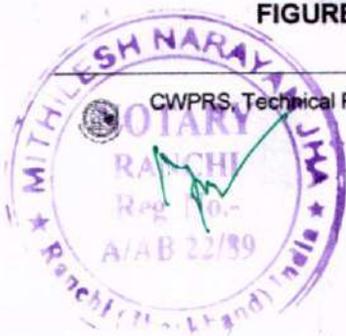


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69

————— 1928 (E) ————— 1928 (W)
————— 1978 (E) ————— 1978 (W)



FIGURE 12: ALIGNMENTS OF KHORA AND PAKWA NALA



5.6 Estimation of Maximum Discharge for Rain Water Catchment canal

5.6.1 Alignment of Rain Water Catchment canal

The mining activities are proposed to be started from northern boundary and progress towards south in a period of about 5 years duration. Details of mining plan are shown in Figure 2. Thus, first 5 years would be used for mining the northern most area and the waste would be dumped in area towards south. The process will be repeated in a period of 25 to 30 years upto southern boundary.

It can be seen from Figure 3 that the mining activities would be disturbed because of the flows generated in central nalla. It is proposed to tap the discharge of central nala at the northern boundary of the coal mining block and transfer flows to eastern and western nalas through rain water catchment canals to be constructed near the outer boundary of the mining block. The proposed rain water catchment is planned at the entry of nalla in northern corner of coal mining block. The proposed alignment of rain water catchment canal was discussed with NTPC officers from EOC, Noida and at site near Hazaribaug. Different alternative alignments were reviewed during the meeting held at Ranchi in March/April 2010. The alignment was finalized in meeting held with NTPC Officers at CWPRS on 3-4 February 2011.

The alignment is more or less along 460 m contour. The exact elevation at the starting point is to be decided after conducting site survey. However, pending availability of exact data it is assumed here that initial bed level of rain water catchment canal would be 460 m. The eastern arm of rain water catchment canal would continue to traverse a distance of about 5100 m before reaching the outfall point in Pakwa nala. Similarly, western arm would continue for a length of about 800 m upto outfall in Khora nala. A fall structure with height of fall equal to difference in elevation of canal bed and nala bed is to be provided at the end of canal alignment.

5.6.2 Eastern Arm of Rain Water Catchment canal

It can be seen from Figure 13 that the discharge in the eastern arm of the rain water catchment canal includes the components of discharge from:

- Catchment of central nala upstream of rain water catchment canal
- Part of the catchment of respective nala draining towards rain water catchment canal



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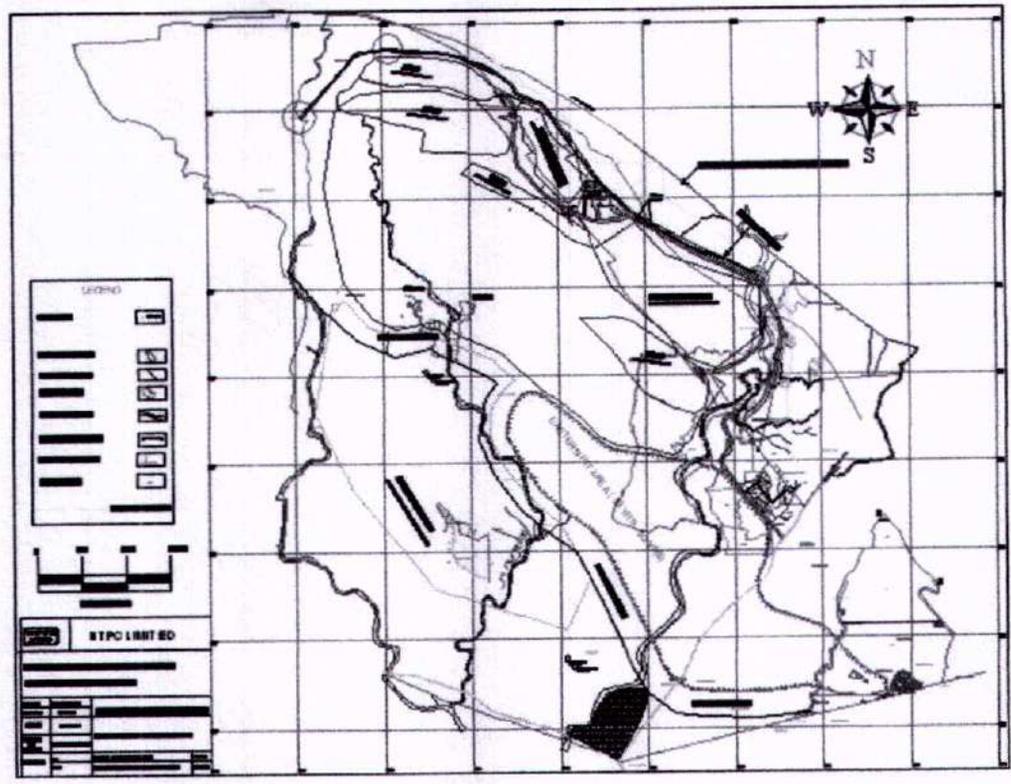


FIGURE 13: ALIGNMENTS OF RAIN WATER CATCHMENT CANAL

Catchment area of central nala upstream of rain water catchment canal measured from the map supplied by Jharkhand Irrigation Department is 7.6 sq. km and maximum flood discharge component from this area was derived as $57.44 \text{ m}^3/\text{s}$. Out of this flow only 90% is proposed to be conveyed to eastern nala i.e. $51.7 \text{ m}^3/\text{s}$ and remaining would be transferred to western nala. Component of discharge from the catchment of eastern nala that would get blocked due to rain water catchment canal was estimated as $1.81 \text{ m}^3/\text{s}$. Thus total discharge in eastern canal would be $53.51 \text{ m}^3/\text{s}$ and by adding 10% to account for differences in survey, manual error in transfer and safety against unforeseen incidences like landslide and unknowingly made blockage, the design discharge for the eastern part of the rain water catchment canal was computed as 58.86 , say $60 \text{ m}^3/\text{s}$.

5.6.3 Western Arm of Rain Water Catchment canal

Contribution of discharge from catchment area of central nala upstream of rain water catchment canal, measured from the map supplied by Jharkhand Irrigation Department as 7.6



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72

sq. km, is 10 % of the maximum flood discharge of 57.44 m³/s i.e. 5.74 m³/s. Component of discharge from the catchment of western nala was estimated as 1.5 m³/s. Thus total discharge in western canal would be 7.24 m³/s and by adding 10% to account for safety, the design discharge for the western arm of the rain water catchment canal was computed as 7.94 say 8 m³/s.

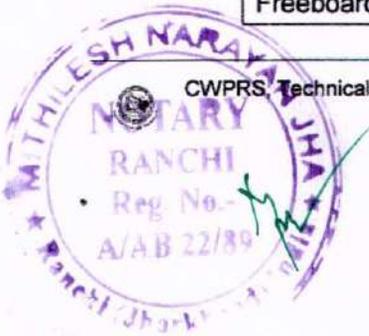
5.7 Design of Rain Water Catchment canal

5.7.1 The rain water catchment canal is required to be designed for the maximum discharge derived above and aligned along the northeastern boundary of the mining block. Since the canal is proposed in a remote hilly area near reserve forest and the bed material consists of boulders, maintenance of the canal would be difficult. Accordingly unlined canal is suggested. The details of a typical section of eastern arm of rain water catchment canal derived for two different bed slopes are given below:

Design discharge (m ³ /s)	60	60
Slope	1 in 1000	1 in 500
Bed width (m)	5	5
Side slope (m)	2 H to 1 V	2 H to 1 V
Depth of flow (m)	3.24	2.74
Manning's n	0.03	0.03
Velocity (m/s)	1.62	2.09
Freeboard (m)	1.5	1.5

5.7.2 The dimensions of western arm of rain water catchment nala were also derived on the similar lines. These are given in Table below. Details of cross sections of both the nalas are presented in Figure 14.

Design discharge (m ³ /s)	8	8
Slope	1 in 1000	1 in 500
Bed width (m)	3	3
Side slope (m)	2 H to 1 V	2 H to 1 V
Depth of flow (m)	1.42	1.19
Manning's n	0.03	0.03
Velocity (m/s)	0.97	1.25
Freeboard (m)	1.5	1.5



147
73

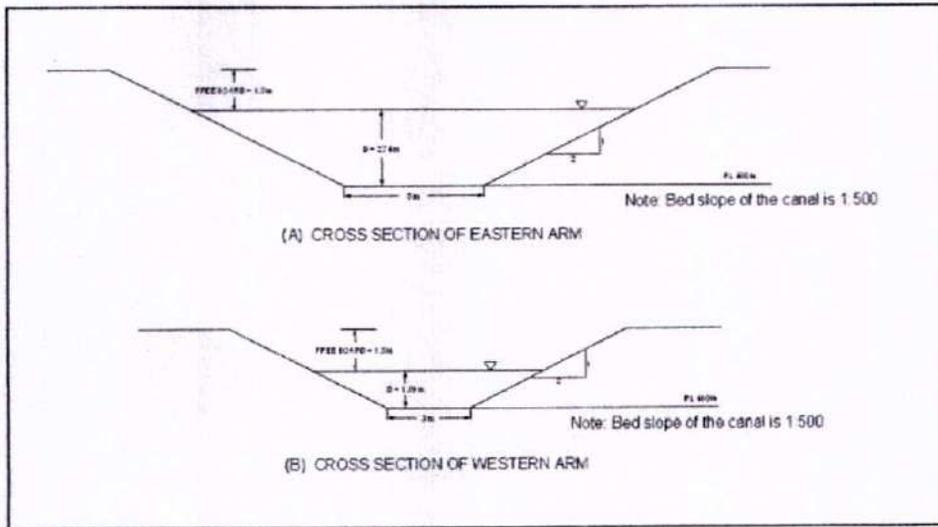
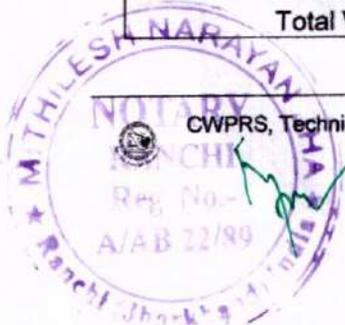


FIGURE 14: CROSS SECTIONS OF RAIN WATER CATCHMENT CANAL

5.8 Review of Check Dam Capacity

5.8.1 Preliminary survey of eastern and western nalas has been carried out by Jharkhand Irrigation Department (JID). Tentative locations of check dams are indicated in Figures 4 and 5.. There would be six check dams each along Khora and Pakwa nala. The basic purpose of the check dam is to store the water requirements of coal mining block. These requirements have been supplied by NTPC as 4576 m³ /day, thus leading to annual volume of 1.67 Mm³. This demand is to be satisfied from twelve check dams on east and west nala. A comparison of the capacity of check dam as estimated by JID with the demand is presented in table below:

Check Dam	Top level of check dam (m)		Storage Capacity (Mm ³) for		Deficit/Excess Capacity (Mm ³)	
	Khora Nala	Pakwa Nala	Khora Nala	Pakwa Nala	Khora Nala	Pakwa Nala
CD1	450	430	0.0775	0.0560	-0.0617	-0.0832
CD2	445	422	0.2077	0.1755	0.0685	0.0363
CD3	433	415	0.0726	0.0476	-0.0666	-0.0916
CD4	423	410	0.2769	0.0371	0.1378	-0.1020
CD5	418	406	0.1288	0.1841	-0.0104	0.0449
CD6	413	402	0.1762	0.1773	0.0370	0.0382
Total Volume			0.9396	0.6776	0.1046	-0.1574



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The negative sign indicates deficit and positive numbers indicate excess over the demand of coal mining block.

6. DISCUSSION OF RESULTS

6.1 The time base of unit hydrograph for Khora nala is 14 hours and the peak discharge of unit hydrograph is $33.5 \text{ m}^3/\text{s}$. Unit hydrograph of Pakwa nala has base period of 16 hours and a peak value of $27.9 \text{ m}^3/\text{s}$.

6.2 It can be seen from Figures 8 and 9 that the storm hydrographs for Khora and Pakwa nalas have a peak value of $416 \text{ m}^3/\text{s}$ and $393 \text{ m}^3/\text{s}$ respectively. As against these, the maximum discharge for the two nalas is 521 and $500 \text{ m}^3/\text{s}$ respectively.

6.3 a) The design discharge in Khora and Pakwa nalas is between 500 to $600 \text{ m}^3/\text{s}$. Hence, maximum discharge of $600 \text{ m}^3/\text{s}$ was considered in the flood routing studies to get an idea of high water level likely to be experienced in each nala. It can be seen from the water surface profile presented in Figure 10 for Khora nala that the left bank of the nala is at lower elevation between 300 m and 600 m chainage and water will overflow for discharge above $400 \text{ m}^3/\text{s}$. Similarly there is a low-lying portion of left bank between 2.75 km and 4.5 km. During the passage of maximum discharge of $521 \text{ m}^3/\text{s}$ through Khora nala water level would rise above the low bank level and enter into the adjoining area. It is necessary to confirm the bank levels as supplied by Jharkhand Irrigation Department. If these levels are low and correct it would be necessary to raise the banks by height of about 3.5 m. The raising of the bank would also be required in the low lying zone around 3.5 km.

b) A review of water surface profile presented in Figure 11 shows that between 0.3 and 2 km right bank of Pakwa nala is at lower elevation than the water levels corresponding of $400 \text{ m}^3/\text{s}$. Similar to the confirmation suggested for Khora nala it would be essential to confirm the bank levels of Pakwa nala. After confirmation of the low levels, raising of the banks by 2.5 m would be required for the maximum discharge of $500 \text{ m}^3/\text{s}$ to restrict water level within the banks and avoid inundation of adjoining areas.

c) The maximum discharge of Pakwa nala is estimated under the presumption that half of discharge of central nala would be received in Pakwa nala. A review of ground contours supplied by NTPC indicate that general slope of ground is from Khora nala to Pakwa nala. As





such, there is likelihood of Pakwa nala receiving flow more than half. In the present situation, it is presumed that the nala would receive 90 % of flow, leading to maximum flow in Pakwa nala as 581.52 m³/s. This would require review of water surface profile of say 600 m³/s. It is pertinent to indicate here that there is very little rise in water levels of 500 and 600 m³/s and as such the raising of bank lines estimated would change by about 0.5 - 0.6 m.

6.4 The rain water catchment canal alignment in Figure 13 is more or less along 460 m contour. The canal would discharge in Pakwa nala arm in hilly region at location of natural steep fall. The exact location can be decided at site and minor adjustments be made in the alignment. It is expected that this would minimize the requirement of constructing fall structure by using naturally available strong rock.

6.5 The locations of Khora and Pakwa nala presented in Figure 12 indicate that there is no major change in the position and alignment of the nalas from 1928 to 1978.

6.6 The maximum discharge in eastern and western arms of rain water catchment canal is estimated as 60 m³/s and 8 m³/s respectively. These are used in the derivation of cross section of eastern and western arms of rain water catchment canal.

6.7 a) Two alternative sections for rain water catchment canal are derived using bed slope of 1/1000 and 1/500. Total length of eastern arm of rain water catchment canal is about 5100 m. Thus, bed level of canal would fall by 5.1 m and 10.2 m respectively at the outfall into Pakwa nala. In other words, bed level of canal at the outfall would be 454.9 or 449.8 m corresponding to initial bed level of 460 m. The ground level at the outfall point is around 435 m. Accordingly, it is suggested to select the section corresponding to bed slope of 1/500. The cross section of eastern arm of rain water catchment canal is shown in Figure 14. In addition stepped structure with suitable height be provided to cover difference in bed level of rain water catchment canal and ground level at the outfall of rain water catchment canal. The structure would also serve the purpose of energy dissipation.

b) Further the length of western arm of rain water catchment canal is about 800 m. This would lead to bed level at the outfall into western nala as 459.2 and 458.4 m for a slope of 1/1000 and 1/500 respectively with initial bed level of 460 m. Similar to eastern arm of rain water catchment canal, section of nala with bed slope of 1/500 is suggested with stepped structure of



suitable height. The cross section of western arm of rain water catchment canal is shown in Figure 14.

6.8 a) Total requirement of coal mining block, as supplied by NTPC is 1.67 Mm³. This is to be satisfied from 12 check dams on Khora and Pakwa nalas. It is assumed that the demand is to be equally distributed. The capacity of check dam was compared with the individual demand. It can be seen from the comparison that capacity of check dams 1, 3 and 5 on Khora nala is less than the individual demand and capacity of other three dams is greater than the demand. As against this, the capacity of check dams 1, 3 and 4 on Pakwa nala falls short of demand and other check dams viz. 2, 5 and 6 have capacity greater than the demand.

b) The total capacity of 12 check dams of 1.62 Mm³ is less than the total demand of 1.67 Mm³. Hence, it would be necessary to make separate arrangement for meeting the deficit of 0.05 Mm³ and losses on account of seepage and evaporation.

c) It is likely that the check dams would be filled with sediment as the transport capacity of flow would be reduced due to storage. It is therefore suggested that periodical cleaning of check dams be carried out by removing the accumulated sediment to ensure availability of storage capacity.

7. CONCLUSION

7.1 Studies for reviewing the situation at Pakri Barwadih coal mining block have been carried out at the request of NTPC, Noida. The important conclusions of the studies are given below:

- A) Estimation of flood hydrograph has been carried out using the method of synthetic unit hydrograph (SUH) as suggested by CWC/RDSO. The SUH method is used because stream gauging data any of the nala is not available. The peak flow of unit hydrograph for Khora nala is 33.5 m³/s and base period is 14 hours. The unit hydrograph for Pakwa nala has base period of 16 hours and peak discharge of 27 m³/s.
- B) The storm duration for Khora nala is 3 hours and the net rainfall ordinates are 9.6, 2.3 and 1.2 cm. In case of Pakwa nala, the storm duration is 4 hours with ordinates of 10.8, 2.5, 1.2 and 0.6 cm.



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- C) The storm hydrograph for Khora nala has a peak of 416 m³/s at 4.4 hours. Pakwa nala hydrograph has a peak value of 393 m³/s at 4.75 hours. The maximum estimated discharge of Khora nala is 521 m³/s and that for Pakwa nala is 500 m³/s.
- D) The flood routing studies along both the nalas have been carried out and it is noticed that raising of banks for Khora nala would be required between 0.3 to 0.6 km and between 2.75 to 4.5 km. In case of Pakwa nala raising of the banks would be required between 0.3 to 2 km. Confirmation of bank levels is suggested and raising of banks to prevent overtopping is to be taken up thereafter. The height of raising would be upto 3.5 m.
- E) Shifting of alignments of Khora and Pakwa nala have been studied by comparing the alignments during 1928 and 1978 survey. Results in Figure 12 indicate that there is no major shift in the alignment and location of Khora and Pakwa nala.
- F) Maximum discharge for eastern and western arm of rain water catchment nala is estimated as 60 and 8 m³/s respectively. Sections of these nala are derived for a bed slope of 1/500 (Figure 14).
- G) Review of check dam capacities is taken with respect to demand of coal mining block. The shortfalls in capacity of check dams on Khora and Pakwa nala are identified and alternative supplementary arrangements are suggested. Periodical cleaning of check dams and making separate arrangements to meet annual deficit with losses is necessary to ensure the availability of water.

8. ACKNOWLEDGEMENT

The studies to decide location and type of intake were carried out at the request of M/s NTPC, Noida. Discussions with Shri S M Khare, General Manager and his team members are acknowledged with thanks. Excellent arrangements were made by team of M/s NTPC, Hazaribagh during the site inspection and discussions.

Dr. I D Gupta was Director during the conduct of studies and preparation of report. The studies were supervised by Shri S. Govindan, Jt Director. Assistance provided during the conduct of studies by Smt Neena Isaac Chief Res. Officer, Shri P S Kunjeer Research Officer, Smt Sneha Jayade Res. Assistant and other staff members are acknowledged with thanks.





भारत सरकार / Government of India
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Ministry of Environment, Forest & Climate Change
एकीकृत क्षेत्रीय कार्यालय/Integrated Regional Office

पता: द्वितीय तल, झारखण्ड राज्य आवास बोर्ड मुख्यालय, हरमू चौक, राँची, झारखण्ड - 834002
Add: 2nd Floor, Headquarter-Jharkhand State Housing Board, Harmu Chowk, Ranchi, Jharkhand - 834002
Tel: 0651-2410002, 2410007; E-mail: ro.ranchi-mef@gov.in



मिसिल सं० FP/JH/min/38798/2019/717

दिनांक 25.11.2022

सेवा में,

श्री चरणजीत सिंह,
वैज्ञानिक 'डी' (FC Division)
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय,
इंदिरा पर्यावरण भवन, अलीगंज,
जोरबाग रोड, नई दिल्ली-110003

विषय: पकरी-बरवाडीह कोल माईन नॉर्थ ईस्ट प्रोजेक्ट, मेसर्स नेशल थर्मल पॉवर कार्पोरेशन लिमिटेड जिला हजारीबाग स्थित का स्थल निरीक्षण एकीकृत क्षेत्रीय कार्यालय, राँची द्वारा किए जाने के संबंध में।

सन्दर्भ: पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार के पत्र संख्या 8-56/2009-एफ.सी. (vol) दिनांक 07/07/2022

महोदय,

उपरोक्त विषयान्तर्गत श्रीमान् के संदर्भित पत्र के आलोक में परियोजना से संबंधित वांछित स्थल निरीक्षण किया जाकर तैयार प्रतिवेदन को मार्गदर्शिका के पारा 1-21-(III) के आलोक में विभागाध्यक्ष के अनुमोदनोपरांत क्षेत्रीय सशक्त समिति के समक्ष प्रस्तुत करा उनकी संस्तुति के साथ संलग्न प्रेषित की जा रही है।

संलग्न: यथा उक्त

भवदीय

25/11/22
(शशि शुकल)

सहायक वन महानिरीक्षक
एकीकृत क्षेत्रीय कार्यालय, राँची



Site Inspection Report for Pakri-Barwadih Coal Block of M/s NTPC.

An application for diversion of 331.198 Ha of Forest land in Barkagaon Range of Hazaribagh West Forest Division is under consideration as proposal no. FP/JH/Min/38798/2019. This proposal is for coal-mining by M/s NTPC within its lease area of 4695 Ha. A Forest area of 1026.438 Ha within the lease has already been diverted (Proposal No. FP/JH/Min/693/2009; Stage-II vide letter dated 17/9/2010) and mining is happening there since 2016.

The extant case is proposed North-West extension of the existing quarry.

According to the FC Rules, the Integrated Regional Office, Ranchi was requested by ministry to vide its letters dated 23/2/2022 & 7/7/2022 to inspect the lease area, proposed diversion area & CA area involved in the proposal. Ministry also asked IRO Ranchi to assess the status of compliance of conditions stipulated in the approval dated 17/9/2010, granted towards the area of 1026.438 Ha in light of para 1.21 (iii) of the FCA Handbook.

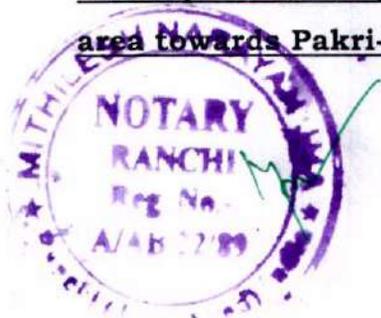
Accordingly, the team of IRO Ranchi, comprising its AIG, visited the site on 28/10/2022.

During the site inspection among others following representatives of state Forest Department and project proponents were present along with the visiting team: -

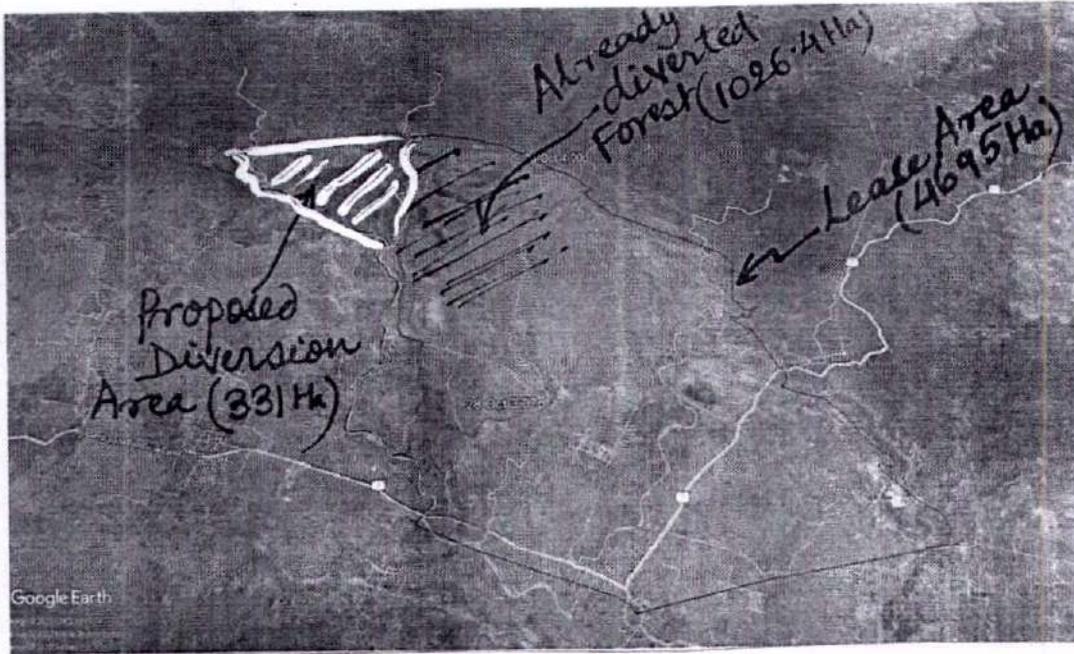
1. Shri R.N. Mishra, DFO Hazaribagh West
2. Shri Shailendra Kumar, IFS, Hazaribagh West
3. Shri Satyam Srivastava, Head of Project, NTPC
4. Shri Birendra Kumar, AGM (Environment), NTPC

The site inspection was preceded by an on-site presentation made by NTPC officials to give an overview of the extant fresh proposal and the status of S-II compliance towards already diverted 1026.438 Ha forest area.

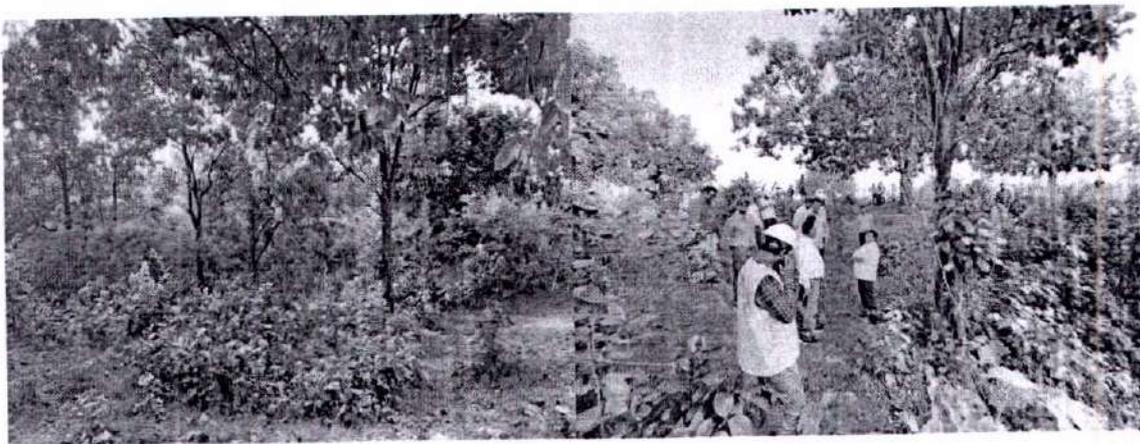
FC Proposal No. FP/JH/Min/38798/2019 for diversion of 331.198 Ha forest area towards Pakri-Barwadih (North-West) Coal Mining Project: -



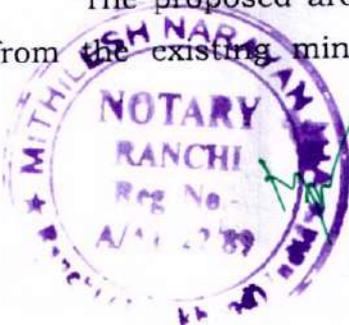
In this fresh proposal for diversion of 331.198 Ha, the proposed forest-area is located in the North-Western side of the already diverted area (1026.438 Ha; S-II vide letter dated 17/9/2010, as depicted in the following imagery: -



It is seen that the proposed forest area is contiguous to the already diverted area. The area has fairly good vegetative density and undulating terrain. The forest officials present there apprised that occasional movement of elephant herds too is reported in the area.



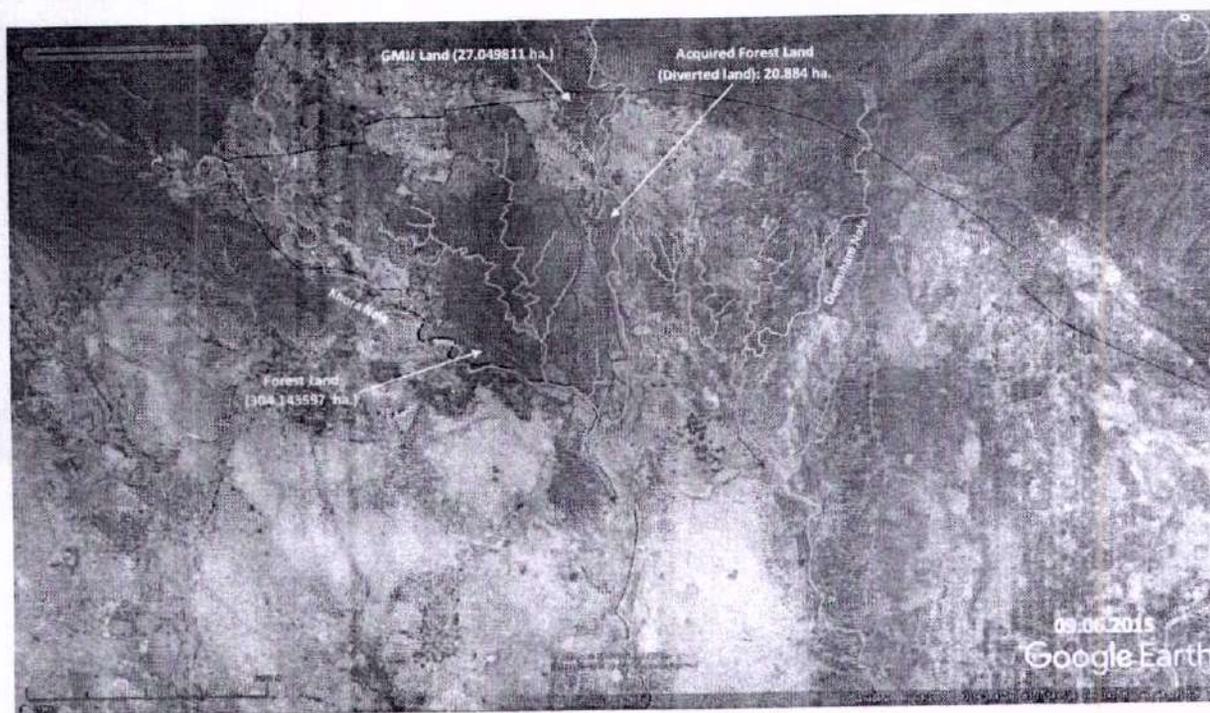
The proposed area (331.198 ha; FP/JH/Min/38798/2019) is separated from the existing mines (1026.438 Ha area; FP/JH/MIN/693/2009) by a



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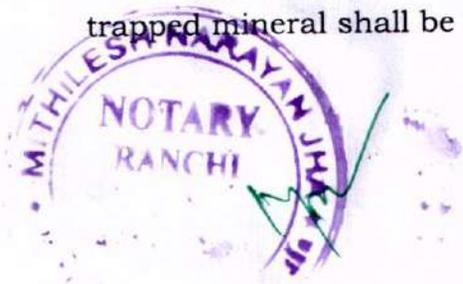
tributary of the Khora Nala which constitutes the western boundary of the lease area (as depicted below).

The total lease hold of the North-West Project is 485.16 Ha which includes 113.56 Ha of tenancy land, 19.71 Ha of GM Land and 351.189 Ha Forest land which includes 20.692 Ha already diverted forest land 9 from 1026.438 Ha) apart from the applied 331.198 Ha forest land.



The total coal bearing area is 471.06 Ha which has mineable reserve of 138.96 MT. with a production capacity of 3 MTPA, the total project life is planned for 52 years.

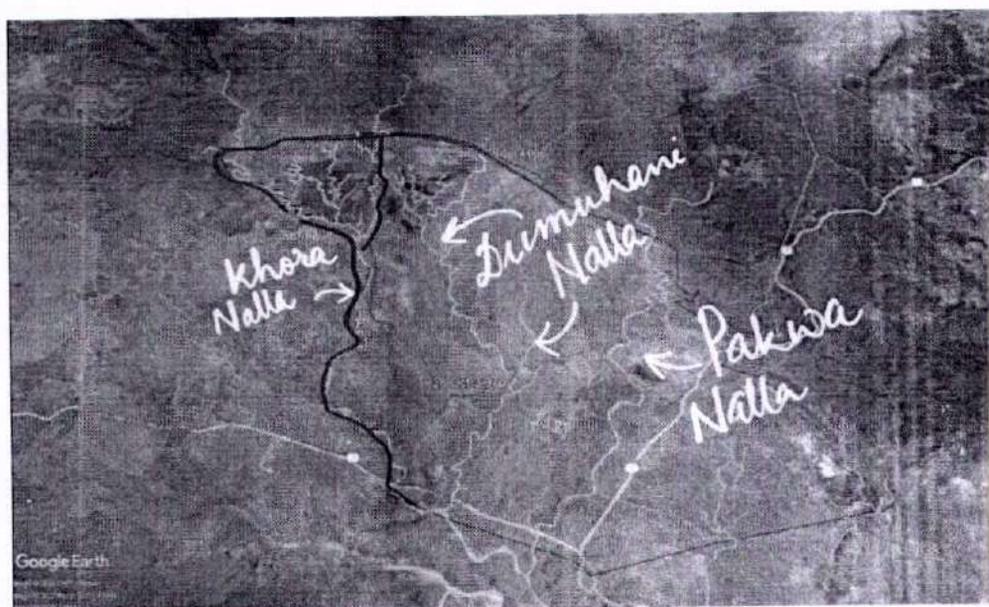
The project proponent has emphasized that the 15 mtr. safety zone at the boundary of proposed and existing area has been incorporated in the mining plan and therefore 33.18 MT of mineral reserve shall be kept as Barrier & Batter. The trapezoid form of the earth below the undisturbed surface accounts for such staggering occluded minable mineral resource – about 30% of total. Upon further enquiry on the matter, the representatives of user agency apprised that this trapped mineral shall be mined in 2nd phase of project – some 40 years later.



User agency, in attempt to capitalize the discussion, tried to justify the violation of condition No. 8 imposed in final approval of 1026 Ha area.

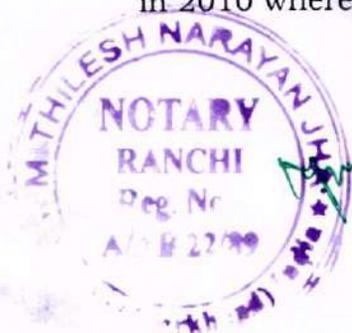
The condition No. 8 of the final approval dated 17/09/2010 for 1026.438 Ha (adjacent forest area, to same user agency) demanded, "User agency will take up programme for at least 50m greenbelt along the sides of the Pakwa Nallah and Dumuhani Nallah from the initial years under the supervision of the State Forest Department."

The situation of Pakwa Nallah & Dumuhani Nalla (Khora Nalla too) is shown in the imagery below.



User agency tried to explain that since Dumuhani Nalla was running almost through the middle of the project area, leaving 50m belts on both sides of it would have resulted in unviable mining operation as massive reserve would have left unutilized. Therefore, they resorted to mining there too.

The inspecting team of IRO asked the project proponent that if such massive was the implication why appropriate representation in time was not made by user agency considering the fact that conditions under S-II were issued in 2010 whereas actual mining started six years later in 2016.



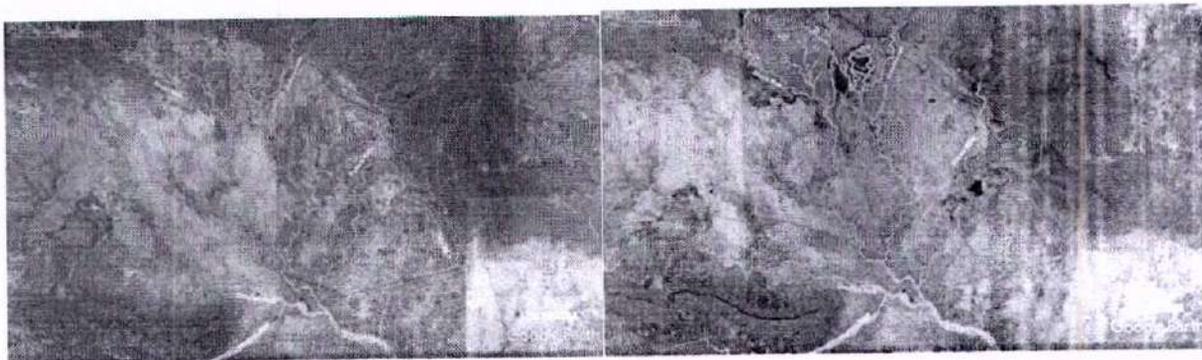
Situation portray least botheration of user agency towards the compliance of conditions mentioned in final approval of Forest clearance while implementing the project.

Further project proponent apprised that Dumuhani nalla was to be diverted as per the approved mine plan (Chapter 5.2.11) of CWPRS Pune. Even then U/A gave consent to develop greenbelt around it for sake of processing hurried Forest clearances. (Stage-I issued on 11/5/2010, S-II on 17/9/2010).

They also informed that user agency has procured required permission to divert the Nallah from water Resource Department, Govt. of Jharkhand vide letter dated 19.3.2013. State Forest Department officials were asked to clarify whether or not the water Resources department is empowered to accord such permission in forest area or not; the officials responded in negative.

In such a scenario it is evident that user agency's prime concern was revenue generation only with least care towards the compliance of conditions by which the very approval of mining in the area was conveyed.

The drainage system of Dumuhani Nalla prior to mining operation commencement (in 2015) and post mining operation (2019) are shown in the below two satellite imageries.

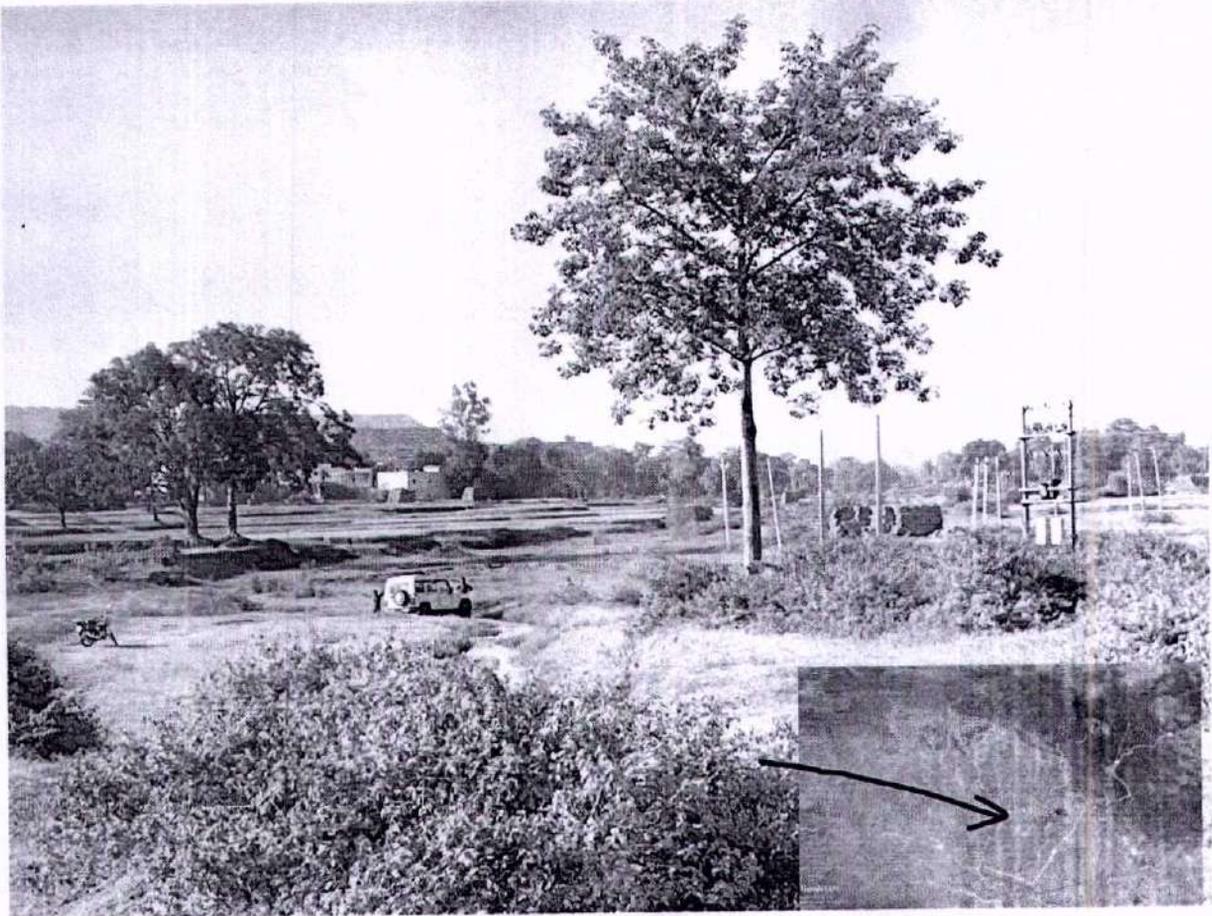


From the two satellite imagers it is quite clear that the mining operation has destroyed the very region from where the Dumuhani Nalla was rising/originating. Since the source region itself is completely dug out, the nalla course now receives almost no water in itself.



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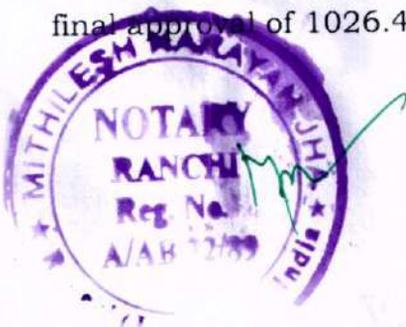
The following photo shows the amount of water in Nalla at Point 'A' at the time of visit.



Therefore, it becomes hence clear that user agency has not complied with the condition no. 8 of final FC approval.

Further condition No. 9 demands that coal evacuation should be done through high speed conveyor of 20 m width. During site inspection it was found that coal is being transported through conveyor partially, coal was seen being transported by road too. This apparently tantamount to partial violation of condition no. 9.

User agency has done considerable compliance related to soil, moisture and water conservation in the area including other conditions imposed in the final approval of 1026.438Ha.



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Site inspection to proposed CA (DFL) area:-

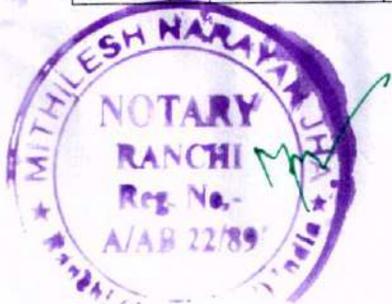
The proposed CA in Degraded Forest Land (DFL) for the extant proposal is proposed over 665.237Ha of Degraded Forest land in Barkatha Forest Range, Hazaribagh (West) Forest Division. During the visit to the proposed CA DFL area, the following officials/representative were present:

- Sh. Shailendra Kumar, IFS, Hazaribagh (West) Forest Division
- Sh. Kamallesh Singh, Range Officer of Barhi/Barkatta.
- Sh. Rajendra Kumar, SBO.
- Sh. Deb Chand Mahto Kumar, SBO.
- Sh. Pavan V. Khandwe, Addl. General Manager (Mining), PB, NTPC Ltd.
- Sh. Birendra Kumar, Addl. General Manager (Env. Mgmt.) PB, NTPC Ltd.

The CA DFL area is constituted/identified in 7 patches spread across 8 villages. Most of the area was found suitable for raising compensatory afforestation. Few patches were found to have considerable amount of vegetation and the forest officials and the representatives of user agencies were asked to deduct the dense areas from the net workable extents. Considering the huge spatial extent of the patches, it may be difficult to completely replace the patches, hence gross area and net area consideration was asked for incorporation. Absence of existing boundary pillars, kuccha/pakka encroachments and less staff in position were few ubiquitous impediments observed which officials ensured to take care off.

The entire proposed CA (DFL) is situated in 8 villages, the details provided in the following table:

Name	Area in ha.	Observation (During Site Visit)
Patch 1	36.459	-
Patch 2	126.282	-
Patch 3	119.112	-
Patch 4	92.011	Encroachment small (village) has been observed
Patch 5	39.856	-
Patch 6	68.433	-



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Patch 7	183.082	Encroachment (small village at Pandanatanr & Brick kiln at Bero) has been observed.
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Assessment of Violation in context with para 1.21 of FC Handbook:-

Since the user agency has violated the condition No. 8 of final FC approval for approved 1026.438 Ha forest land in the lease, the para 1.21 (III) is applicable to assess the violation.

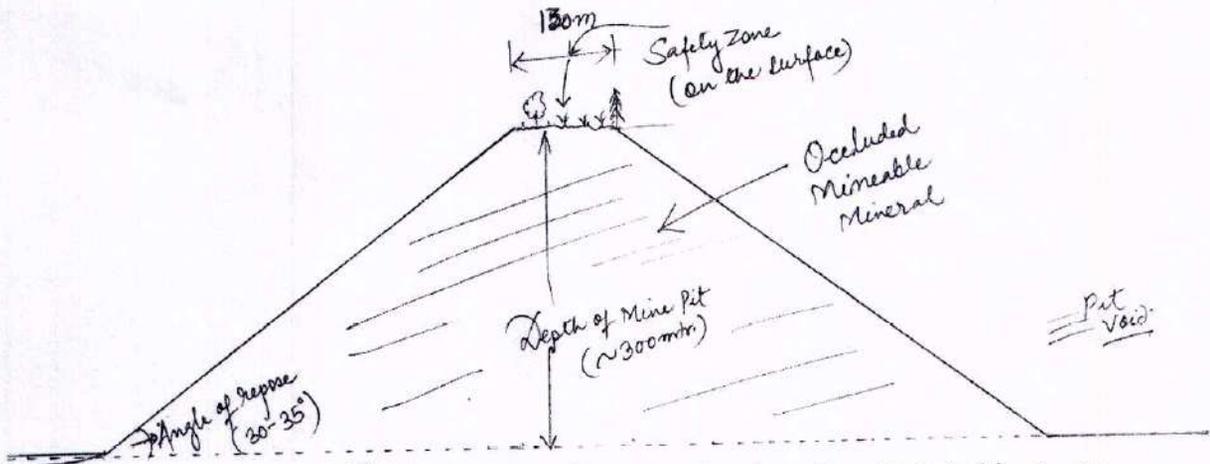
Further, as the violation has been done by way of mining in the otherwise greenbelt, the situation of *fait-accomplie* has been created and hence now user agency can not comply with the condition anyways.

This *fait-accomplie* situation is the result of user agency's urge to extract more mineral & hence revenue generation.

As per condition no. 8, user agency was supposed to maintain greenbelt of 50 meters width on the both sides of the stream (Nalla). Considering the total length of the Nalla, 12KM (12000 meters) within the lease area, and average width of 30 meters, the user agency was supposed to establish & maintain greenery (and not mining) in $12000 \times 130 = 1560000 \text{ m}^2$ or 156 Ha area.

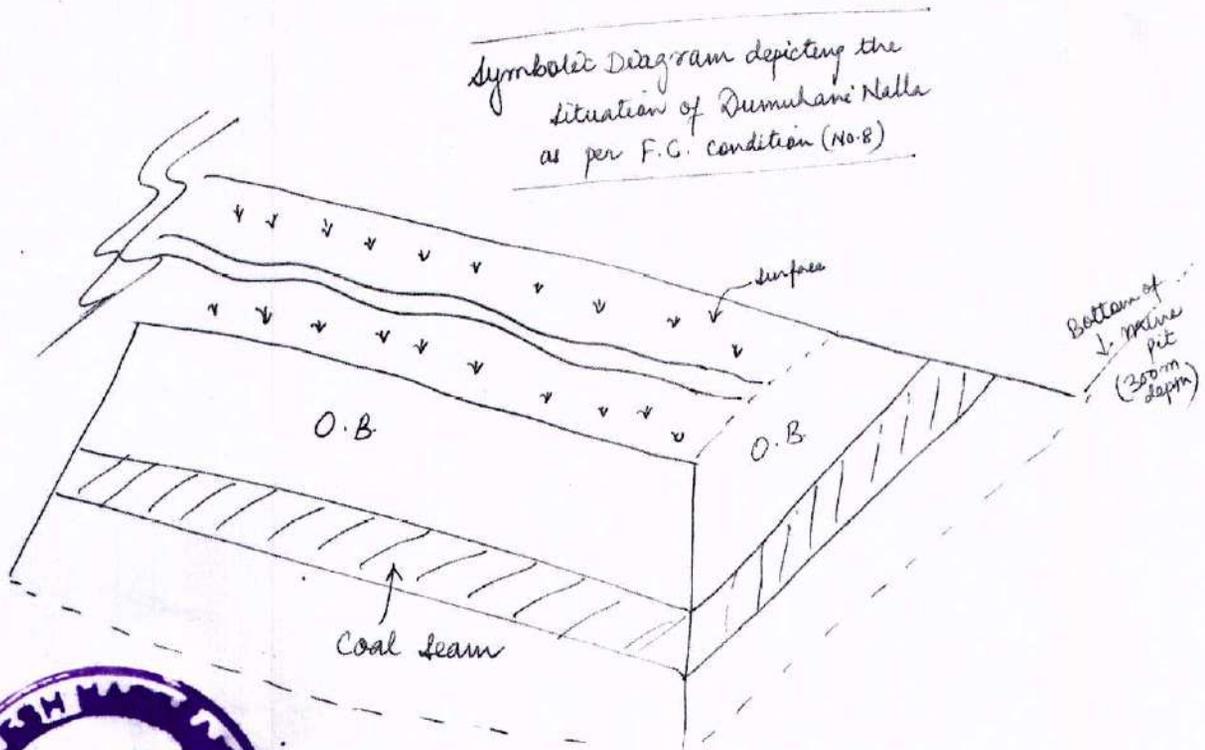
Considering the Angle of Repose (AoR) of a relaxed 45° , and average depth of mining as 300meters;





∴ Representative diagram showing the cross-sectional view:-
 considering a more relaxed AOR of 45°; and Average stream bed width = 30mtr
 Cross-sectional Area = $\frac{130 + 730}{2} \times 300$
 = 129000 m²

A Total Earth of 129000 m² X 12000m = 1548 million m³ would have left undistributed throughout the course of Dumuhani Nalla within the lease (as depicted in the symbolic diagram below).



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Considering a minimal 10% of total earth as useful mineral, the volume of Coal would be 154.8 million m³.

Therefore, considering the specific gravity of 1.8 for these coal, the total amount of Coal mined by violating the FC Condition is 278MT.

Hence, for mining this staggering amount of mineral the user agency has violated the condition of FC and the area involved in violation is 156 Ha.

Also, by mining in the otherwise postulated green area, the user agency has saved itself upon the cost of Afforestation too which was expected on the violated land.

Therefore, in assessment of the quantum of violation, the following points are considered (in accordance to the ministry's guideline dated 1/8/2017): -

1. Penal NPV: - 2 times of the Normal NPV as per para 1.21(iii) of the FC Guidelines Handbook.
2. Loss of Eco-system services that the green belt would have provided: - Equal to the NPV.
3. The greenbelt along the Nalla would have served as a good Habitat for avian fauna and other several biodiversity. Therefore, 50% of NPV is accounted for Habitat Destruction as per the guideline dated 1/8/2017.
4. Compensatory afforestation and soil moisture conservation cost that the user agency should have borne as per the laid condition. Since afforestation was to be done in linear patches, considering the increased fencing the rate of Afforestation is considered as Rs 5 Lakh per Ha.

Therefore, the Penalty assessed for the Fait-accompli violation is:

156 X (3.5 times NPV+ Afforestation cost)

=156 X (3.5X1357110+500000) Eco class-III, Density=.8

=Rs 818982060/-.



Recommendations of IRO Ranchi:

The extant case was discussed in the REC meeting in light of the violation done by the user agency in the adjacent/contiguous area of the same mining lease.

REC members took serious note of the apathetic attitude of project proponent towards the conditions on which the very Forest Clearance was accorded towards the mining in forests.

Therefore, REC unequivocally recommended that the extant proposal of project proponent in the same lease area should only be considered after the penalty of Rs 818982060/- (Rupees Eighty One Crore Eighty Nine Lakh Eighty Two Thousand and Sixty only) is realized from user agency for violating the FC conditions and creating fait-accompli situation at the site against the guidelines of Hon'ble Supreme Court of India also.

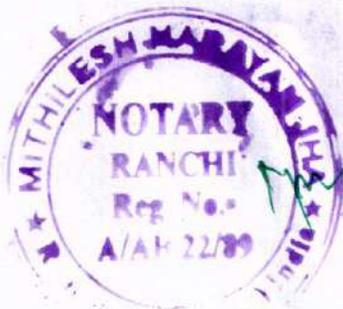
Shashi Shankar
25/11/22

Shashi Shankar

AIGF, IRO Ranchi.

Santosh Tewari
Santosh Tewari

Dy. DGF, IRO Ranchi.



Armeruse-08'
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भारत सरकार / Government of India
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Ministry of Environment, Forest & Climate Change
एकीकृत क्षेत्रीय कार्यालय/Integrated Regional Office

पता: द्वितीय तल, झारखण्ड राज्य आवास बोर्ड मुख्यालय, हरमू चौक, राँची, झारखण्ड - 834002
Add: 2nd Floor, Headquarter-Jharkhand State Housing Board, Harmu Chowk, Ranchi, Jharkhand - 834002
Tel: 0651-2410002, 2410007; E-mail: ro.ranchi-mef@gov.in



मिसिल सं० FP/JH/min/38798/2019/1014

दिनांक 03.04.2023

सेवा में,

सहायक वन महानिरीक्षक, (FC Division)
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय,
इंदिरा पर्यावरण भवन, अलीगंज,
जोरबाग रोड, नई दिल्ली-110003

विषय: पकरी-बरवाडीह कोल माईन प्रोजेक्ट, मेसर्स नेशल थर्मल पावर कार्पोरेशन लिमिटेड जिला हजारीबाग स्थित का स्थल निरीक्षण एकीकृत क्षेत्रीय कार्यालय, राँची द्वारा किए जाने के संबंध में।

सन्दर्भ: पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार के पत्र संख्या 8-56/2009-एफ.सी.पी.टी दिनांक 07/03/2023

महोदय,

उपरोक्त विषयान्तर्गत श्रीमान् के संदर्भित पत्र के आलोक में परियोजना से संबंधित वांछित स्थल निरीक्षण FAC द्वारा गठित उप-समिति के सदस्यों द्वारा दिनांक 17.03.2023 को किया जाकर तैयार प्रतिवेदन को विभागाध्यक्ष के अनुमोदनोपरांत उनकी संस्तुति के साथ संलग्न प्रेषित की जा रही है।

संलग्न: यथा उक्त

भवदीय

(शशि शंकर)

सहायक वन महानिरीक्षक
एकीकृत क्षेत्रीय कार्यालय, राँची



Site Inspection Report of Pakri-Barwadih Coal Mining North West Project.

An FC Proposal with proposal no. FP/JH/MIN/38798/2019 is applied by user agency- NTPC limited in Hazaribagh West Forest Division in Hazaribagh West District Jharkhand for diversion of 331.198 ha. of forest land towards Pakri-Barwadih Coal Mining North West Project.

While processing the proposal, Ministry vide its letter dated 7.07.2022 requested Integrated Regional Office Ranchi to inspect the site and to submitted the site inspection report. The site inspection report was to include the inspection of area proposed for diversion, area identified for raising Compensatory Afforestation (CA, DFL) as well as to assess the status of compliance of condition stipulated in the approval dated 17.09.2010 granted earlier for an area of 1026.43 ha. (FP/JH/MIN/693/2009) for the same project within the lease. Ministry vide its letter dated 23.02.2022 also has earlier requested IRO Ranchi to take appropriate action as per provision of FC guideline handbook para 1.21 (3) towards reported partial compliance/non-compliance in the latter case. Accordingly, Integrated Regional Office inspected the site on 28.10.2022 and put up the comprehensive report to ministry vide its letter dated 25.11.2022 which included inspection reports of area proposed for diversion, that of area proposed for compensatory afforestation (CA) as well as assessment of non-compliance of conditions imposed in final FC approval accorded for area of 1026.43 ha. as per FC guideline handbook para 1.21.

The proposal was examined /discussed in FAC meeting held on 09.12.2022 in light to the modification sought by user agency in the condition of stage-II. In the meeting sub-committee was constituted to visit the area with the following objective.

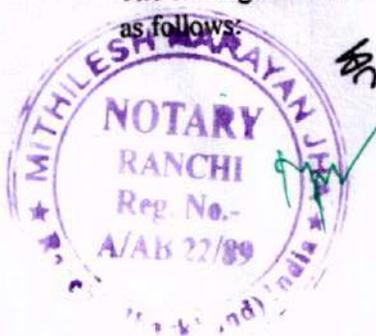
- I. Assessment of hydrological regimes of the area and impact of ongoing mining operations of the user agency in general and Dumuhani Nallah in particular and changes brought in by the User Agency and its impact on the ecology of the area.
- II. Efficacy of mitigation measures, if any, undertaken by the user agency in their lease area
- III. Holistic assessment of 1787 ha of forest land involved in the mining lease of the user agency, its present status and legitimacy of future use proposed by the User agency.

The sub-committee consisting of the following members visited the area on 17.03.2023:-

- 1. Deputy Director General of forests IRO, Ranchi
- 2. Assistant Inspector General of Forests IRO Ranchi
- 3. Divisional Forest Officer, Hazaribagh (West) Division, Jharkhand
- 4. Dr. Anshumali, Professor & Head, Department of Environment science and Engineering, IIT(ISM), Dhanbad- 826004, Jharkhand (Technical Expert member of the Sub-Committee)

The visit was specific to the query and mandate given by FAC to the Sub-committee. The Expert member of the Sub-Committee Dr. Anshumali, thoroughly inspected the examined the area in the context of the objective and has presented the technical report which is annexed herewith (Annexure-I).

The findings of the sub-committee towards the aforesaid objectives are presented point-wise as follows:



I. **Assessment of hydrological regimes of the area and impact of ongoing mining operations of the user agency in general and Dumuhani Nallah in particular and changes brought in by the User Agency and its impact on the ecology of the area:** The technical expert of the sub-committee after exhaustive visit of the area and after extensive study of the region opined that the hydrologic regime of the area is being impacted/has been impacted more by other anthropogenic activities like agriculture, sand/soil mining and brick kilns than the contextual coal mining and its related ancillary activities. It has been emphasised in his report that Khorra Nalla (in west of active mining area) and Pakwa Nalla (east) were present along with a few small tributaries at the time of inspection; and the mining activities or haul road boundary are at distance from these Nallas having no visible impact. This epitomises NTPC Pakribarwadih Coal Mine adhering with the guidelines.

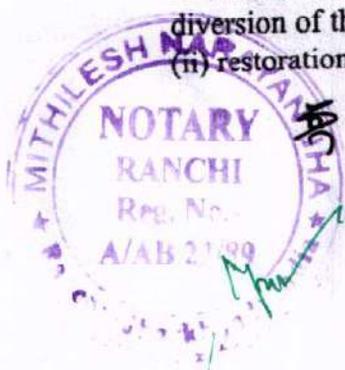
It is further added that present watershed status of the Khorra Nalla (west) and Pakwa Nalla (east) are not matching with related Survey of India Toposheet no. 73E/1. This irreversible damage to the natural boundaries of the Nallas are majorly attributed to other anthropogenic activities than mining in the area.

The central Dumuhani Nalla was found to be realigned with Khorra Nalla (west) and Pakwa Nalla (east) according to the landscape gradient by NTPC Pakribarwadih Coal Mine in the upstream to the mining lease area and maintained distance from the OB sites. Therefore, all the first order streams contribution that originated before the lease in the hilly terrain has been taken due care and has been diverted to the two of the Nallas. Therefore, all the hilly runoff is joining the realigned portion of Dumuhani Nalla. Further, certain portion of the upstream Dumuhani Nallah was found straightened by the user agency to optimize the coal extraction, OB management and haul road maintenance.

It is also highlighted that the hydrological status of the Dumuhani Nallah in lease area, which is yet to be mined out, is highly affected due to the agriculture activities, sand mining, soil mining, and brick manufacturing. The present watershed status of the Dumuhani Nallah is not matching with corresponding Survey of India toposheet no. 73 E/1.

Therefore, prima-facie the three watersheds (Khorra, Pakwa and Dumuhani) have been subject to extreme diversion by locals for their livelihood amelioration well before the mining activities begun in the region. Since, the lease area is under different stages of mining development by the user agency and all people have to shift from the leased area, the diverted streams do not account/contribute for water deficit for habitations beyond the lease area. The leased area is dedicated for the coal mining while livelihood options and ecosystem services for the local people are compensated or will be compensated by the user agency. Therefore, retaining the Dumuhani Nalla and developing green belt in between extensive and intensive coal mining plan does not hold good. Hence, the technical expert member suggests that the green belt development can be notified for Khorra Nalla instead of Dumuhani Nalla (a tributary of Khorra Nalla).

Therefore, the hydrological expert member of the committee, after taking into consideration the holistic approach, has concluded with the recommendation of (i) diversion of the Dumuhani Nalla (a tributary of Khorra Nalla) for coal mining and (ii) restoration and conservation of the Khorra Nalla (west) and Pakwa Nalla (east)



a

watersheds on priority basis under supervision of the forest department and expert hydrologists/agencies and develop their watershed status as per the Survey of India toposheet no. 73 E/1.

2 **Efficiency of mitigation measures, if any, undertaken by the user agency in their lease area:** The representatives of user agency present at the time of inspection informed the inspecting committee that mining in the area started in the year of 2016 and simultaneously the impact mitigating measures were also kept in place with more emphasis on plantation/green belt development, soil moisture and water conservation.

The following mitigation measures have been under taken by the user agency:

- Fencing and maintenance of around four and a half kilometre long safety zone along Khorra Nalla by planting around 32000 saplings.
- Pakwa Nalla side area is rich in vegetation, there has been protection of existing vegetation as well as planting of about 5000 saplings along it.
- They have also informed that they have taken multiple sapling distribution drive among locals to increase the green cover in the vicinity.
- To check the runoff from the area and to ensure prolong inundation of these Nallas (Khorra and Pakwa) user agency has constructed 12 units of Check dams.
- User agency has apparently undertaken measures to protection of removed top-soil and unsolicited flaring of overburden dump by taking up plantation activities over them.

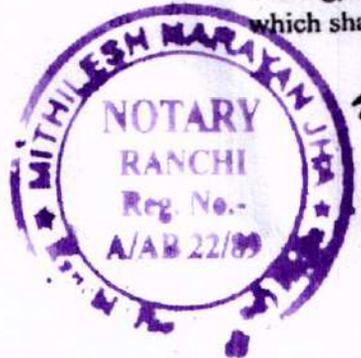
The details of water conservation measures undertaken by user agency as stated by them at the site is produced as Annexure- II.

The user agency has informed that their mitigative measures have accounted for recharge of groundwater to the tune of 1,48,796 cum/year. Similarly, 16.18 Lakh cum of water capacity creation has been acclaimed by user agency by way of created Check dams.

These claims of user agency need to be studied for ascertaining the efficiency of the mitigative measures adopted by it. Considering the gestation period of these measure spread to a larger temporal context too, this study becomes imperative.

3 **Holistic assessment of 1787 ha of forest land involved in the mining lease of the user agency, its present status and legitimacy of future use proposed by the User agency.**

As informed by user agency according to the mine Plan total mining lease area is 4695 ha and out of that 1787 ha is the forest land. Out of total forest area located within the lease, 1699.4 ha of forest land is within the prospective mining area (coal-bearing) and rest 87.6 ha forest land is outside the proposed/intended mining area which shall be used for development of ancillary infrastructure.



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Further, out of the 1787 ha of forest land, 1026.438 ha forest land have already been diverted vide Stage-I and Stage -II FC no.: F. No. 8-56/2009-FC dated 11.05.2010 and 17.09.2010 respectively. This 1026.438 ha of the forest land is being used for opencast mining, coal evacuation corridor and development of the mine infrastructures necessary to operate the mine.

In addition, 6.291 ha of forest land was diverted for development of the railway siding vide FC No. - Stage-I vide Lr no. FP/JH/ RAIL/ 16048/ 2012/ 518 dated 26.05.2016 and stage-II vide Lr no. FP/JH/ RAIL/ 16048/ 2012/ 2686 dated 31.10.2018.

Forest area amounting 333.1931ha remains un-diverted in the lease.

Future use of the Forest Land: The Project Proponent have applied for diversion of the 331.198 ha of forest land for Pakri Barwadih North-West quarry vide application no. F.No. FP/JH/MIN/38798/2019 dated 07.02.2019.

Further, 89.88 ha of forest land shall be used for development of the Underground mining after obtaining the forest clearance in due course of time. It was informed by the project proponent that the Geological Report is under preparation for the underground mining in dip side of the coal block and application shall be made for diversion of the 89.88 ha of the forest land after preparation of the detailed mining plan for Underground Mining. A forest area of 11.212 Ha is being managed as safety zone in the lease.

It was further informed by the project proponent that the rest of 321.981 ha of forest land in the mining lease area shall be used as green belt for the time being and, if required, application shall be made for diversion of the same as per the requirement. All the un-diverted forest land within the coal blocks is under administrative control of the state forest department.

The present and future use of the 1787 ha of forest land as informed by user agency is presented as Annexure-III.

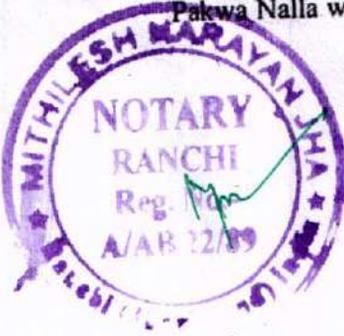
Specific recommendations:

Based on the site visit by the sub-committee and the recommendation made by the technical expert member of it it is concluded that the study of hydrologic regime of an area in both temporal as well as sectoral manner depends on the differential aspects of versatile field parameters.

Therefore, the appraisal of the mining activities and the mitigating efforts adopted thereupon towards the hydrologic regime needs to be undertaken on parallel basis against the project implementation phase. This would not only help to estimate the detrimental effect, but also to enhance the efficacy of mitigative measures adopted.

Hence the following is recommended by the sub-committee:-

- A team of specialists from field of soil Engg, agriculture Engg, Hydrology, GIS & Geology may be constituted under chairpersonship of DFO who shall continuously study the area for assessing the impact of on-going mining on various environmental/ecological parameter and shall submit finding report to IRO annually.
- U/A shall generate drone survey Data on spatial and seasonal status of Khorra Nalla & Pakwa Nalla watersheds for having first-hand information on the current status of the



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Khorra and Pakwa Nalla watershed parallel to the ongoing mining activities. The data hence collected shall help user agency to design and develop green belt under supervision of Forest Department, For this purpose a reported institute, preferably located in the state, may be engaged for data collection, processing and interpretation in effective and exclusive manner. The institute can also be requested to study the entire region of 10 km from the lease boundaries for temporal land use and its changes.

- Study of river-aquifer interaction using non-invasive geo-physical technique in 10 km radius of NTPC Pakribarwadih Coal mine site. The study may help in delineation of groundwater potential zones, ground water variation in these zone and may help in water budgeting to the surrounding

The report of the subcommittee is hence hereby being put along with the Technical expert member's annexed with it for perusal and necessary action please.

Saba Alam

Saba Alam Ansari
(DFO, Hazaribagh West)

Shashi Shankar
31/3/2023

Shashi Shankar
(AIGF, IRO Ranchi)

The report is prepared under my guidance and the same is approved by me for submission to Forest Advisory Committee as per the directions received.

Santosh Tewari

Santosh Tewari
(Dy.DGF, & Head- IRO Ranchi) 3



**Department of Environmental Science and Engineering
Indian Institute of Technology (Indian School of Mines) Dhanbad-826004, Jharkhand**

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- Report on conduct of Site Visit of the Pakaribarwadih Coal Mine Site on 17.03.2023

The sub-committee on the recommendation of the Forest Advisory Committee constituted by the MoEF&CC (FAC held on 09/12/2022; Ministry's letter no. 8-56/2009-FCpt dated 17/02/2023) visited NTPC Pakaribarwadih Coal Mine Site on 17.03.2023 from 10.00 AM to 5.00 PM (Letter No. FP/JH/MIN/38798/2019/975 dated 15.03.2023). The following members of the sub-committee (FAC) visited the Pakaribarwadih Coal Mine Site on 17.03.2023 (Photo Plate 1):

1. Deputy Director General of Forest, IFS, MoEF&CC, IRO (Central), Ranchi, Jharkhand
2. Assistant Inspector General of Forest, IFS, MoEF&CC, IRO (Central), Ranchi, Jharkhand
3. Divisional Forest Officer, IFS Hazaribagh (West) Division, Jharkhand
4. Dr. Anshumali, Professor & Head, Department of Environmental Science and Engineering, IIT(ISM), Dhanbad-826004, Jharkhand



Photo Plate I

The undersigned carried out **qualitative** "Assessment of hydrological regimes of the area and impact of on going mining operations of the user agency in general and Dumuhani Nallah in particular and changes brought in by the User Agency and its impact on the ecology of the area" (Photo Plate II and III).

The undersigned put forward the following field observations for kind perusal and necessary action:

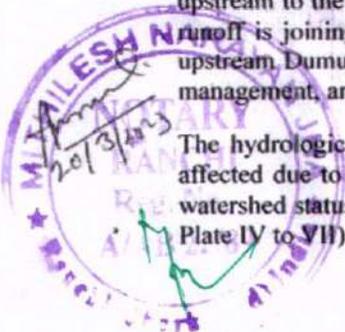
(1) The two streams viz Khorra Nalla (west) and Pakwa Nalla (east) were present at time of inspection along with a few small tributaries. The mining activities and haul road boundary are at a distant from the natural river boundary without any visible impact. It is showing that NTPC Pakaribarwadih Coal Mine is adhering with the guidelines. The green belt development is going on and visible to the sub-committee members.

Further, agriculture activities, sand mining, soil mining, and brick manufacturing are irreversibly damaging the natural boundaries of the Khorra Nalla (west) and Pakwa Nalla (east) and may be responsible for complete disappearance and marginalisation of the river boundaries in near future. The present watershed status of the Khorra Nalla (west) and Pakwa Nalla (east) are not matching with Survey of India toposheet no. 73 E/1.

(2) The central Dumuhani Nallah (a tributary of Khorra Nalla) was present at the time of inspection without its streams of different orders.

During site inspection, the central Dumuhani Nallah was found realigned with the Khorra Nalla (west) and Pakwa Nalla (east) according to the landscape gradient by the NTPC Pakaribarwadih Coal Mine, in the upstream to the mining lease area and maintained distance from the OB sites (Photo Plate II). All the hilly runoff is joining the realigned portion of the Dumuhani Nallah (Photo Plate III). Certain portion of the upstream Dumuhani Nallah was found straightened by the user agency to optimize the coal extraction, OB management, and haul road maintenance.

The hydrological status of the Dumuhani Nallah in lease area, which is yet to be mined out, is highly affected due to the agriculture activities, sand mining, soil mining, and brick manufacturing. The present watershed status of the Dumuhani Nallah is not matching with Survey of India toposheet no. 73 E/1 (Photo Plate IV to VII).



Impression:

The qualitative observations give first impression about extreme diversion of the three watersheds (Khorra, Dumuhani and Pakwa) by local people for their livelihood, well before the inception of the coal mining activities.

Since, the lease area is under different stages of mining development by the user agency and all people have to shift from the leased area. The leased area is dedicated for the coal mining while livelihood options and ecosystem services for the local people are compensated or will be compensated by the user agency. Therefore, retaining the Dumuhani Nalla and developing green belt in between extensive and intensive coal mining plan does not hold good. Hence, the undersigned suggest that the green belt development can be notified for Khorra Nalla instead of Dumuhani Nalla (a tributary of Khorra Nalla).

Conclusion:

In view of the above, the undersigned taken into consideration the holistic approach while recommending the following:

(1) diversion of the Dumuhani Nalla (a tributary of Khorra Nalla) for the coal mining.

(2) restoration and conservation of the Khorra Nalla (west) and Pakwa Nalla (east) watersheds on priority basis under supervision of the forest department and expert hydrologists/agencies and develop their watershed status as per the Survey of India toposheet no. 73 E/1.

Specific Recommendation

The undersigned is recommending following studies to be conducted so that trade-off between water-food-energy nexus and minimize social conflicts and environmental degradation can be addressed:

(i) The user Agency must generate Drone Survey Data on the spatial and seasonal status of Khorra Nalla (west) and Pakwa Nalla (east) watersheds.

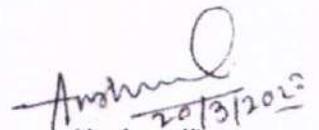
This will provide first hand information on the current status of the Khorra Nalla (west) and Pakwa Nalla (east) watersheds parallel to the on-going mining activities. This will help user agency to design and develop green belt under the supervision of the Forest Department.

(ii) LiDAR based or Drone based LiDAR reconnaissance of watersheds and sub-watersheds in the 10 km radius of the NTPC Pakaribarwadih Coal Mine Site.

This study envisages the impact of land use and land cover changes on the natural ecosystems (forests, watersheds, rivers, streams, aquifers, flora and fauna etc.) and man-made ecosystems (agriculture, villages, peri-urban centres, urban centres, infrastructure, industries including mining etc.). This will insure and secure long-term runoff management, agriculture productivity, aquifer recharge, groundwater availability etc., upstream, midstream and downstream of the Khorra Nalla (west) and Pakwa Nalla (east) watersheds.

(iii) Study on river-aquifer interaction using non-invasive geophysical techniques in the 10 km radius of the NTPC Pakaribarwadih Coal Mine Site.

This study envisages the spatial and seasonal variations in the river-aquifer interaction, delineation of the groundwater potential zones, modelling of the groundwater contamination transport, vulnerability risk assessment etc.

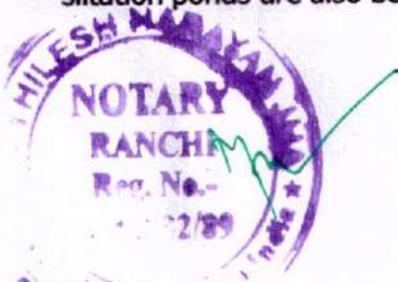

(Anshumali)

Dr. Anshumali
Professor & Head
Dept. of Environmental Sc. & Engrg
Indian Institute of Technology
(Indian School of Mines) Dhanbad
Jharkhand-826004, India



Measure for Water Conservation at NTPC Pakri Barwadih Coal Mining Project (PBCMP)

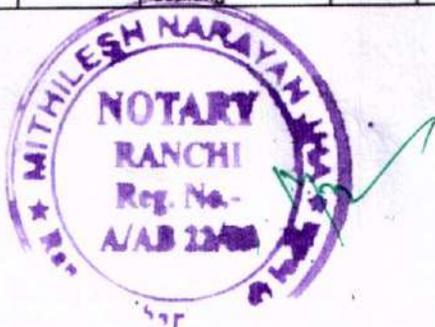
1. Drainage in the core zone has been planned to be regulated in a manner so that impact on surface water bodies is minimized and the drainage pattern of the area is not affected.
2. Catchment drain on the North side of the present mining pit area has been made to route them to the settling pond and to the main tank which will flow finally to the Khora & Pakwa nallahs.
3. Water management (including storm water drainage) scheme (by a network of garland drains/ diversion ditches and catch-pits) has been planned and implemented.
4. In PBCMP, 4.89 Km Garland drains have been constructed wherever required on sides of quarries and external dumps (depending on contours). The garland drains have been routed through catch pits and settling tanks to settle out suspended solids in discharged water and the storm water. The clarified water is being discharged to natural watercourses. Retaining walls / toe wall with gabion have been built all-around the topsoil dump which will have weep holes for passage of storm water to join garland drains. External dump is in moving phase. After reaching the final limit, retaining walls will be made.
5. Top surface of the dumps are slightly sloped to collect water in garland drains in a systematic manner.
6. Small grasses and bushes in drains hold back solid particles from draining away.
7. Small stone barriers across the drain will check water current and arrest solids.
8. Stone pitching has been made at suitable places to regulate water flow.
9. Some of the drains, which will serve for a long time, have been made pucca.
10. Settling pits and drains are being de-silted periodically.
11. Seven (7) Nos. of rock fill Check dam and garland drains are also constructed to avoid any siltation in the nearby area. Regular cleaning of the check dams and siltation ponds are also being done.



17/03/2023
वीरेंद्र कुमार / BIRENDRA KUMAR
अधीन निरीक्षण / ADOL. GENERAL MANAGER
(परिष्कारण विभाग) / (EMBRACEMENT MANAGEMENT)
शुभम नदी क्षेत्र / COAL MINING PROJECTS
पुर्वोत्तर / (R/23) / NTPC Limited
बुरहानपुर / HAZARIBAG

12. NTPC is constructing 12 check dams in Khora and Pakwa nala based on the detailed study completed by Central Water and Power Research Station.
13. Mines has established an ETP of 125 KLD capacity for treatment of workshop effluents with the electro-mechanical technology for Mine workshop. HEMMs are being washed in this designated area. The clarified effluents are being used for vehicle washing.
14. Effluents from the canteen and rest areas is being diverted through drains for green belt development. Sanitary sewage generated in office area etc is being treated in septic tanks and soak pit.
15. Ground water, surface water and drinking water Monitoring and analysis is being done through NABL accredited lab in consultation with the State Pollution Control Board and ground water levels are being carried out manually at 20 nos. of dug-wells/bore-wells around mining lease. Apart from manual monitoring of water level 6 nos. of automated Piezometers have been installed.
16. The project has constructed and installed a 1.5 MLD STP (Sewage Treatment Plant) at Dhenga for treatment of domestic waste water.
17. Further, to avoid soil erosion plantation has been carried out on external dump at an area of about 23 Ha along with Mixed grass variety seeds and root shoots of **Vertiver** grass. Also, 6.2 km toe wall followed by garland drain of 6.2 km are also constructed to avoid any siltation in the nearby area. The garland drain ultimately connected to the settling pit.
18. For ground water recharge 18 nos. of village pond have been desilted & deepened and 10 nos. of new ponds have been made in different location of Pakri Barwadih Coal Mining Project. Roof top rain water harvesting system has been installed at the site office, langathu, mines workshop and dispensary. Thereby, about 1,48,796 m³ per year ground water can be recharged. Details as under -

Sl No	Name of village	Water Recharge Activity	Surface area (Sq M)	GPS Coordinates		Water storage Capacity (Cum)	Description of pond in			Volume of Pond in m ³	Annual Ground Water Recharge in m ³
				Latitude	Longitude		Length	Width	Avg. Depth		
1	Dadikala	Tari Ahar talab	2982	23°52'52.1"	85°12'30.22"	7455	65	24	2.01	3135.6	3657.36384
2	Chepakala	Chepa Ahar talab	30415	23°90'60.05"	85°21'38.11"	76037.5	160	55	3.5	30800	35925.12
3	Pakri-Barwadih	Barka Ahra talab deepening and desilting	13200	23°86'35.23"	85°22'43.19"	33000	126	35	3	13230	15431.472



17/01/2023
 श्रीरंजित कुमार / SHRI RANJIT KUMAR
 (विकास प्रशासक) / (DEVELOPMENT MANAGER)
 प्रमुख, पाकरी एचपीसी लिमिटेड
 राँची / RAJESH

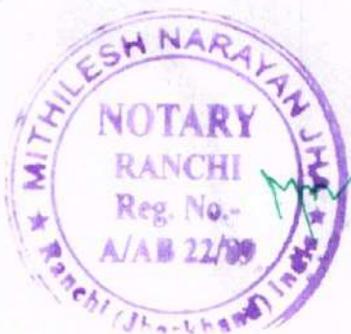
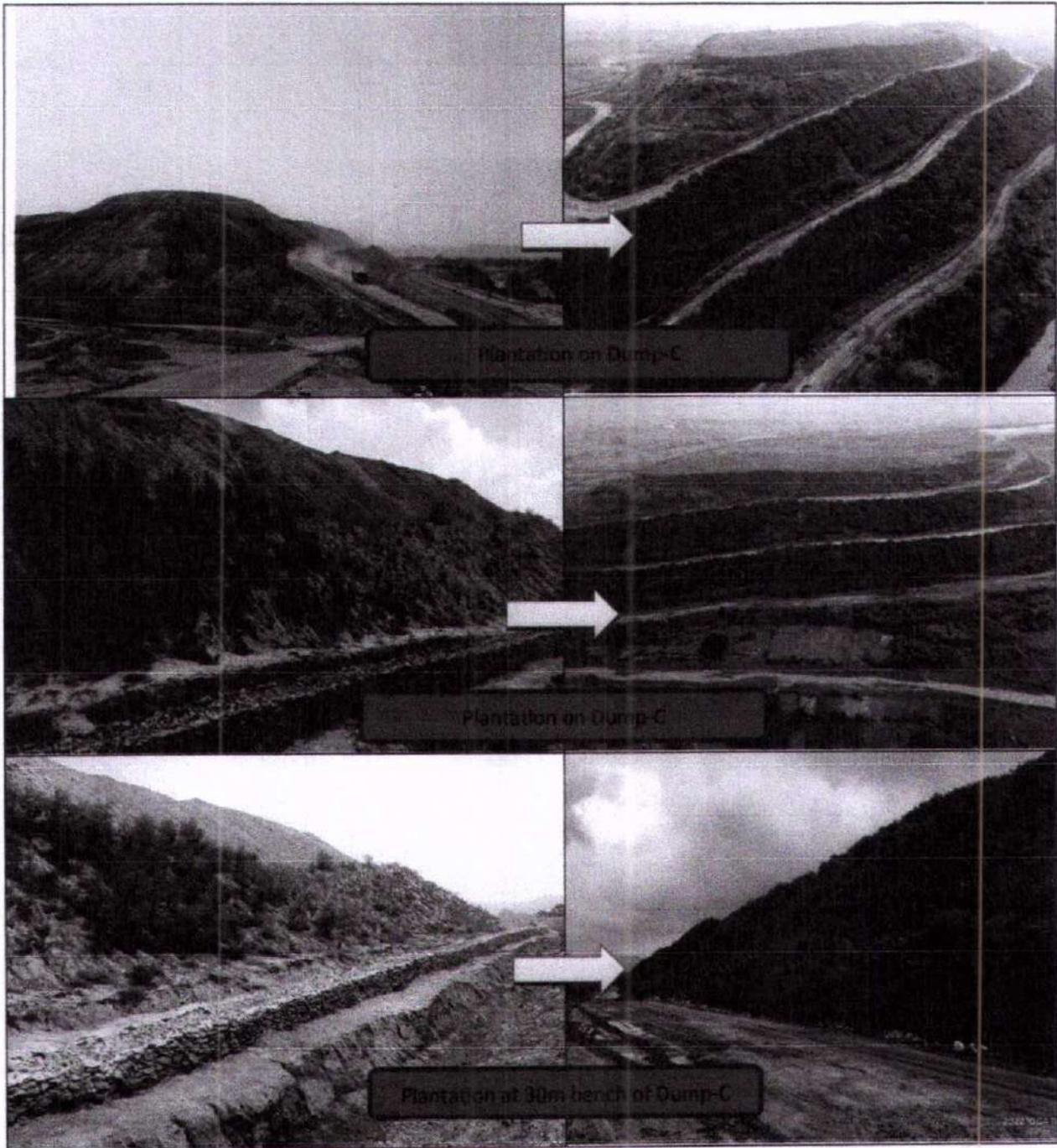
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4	Urub	Padeo bagi Arhar pond (Bada talab) deepening and check dam repair	20000	23°53'59.63"	85°11'16.92"	50000	184	34	3.2	20019.2	23350.39488
5	Garikala	Japotva Ahar pond deepening	4940	23°52'30.31"	85°09'54.74"	12350	92	28	2.5	6440	7511.616
6	Kusumbha	Purna Ahar talab repair and deepening	6862	23°94'81.61"	85°27'82.54"	17155	87	32	2.5	6960	8118.144
7	Banka	Banka talab	2900	23°98'13.9"	85°29'13.9"	7250	64	24	2.4	3686.4	4299.81696
8	Petto	Badi talab	3816	23°86'33.39"	85°06'92.95"	9540	56	35	2	3920	4572.288
9	Kodwe	Kodwe Talab	1280	23°26'48.16"	85°47'10.74"	3200	36	18	2	1296	1511.6544
10	Langathu	New Water Recharge Pond construction	400	23°52'15.52"	85°12'43.27"	1000	28	11	2.09	643.72	750.835008
11	Langathu	Roof top water recharge system	1500	23°52'19.49"	85°12'49.30"	1800					1152
12	Hazaribagh	Zheel park desilting and repair (One side)	36000	24°00'98"	85°36'30"	108000	225	54	3	36450	42515.28
											148795.99

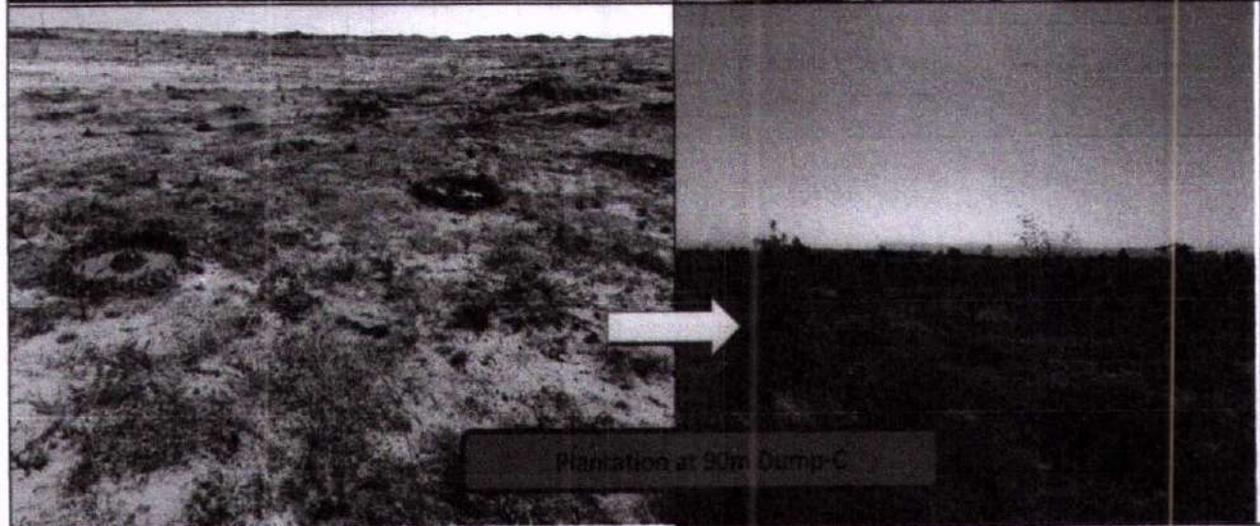
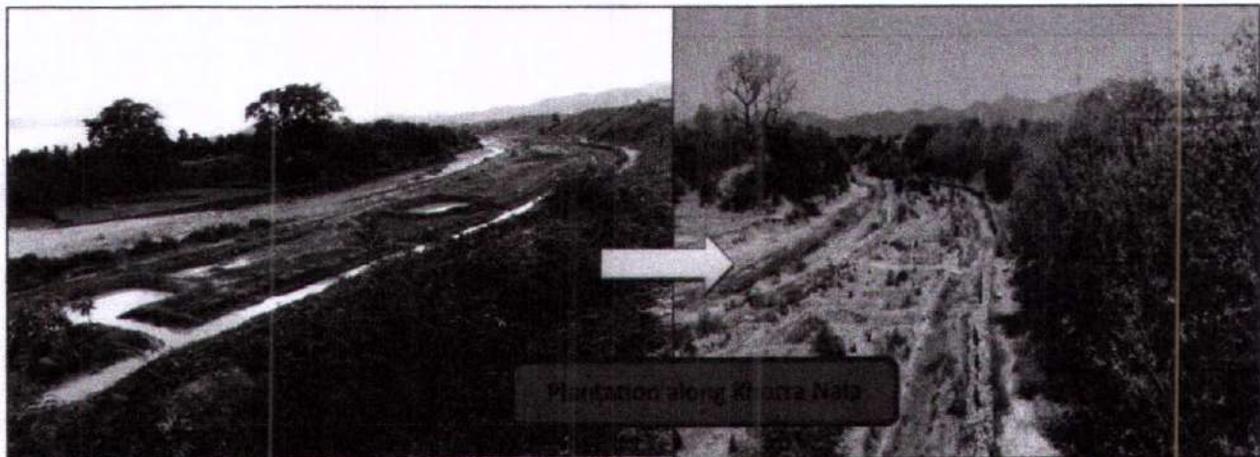
17/03/2023
वीरेंद्र कुमार / BRENDRA KUMAR
अपर मैनेजर / ADDL GENERAL MANAGER
(पर्यावरण विभाग) / ENVIRONMENT MANAGEMENT
शहरी वन विभाग / COAL MINING PROJECTS
एनडीडी / NDDI / IITPC Limited
राजपुर / HAZARIBAG



1. Plantation photographs –



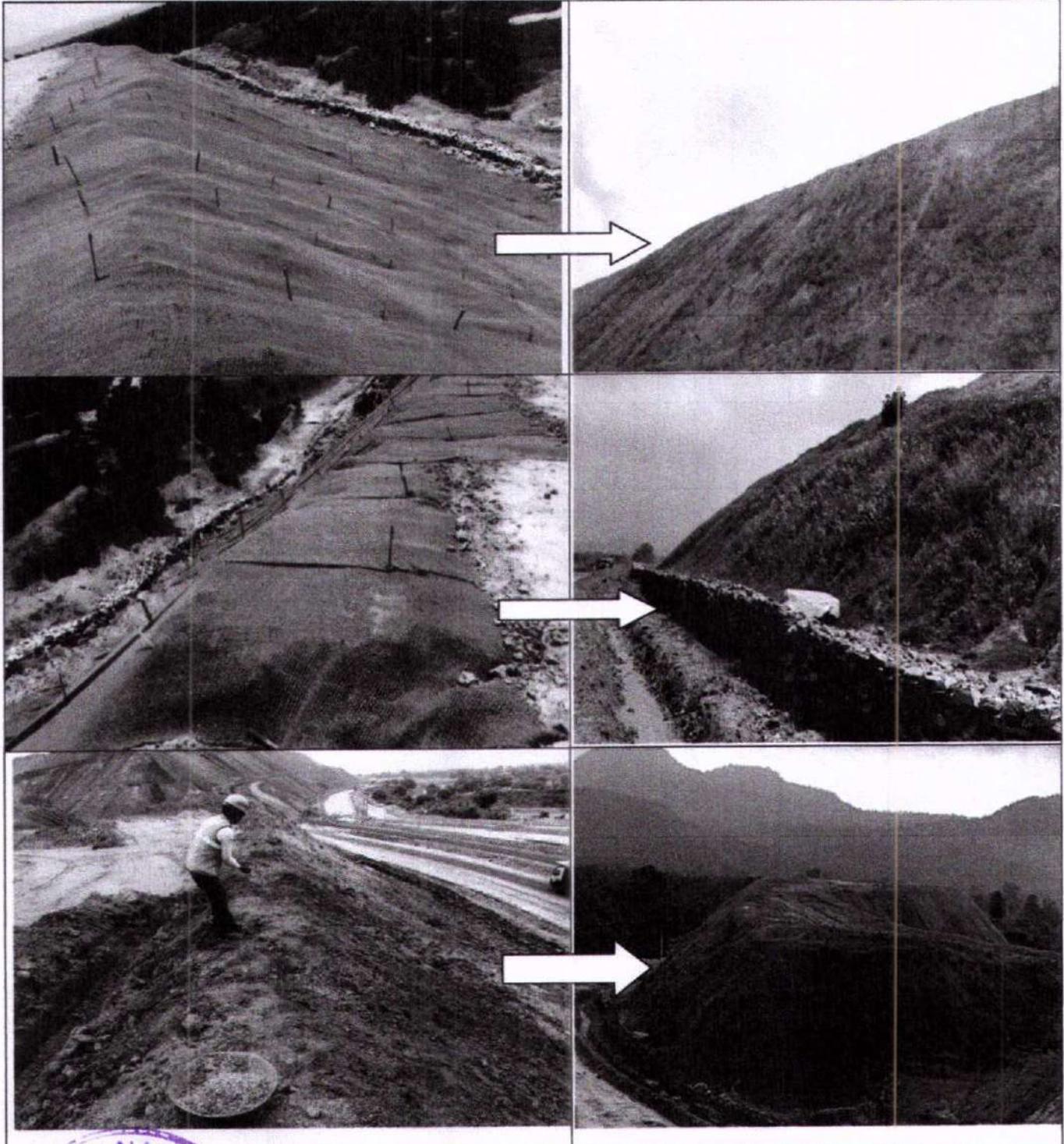
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(पर्यावरण संरक्षण) (ENVIRONMENT MANAGEMENT)
बिहार खान कोयला (Bihar Coal Mining Projects)
पब्लिक लिमिटेड (Bihar) (BTPC Limited)
बिहार / BIHAR



MITHILESH NARAYAN JHA
NOTARY
RANCHI
Reg. No.-
A/AB 22/89
India

17/03/2023
वीरेंद्र कुमार / BHRENDRA KUMAR
जवन निदेशक / ADJL GENERAL MANAGER
(सुरक्षा विभाग) (ENVIRONMENT MANAGEMENT)
शुभ संसाधन लिमिटेड / COAL MINING PROJECTS
पठार 20/21/ NTPC Limited
बनारस / BANARAS

2. Soil Erosion Protection Measure –



MITHILESH NARAYAN JAIN
INSPECTOR
REG. No. -
A/AB 22/89

17/03/2023
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अपर प्रोड्यूसर / ADDL. GENERAL MANAGER
(पर्यावरण विभाग) (ENVIRONMENT MANAGEMENT)
शुभम कोयलेश्वर / SHUBHAM KOYALSHWAR
प्रमोड प्रोजेक्ट्स / NTPC Limited
गुडगाँव / HAZARIBAG

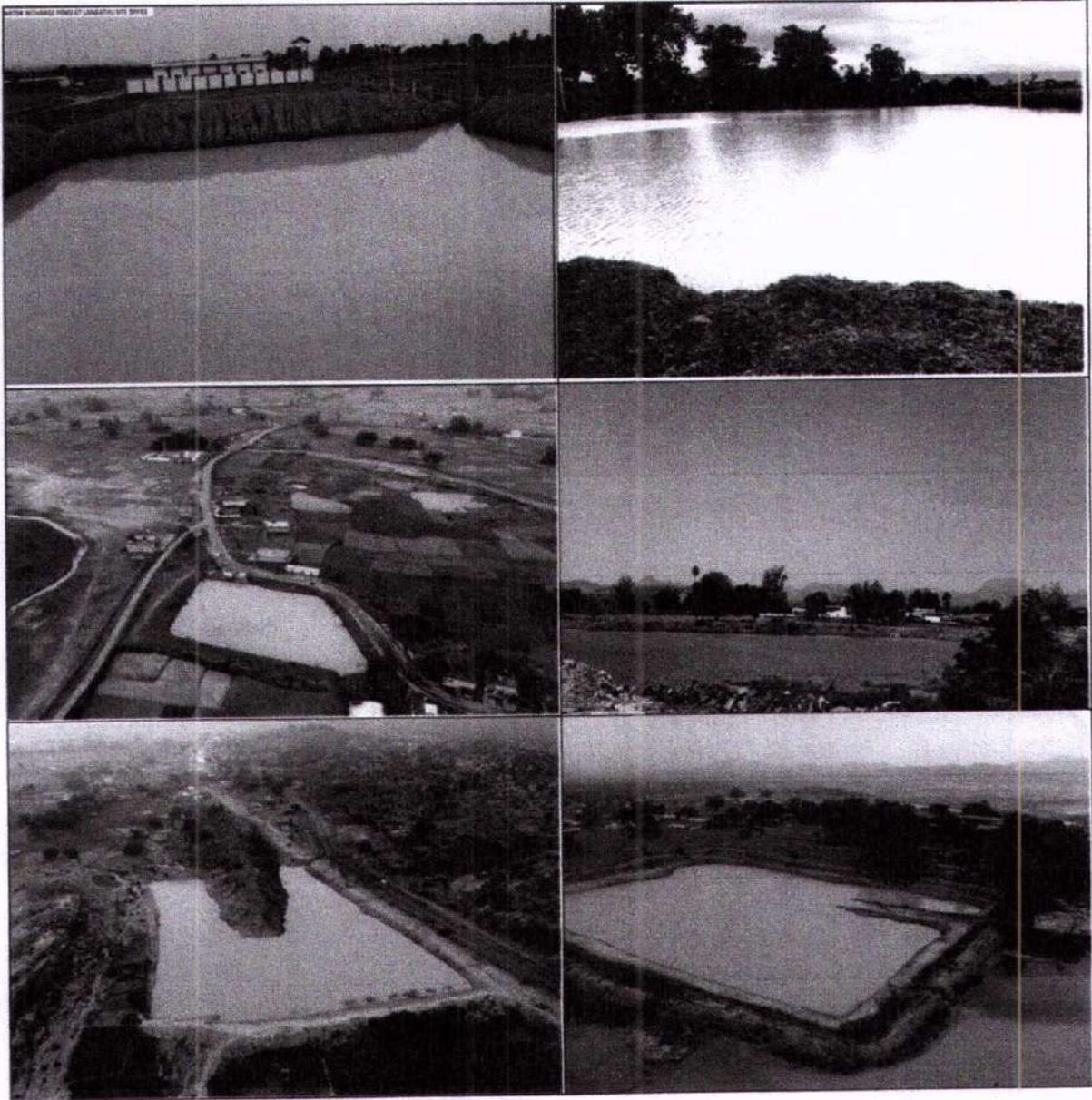
3. Rain-water Harvesting structure in PBCMP-



NOTARY
RANCHI
Reg. No. A/AB 22/09
Ranchi (Jharkhand) India

17/03/2023
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अधीन निदेशक / ADOL. OF HERALD MANAGER
(विद्युत वितरण) / (ELECTRICITY MANAGEMENT)
शुभ नगर विद्युत वितरण कॉर्पोरेशन लिमिटेड
प्रभुपुरा / BHADRA / NTPC Limited
बिहार / BIHAR

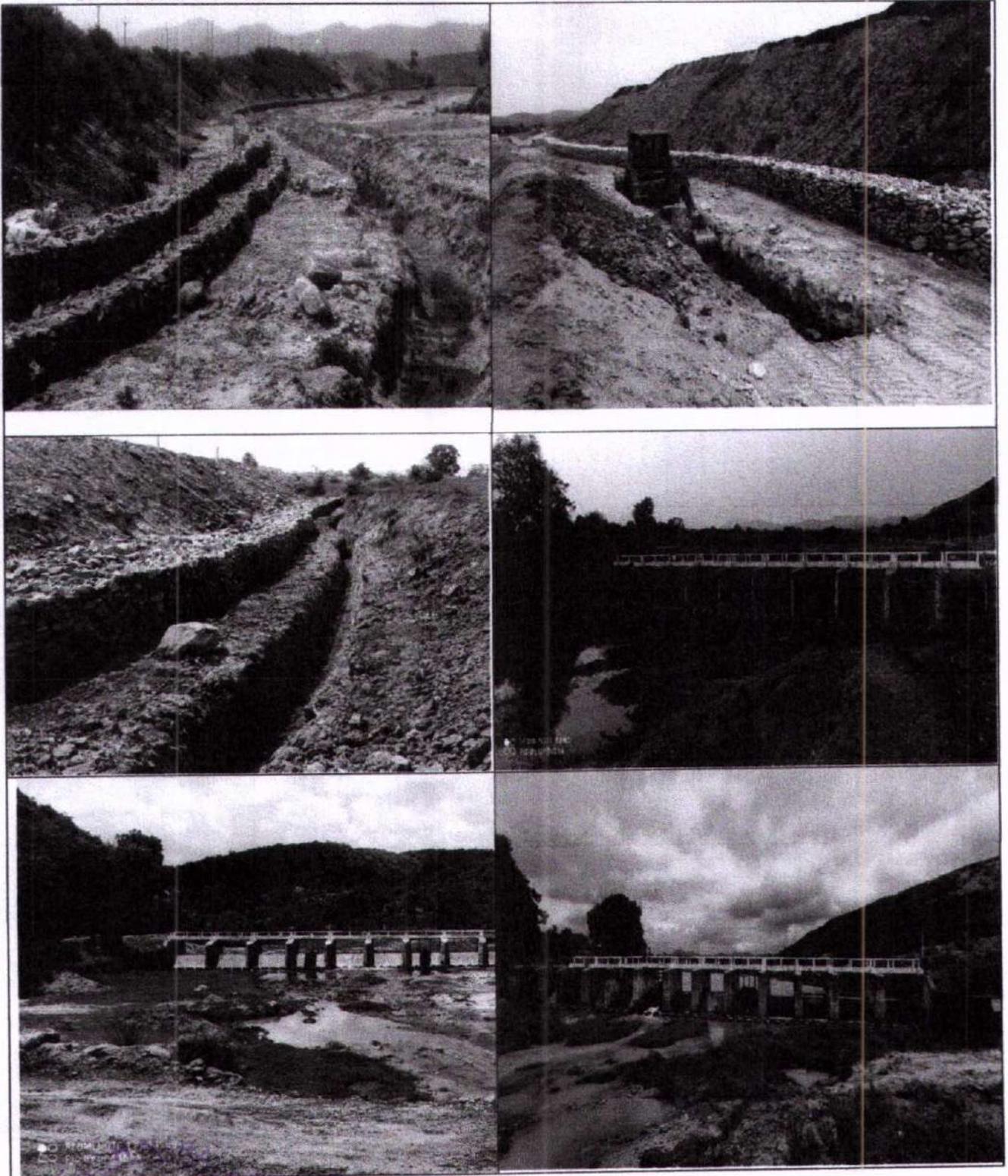
4. Recharge ponds –



17/03/2023
वीरेंद्र कुमार / BIRENDRA KUMAR
ज्येष्ठ प्रबंधक / ADDL. GENERAL MANAGER
(पर्यावरण प्रबंधन) / ENVIRONMENT MANAGEMENT
शक्ति कोयला लिमिटेड / COAL MINING PROJECTS
प्रधान कार्यालय / NTPC Limited
बिड़रुवा / HAZARIBAG

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5. Garland drains and Check Dams –



MITHILA NOTARY RANCHI Reg. No.- A/AB 22/89

17/03/2023
बीरेन्द्र कुमार / BIRENDR KUMAR
उप निदेशक / ADDL. GENERAL MANAGER
(परिचालन विभाग) (OPERATION MANAGEMENT)
आर.पी.डी. (आय) (R.P.D. (A.Y.))
राजकीय नदी नदी परियोजना (RAJYAT NADI NADI PROJECT)
राजकीय नदी नदी परियोजना (RAJYAT NADI NADI PROJECT)
राजकीय नदी नदी परियोजना (RAJYAT NADI NADI PROJECT)

Holistic Assessment of 1787 Ha Forest Land Involved in the Mining Lease of the user agency, its present status and legitimacy of future use proposed by the user agency.

As per the approved mining plan total mining lease area is 4695 ha and out of that 1787 ha is the forest land. Out of 1787 Ha forest land, 1699.4 ha forest land is within the prospective mining area and 87.6 ha forest land is outside the prospective mining area and shall be used for development of ancillary infrastructure.

Present use of the Forest Land: Out of the 1787 ha of forest land 1026.438 ha forest land have already been diverted vide stage-I and stage -II FC no.: F.No. 8-56/2009-FC dated 11.05.2010 and 17.09.2010 respectively. This 1026.438 ha of the forest land is being used for opencast mining, coal evacuation corridor and development of the ancillary mine infrastructures.

Further, 6.291 ha of forest land was diverted for development of the railway siding vide FC No. -Stage-I vide Lr no. FP/JH/ RAIL/ 16048/ 2012/ 518 dated 26.05.2016 and stage-II vide Lr no. FP/JH/RAIL/ 16048/2012/ 2686 dated 31.10.2018.

Further, 11.212 ha of forest area have been identified and allocated as safety zone and as per condition no 2b of stage-II FC no.: F.No. 8-56/2009-FC dated 17.09.2010, fencing and plantation are being done in this area.

Future use of the Forest Land: NTPC Ltd has applied for diversion of the 331.198 ha of forest land for Pakri Barwadih North-West quarry vide application no. F.No. FP/JH/MIN/38798/2019 dated 07.02.2019.

Further, 89.88 ha of forest land shall be used for development of the underground mining after obtaining the forest clearance in due course of time. At present, Geological Report is under preparation for the underground mining and application shall be made after preparation of the detailed mining plan for Underground Mining.

Further, left out 321.981 ha of forest land shall not be used in near future. However, application shall be made for diversion as per the requirement, if any.

All the un-diverted forest land within the mining lease is under administrative control of the state forest department.

The present and future use of the 1787 ha of forest land is tabulated below:

Sl. No.	Description of Use	Present Use (in Ha)	Future Use (in Ha)	Total Area (in Ha)
1	Opencast Area (PB, PB-NW, Coal evacuation corridor, Mine Infra etc.)	1026.438	331.198	1357.636
2	Underground (GR under Preparation)	0.000	89.880	89.880
3	Safety zone of PB-CMP	11.212	0.000	11.212
4	Outside Block (Railway Siding)	6.291	0.000	6.291
5	Un-utilized(future use as per requirement)	0.000	321.981	321.981
Grand-total		1043.941	743.059	1787.000



मानिश राव कोल्हे / MANISH RAO KOLHE
 सहायक (आम सभ) / MANAGER (Mine Survey)
 पाकरी बरवादीह / Pakri Barwadih
 कोयला खनन परियोजना / Coal Mining Project
 एन टी सी लिमिटेड / NTPC Limited
 जिला - हजारीबाग / Dist-Hazaribag

बिरेन्द्र कुमार / BIRENDRA KUMAR
 जेनरल मैनेजर / ADDL GENERAL MANAGER
 (परियोजना प्रबंधन) / (PROJECT MANAGEMENT)
 कोयला खनन परियोजना / COAL MINING PROJECTS
 एन टी सी लिमिटेड / NTPC Limited
 हजारीबाग / HAZARIBAG

AGM(Mining)/Agent

PakriBarwadih Coal Mining Project

माईन एजेंट / MINE AGENT

एन टी सी लिमिटेड / NTPC Limited

पाकरी बरवादीह कोयला खनन परियोजना

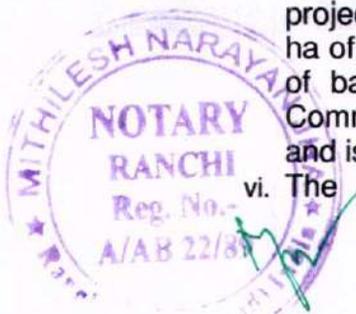
Pakri Barwadih Coal Mining Pro.

Hazaribag

Minutes of the Meeting of Advisory Committee meeting dated 25.04.23**Agenda No. 1****F. No. 8-56/2009-FC (Vol)**

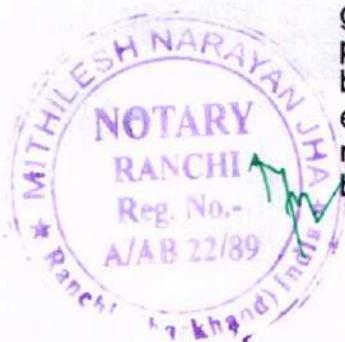
Subject: Proposal for non-forestry use of 331.198 ha of forest land in favour of M/s NTPC Limited for Pakribarwadih (North West) Opencast Coal Mining Project in West Forest Division, District Hazaribagh (Jharkhand) - regarding.

1. The agenda item was considered by the Advisory Committee (AC) in its meeting held on 25.04.2023. The corresponding agenda note may be seen at www.parivesh.nic.in.
2. During the meeting, all the facts and background of the proposal, along with examination of the proposal in the DSS were presented and explained by the Member Secretary before the AC for their examination and analysis. Committee was also apprised of the relevant provisions under other Acts & Rules relevant to the proposal and their significance.
3. The AC after thorough deliberation and discussion observed that:
 - i. The Government of Jharkhand vide their letter No. Van Bhumi-10/2021-1664/V.P. dated 14.06.2022 submitted the above mentioned proposal seeking prior approval of the Central Government under Section-2 of the Forest (Conservation) Act, 1980. Legal status of the forest land proposed for diversion is Protected Forest land and Jungle Jhadi land comprising of 306.36 ha and 24.82 ha, respectively. Density of the area has been reported to be 0.8 by the DCF concerned with 30,521 project affected trees.
 - ii. Compensatory afforestation has been proposed over an area of 683.863 ha of degraded forest land in Hazaribagh West Forest Division. CA scheme involving financial provision of ₹87,62,282/- has been submitted for a period of 10 years.
 - iii. The area proposed for diversion is adjoining the 1026.438 ha forest land already diverted in favour of the same user agency. A nallah namely Khorra Nallah separates the extant forest area of 331.198 ha from the 1026.438 ha of forest land approved in the past. As reported by the concerned DCF in his report the said nallah will be largely affected by the mining activities.
 - iv. The total area involved in the project is 485.161 ha, with 331.198 ha of forest land included in the present proposal, 133.27 ha of non-forest land and 20.6925 ha forest area proposed to be re-diverted from the 1026.438 ha of forest land already diverted by the Central Government vide order dated 17.09.2010 in favour of user agency.
 - v. As per Mining Plan approved in the past, the total lease area was 4625.84 ha comprising of 1124.08 ha of forest land and 806.82 ha of recorded forest land and 2694.9 ha of private non-forest land. Now, Mining Plan has been revised and as per revised Mining Plan, total project area is 4695 ha, comprising of 1787 ha of forest land and 2908 ha of non-forest land. Out of total forest area, with regards to the status of balance forest area of 428.582 ha, Nodal Officer informed the Committee that said area may be required by the user agency in future and is currently under the possession of the State Forest Department.
 - vi. The Hon'ble NGT vide order dated 18.02.2019 in OA No.

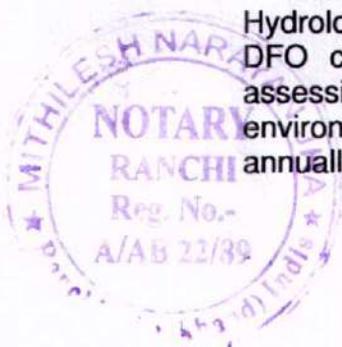


182/2016(EZ), constituted a committee to inspect the Pakri Barwadih Coal Mining Project of M/s NTPC Ltd. and to verify as to whether the conditions of the Forest Clearance (FC) and Environmental Clearance (EC) are meticulously complied with by the M/s NTPC. During inspection, it was observed that some of the conditions of FC approval (Stage-I and Stage-II) were still partially complied/ or where the project proponent has to take actions for complete compliance.

- vii. IRO in its inspection report, adverted to the violation committed by the user agency in respect of contiguous forest area of 1026.438 ha and recommended that extant proposal should only be considered after the penalty of Rs. 81,89,82,060 / - (Rupees Eighty One Crore Eighty Nine Lakh Eighty Two Thousand and Sixty only) is realized from user agency for violating the FC conditions and creating *fait-accomplie* situation.
- viii. The proposal was earlier considered by the Advisory Committee (AC) in its meeting held on 09.12.2022 and the AC observed that since the lease area of the user agency is transacted by various nallahs and therefore, the issue related to impact assessment on hydrological regimes by shifting of nallah needs to be considered holistically and accordingly, the Committee recommended that Sub-Committee of the AC may be reconstituted to ascertain and report on the following:
 - a. Assessment of hydrological regimes of the area and impact of ongoing mining operations of the user agency in general and Dumuhani Nallah in particular and changes brought in by the User Agency and its impact on the ecology of the area.
 - b. Efficacy of mitigation measures, if any, undertaken by the user agency in their lease area.
 - c. Holistic assessment of 1787 ha of forest land involved in the mining lease of the user agency, its present status and legitimacy of future use proposed by the user agency.
- ix. On the basis of the recommendations of the AC, and approval of the same by the competent authority of the MoEF&CC, New Delhi, Ministry vide letter dated 28.12.2022 and 07.03.2023 constituted a sub-committee to visit the area. The Integrated Regional Office, Ranchi vide their letter dated FP/JH/Min/38798/2019/1014 dated 03.04.2023 submitted a report of Sub- Committee which recommended that: -
 - a. A team of specialists from field of soil Engg, agriculture Engg, Hydrology, GIS & amp; Geology may be constituted under chairpersonship of DFO who shall continuously study the area for assessing the impact of on-going mining on various environmental/ecological parameter and shall submit finding report to IRO annually.
 - b. UA shall generate drone survey data on spatial and seasonal status of Khorra Nalla & Pakwa Nalla watersheds for having first-hand information on the current status of the Khorra and Pakwa Nana watershed parallel to the ongoing mining activities. The data hence collected shall help user agency to design and develop green belt under super vision of Forest Department. For this purpose, a reputed institute, preferably located in the state, may be engaged for data collection, processing and interpretation in effective and exclusive manner. The institute can also be requested to study the entire region of 10 km from the lease boundaries for temporal land use and its changes.



- c. Study of river-aquifer interaction using non-invasive geo-physical technique in 10 km radius of NTPC Pakribarwadih Coal mine site. The study may help in delineation of groundwater potential zones, ground water variation in these zones and may help in water budgeting to the surrounding.
- x. The AC observed that the present forest patch of 331.198 Ha of forest land proposed for diversion is part of larger forest landscape in the area and is source to many perennial streams. It was noted that the area doesn't have any perennial river and the water availability is enhanced only by the forests of the area. Hence, a Catchment Area Treatment plan should be prepared and adhered to.
- xi. The AC observed that as the present area of diversion is adjacent to an existing mine and more mines would come up in future leading to cluster mining in the area. Since, the cluster mining would involve activities like breaking of land and removal of earth in the area and beyond the entire landscape will be vulnerable to soil erosion and sedimentation. Therefore, an integrated soil and water conservation plan should be prepared and implemented treating the entire landscape.
- xii. It has been reported by the field officers that the present area is just adjoining to the already diverted forest area of 1026.438 Ha and Khorra Nallah separates these two blocks. The said nallah will largely be affected by the mining activities hence it should be protected by identifying and developing green belts upto 100 metres on either side to prevent sedimentation and choking. As observed in the existing mine of NTPC Pakri Barwadih no amount of siltation dams could prevent the sediment deposition and choking of streams as overburden is dumped just adjacent to the nallahs/ streams. A serious view may be taken in this regard failing which a few decades down the line, the entire area would be affected by water crises.
- xiii. Further it has been recommended by CF Hazaribagh that a water security plan should be prepared by the group of experts and adhered to. Since the area is rich in species composition, eco-restoration plan, Conservation Plan and Reclamation Plan may be prepared by conducting proper study before initiating mining activities and should be implemented in its spirit. An integrated soil and water conservation plan should be prepared and implemented treating the entire landscape. The mining in the area should be in consonance with the "Integrated Wildlife Management Plan" of North Karanpura.
4. **Decision of the Advisory Committee:** The Committee had detailed discussion and deliberation with the Nodal Officer (FCA), Jharkhand and Regional Officer, IRO Ranchi. After going through the facts of the proposal and submissions made by the Regional Officer, IRO Ranchi, the Committee recommended the proposal for grant of Stage-I approval subject to fulfilment of general, standard and the following additional conditions:
- i. A team of specialists from field of Soil Engg, Agriculture Engg, Hydrology, GIS & Geology shall be constituted under chairpersonship of DFO concerned. The team shall continuously study the area for assessing the impact of on-going mining on various environmental/ecological parameter and submit findings/ report to IRO annually.



- ii. UA shall generate drone survey data on spatial and seasonal status of Khorra Nalla & Pakwa Nalla watersheds for having first-hand information on the current status of the Khorra and Pakwa Nallas watershed parallel to the ongoing mining activities. For this purpose, a reputed institute, preferably located in the State, may be engaged for data collection, processing and interpretation in effective and exclusive manner.
- iii. Study of river-aquifer interaction using non-invasive geo-physical technique in 10 km radius of NTPC Pakribarwadih Coal mine site shall be conducted to facilitate the delineation of groundwater potential zones, ground water variation in these zones and help in water budgeting to the surroundings.
- iv. Since the area is rich in species composition therefore Reclamation, Eco-restoration, and Conservation Plan shall be prepared by conducting proper study before initiating mining activities.
- v. The Catchment Area Treatment Plan shall be prepared and implemented at the cost of the user agency for the treatment of all Nallahs/streams pertaining to instant mining lease/project area.
- vi. An integrated soil and water conservation plan shall be prepared and implemented at the cost of the user agency for the entire landscape affected by the mining activities of the User agency in the region.
- vii. The mining in the area should be in consonance with the "Integrated Wildlife Management Plan" of North Karanpura. The cost estimate of Integrated Wildlife Management Plan (IWMP) submitted is based on the rate of 2010, while approval is being considered in 2023, hence rate revision has to be done based on the present rate.
- viii. Remaining draft minutes are concurred with.
- ix. As observed in the existing mine of NTPC Pakri Barwadih no amount of siltation dams could prevent the sediment deposition and choking of streams as overburden is dumped just adjacent to the nallahs/ streams. The Khorra nallah will largely be affected by the mining activities hence it should be protected by identifying and developing green belt of 100 metres on the side of Khorra nallah & Pakwa Nallas that is facing the mining area, to prevent further sedimentation and choking.
- x. A violation of the conditions of approval in case of diversion of 1026.438 ha forest land diverted earlier has been reported and is being processed separately. The State Govt shall ensure that the penal NPV and other penal levies as imposed are deposited before the Stage-II approval.

Agenda No. 2

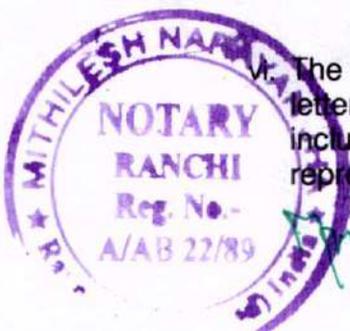
F. No. 8-56/2009-FC (Pt.)

Subject: Modification in condition of Stage-II approval and violation of FC Act: Diversion of 1026.438 ha of forest land for coal mining Pakribarwadih Project in favour of M/s NTPC Ltd. in Hazaribag West Forest Division in Hazaribag District of Jharkhand - regarding.

1. The agenda item was considered by the AC in its meeting held on 25.04.2023. The corresponding agenda note may be seen at www.parivesh.nic.in.

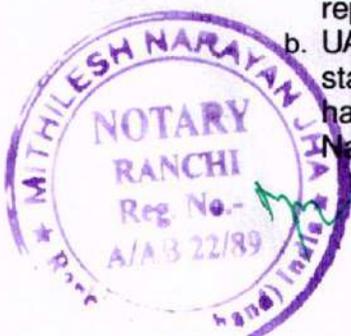


2. During the meeting, all the facts and background of the proposal, along with examination of the proposal in the DSS were presented and explained by the Member Secretary before the AC for their examination and analysis. Committee was also apprised of the relevant provisions under other Acts & Rules relevant to the proposal and their significance.
3. The AC after through deliberation and discussion observed that:
 - i. The extant proposal was accorded Stage-I approval vide Ministry's letter dated 11.05.2010 and Stage-II/ final approval vide letter dated 17.09.2010, inter-alia stipulating the following condition:
"The user agency will take up program for at least 50 m green belt along the sides of the Pakwa nallah and Dumhani nallah from the initial years under the supervision of the state forest department"
 - ii. The user agency i.e. M/s NTPC submitted a representation dated 09.10.2018 and 18.01.2022 requested for amendment in the above mentioned stipulation which appeared as condition no. 7 and 8 in Stage-I and Stage-II approval, respectively. The Ministry vide its letter dated 29.01.2019 requested the State Government to furnish comments on the said representation and provide documents as available with the State Government related to the instant proposal.
 - iii. In the meantime, Regional Office, Ranchi of this Ministry vide their letter dated 09.07.2019 informed that a committee constituted by Hon'ble NGT vide its order dated 18.02.2019 in OA No. 182/2016(EZ) inspected the Pakri Barwadih Coal Mining Project of M/s NTPC Limited on 15.03.2019 for compliance of approvals granted by the MoEF&CC under FC Act and EP Act. The committee observed that some of the condition of FC approval (Stage-I and Stage-II) were still partially complied with, including the raising of green belt around Pakwa and Dumhani nalla. The committee advised the user agency to ensure compliance of conditions stipulated in the FC approval.
 - iv. The Ministry, vide letters dated 3.09.2019 and 23.02.2022, after examination of the said report, requested comments from the State and also requested the IRO to take appropriate action in the matter as per provisions of the Ministry's guidelines given under para 1.21 (iii) of Handbook of Forest (Conservation) Act, 1980.
 - v. The Government of Jharkhand vide letter dated 08.07.2022 submitted their reply in response to Ministry's letter dated 29.01.2019 and 23.02.2022 wherein the following was informed:
 - a. Inspection report of the DFO revealed that Dumuhani Nallah which is running in the midst of the mining area which is also the quarry area has been found to be diverted by the user agency while as per condition stipulated in the approval, green belt should have been developed around the said nallah.
 - b. Despite repeated cautions from the officials of the Forest Department, the user agency has violated the provisions of condition no 8 of the Stage-II approval by diverting the Dumuhani nallah and carried out mining over a stretch of 31 km involving an area of 37.20 ha of forest land without prior approval under the Forest (Conservation) Act, 1980.
 - vi. The Ministry, after examination of reply received from the State, vide letter dated 13.09.2022 requested additional information from the State, including justification from the user agency and comments on various representation received in the Ministry on the alleged violation of the



Act by the user agency. The IRO of the Ministry was also requested to inspect the area and submit a detailed report on the violation.

- vii. The proposal was earlier considered by the Advisory Committee (AC) in its meeting held on 21.09.2022 and 09.12.2022 and the AC observed that since the lease area of the user agency is transacted by various nallah and therefore, the issue related to impact assessment on hydrological regimes by shifting of nallah needs to be considered holistically and accordingly, the Committee recommended that Sub-Committee of the AC may be constituted to ascertain and report on the following:
- a. Assessment of hydrological regimes of the area and impact of ongoing mining operations of the user agency in general and Dumuhani Nallah in particular and changes brought in by the User Agency and its impact on the ecology of the area.
 - b. Efficacy of mitigation measures, if any, undertaken by the user agency in their lease area.
 - c. Holistic assessment of 1787 ha of forest land involved in the mining lease of the user agency, its present status and legitimacy of future use proposed by the user agency.
- viii. On the basis of the recommendations of the AC, and approval of the same by the competent authority of the MoEF&CC, New Delhi, Ministry vide letter dated 28.12.2022 and 07.03.2023 constituted a sub-committee to visit the area. Integrated Regional Office, Ranchi vide their letter dated FP/JH/Min/38798/2019/1014 dated 03.04.2023 submitted a report and observed that:
- a. Prima-facie the three watersheds (Khorra, Pakwa and Dumuhani) have been subject to extreme diversion by locals for their livelihood amelioration well before the mining activities begun in the region.
 - b. The technical expert member of the committee has suggested that the green belt development can be notified for Khorra Nalla instead of Dumuhani Nalla (a tributary of Khorra Nalla).
 - c. The hydrological expert member of the committee, after taking into consideration the holistic approach, has concluded with the recommendation of (i) diversion of the Dumuhani Nalla (a tributary of Khorra Nalla) for coal mining and (ii) restoration and conservation of the Khorra Nalla (west) and Pakwa Nalla (east) watersheds on priority basis under supervision of the forest department and expert hydrologists/agencies and develop their watershed status as per the Survey of India toposheet no. 73 E/I.
- ix. Further the following is recommended by the sub-committee:-
- a. A team of specialists from field of Soil Engg, Agriculture Engg, Hydrology, GIS & amp; Geology may be constituted under chairpersonship of DFO who shall continuously study the area for assessing the impact of on-going mining on various environmental/ecological parameter and shall submit finding report to IRO annually.
 - b. UA shall generate drone survey Data on spatial and seasonal status of Khorra Nalla & Pakwa Nalla watersheds for having first-hand information on the current status of the Khorra and Pakwa Nana watershed parallel to the ongoing mining activities. The data



hence collected shall help user agency to design and develop green belt under super vision of Forest Department. For at his purpose a reported institute, preferably located in the State, may be engaged for data collection, processing mid interpretation in effective and exclusive manner. The institute can also be requested to study the entire region of 10 km from the lease boundaries for temporal land use and its changes.

- c. Study of river-aquafer interaction using non-invasive geo-physical technique in 10 km radius of NTPC Pakribarwadih Coal mine site. The study may help in delineation of groundwater potential zones, ground water variation in these zones and may help in water budgeting to the surrounding.
- x. The AC observed that DFO Hazaribagh and the State government in the proposal of the 331.198 ha of the mine has mentioned that a 100 m green belt could be developed along Khorra nallah which is an important rivulet providing water security to people living downstream. Likewise, in the Eastern extremity of mining area a 100 m green belt can be developed along the riverside. However, Dumuhani Nallah which is running in the midst of the mining area which is also the quarry area has been found to be diverted by the user agency and again recommended to the same rivulet downstream. But as per the condition a green belt has to be developed along the sides of Dumuhani Nallah. However, the earlier recommendation for raising green belts along the nallas were for 50 meters. The AC deliberated on this point in length and comments of PCCF & HoFF Jharkhand was also taken. After deliberation and keeping in view the issue of water security in the area, raising green belt of 100 meters along Khorra and Pakwa, which are flowing flanking the mining area should be done.
- xi. The AC also observed that the State Government has informed that the user agency has violated the provisions of condition no 8 of the Stage-II approval as the user agency at its own diverted the Dumhani nallah without prior approval of the Central Government under the Forest (Conservation) Act, 1980.
4. **Decision of the Advisory Committee:** The Committee had detailed discussion and deliberation with the Nodal Officer (FCA), Jharkhand and Regional Officer, IRO Ranchi. After going through the facts of the proposal and submissions made by the Regional Officer, IRO Ranchi, the Committee recommended to modify the condition no. 8 in Stage-II approval as under:

'The user agency shall restore and conserve the Khorra Nalla (west) and Pakwa Nalla (east) watersheds on priority basis under supervision of the forest department and expert hydrologists/agencies and develop their watershed status as per the Survey of India toposheet no. 73 E/I. A greenbelt of 100 meters on either side of both Khorra Nala and Pakwa Nalla shall be maintained'.

The Committee further observed that in total disregard to the conditions of approval the user agency has mined out the area and changed the course of the Dumuhani nala which was actually required to be protected and maintained as green belt. Keeping this in view the Committee recommended that the penalty shall be imposed for violation committed over the forest area (1026.438 ha) without approval equal to five times the normal NPV plus



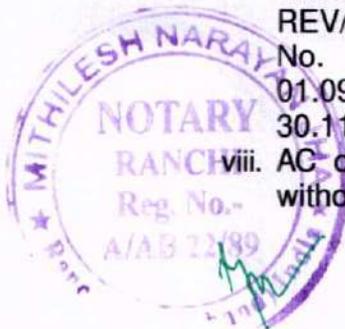
simple interest of 12 % from the date of actual violation committed till the deposition of penalty shall be imposed.

Agenda No. 3

File no. 8-14/2018FC(VOL)

Sub: Diversion of 15.981 ha of forest land in RM Block & other villages for Approach Road, Downhill Pipe Line Conveyer and Feed & Transfer Point area for Rama Iron Ore Mine (ML.No. 2621) in favour of M/s JSW Steel Ltd., Vijaynagar works Bellary in Bellary District of Karnataka. (Online proposal No. FP/KA/Others/27780/2017). –regarding.

1. The above subject agenda item was considered by Advisory Committee (AC) in its meeting held on 25.04.2023. The Nodal Officer (FCA), Government of Karnataka and IRO Bangalore were present in the meeting.
2. The details of the proposal may be seen at www.parivesh.nic.in.
3. The Member Secretary placed all the facts and background of the proposal, along with examination of the proposal in the DSS, before the Advisory Committee for examination and analysis. The Committee was also apprised of the provisions of other Acts & Rules relevant to the proposal and their significance.
4. The Advisory Committee after thorough deliberation and discussion observed that:
 - i. The proposal is for construction of approach road, downhill pipe line conveyer and feed & transfer point area for Rama Iron Ore Mine (ML.No. 2621) in favour of M/s JSW Steel Ltd., Vijaynagar works Bellary in Bellary District.
 - ii. The instant proposal has been accorded Stage-I approval by the Ministry vide its letter of even number dated 31.12.2018 subject to certain conditions prescribed therein.
 - iii. The Government of Karnataka vide letter dated 14.06.2022 submitted the compliance report informing that the CA land has been changed and recommended for Stage-II approval. After analysing the compliance report the Ministry observed certain observation and the same was communicated to the State vide this Ministry's letter dated 05.07.2022.
 - iv. In response to the Ministry's observation, the State govt. on 15.03.2023 submitted/uploaded a complete report on compliance to conditions stipulated in the in-principle/Stage-I approval letter dated 31.12.2018.
 - v. The user agency has submitted the necessary undertakings to comply with the conditions stipulated in the Stage-I approval dated 31.12.2018.
 - vi. The UA has deposited the all the compensatory levies into National Authority, CAMPA account through e-portal.
 - vii. The FRA certificate in Form-I (for linear project) issued by Deputy Commissioner, Ballari District vide No.REV/Mining/FRA/08/2018-19 dated 13.09.2019, REV/mining/FRA/73/2018-19 dated 13.09.2019 and REV/Mining/FRA/63/2017-18 dated 28.11.2019 and rectification letter No. BLR-DC -33011/12-2021-BLRDC/Forest Ballari DC dated 01.09.2021 and proceeding of village Forest Right Committee held 30.11.2018 along with documentary evidences has been submitted.
 - viii. AC observed that the State Government has changed the CA land without Central Government approval providing the justification that



earlier CA land (NFL) proposed for this instant proposal i.e. 16 ha in Sy No. 137 (2.18 ha), 138 (11.10 ha) & 140 (2.72 ha) of Halabhavi Village, Lingasuguru Taluk, Raichur District could not be registered because the land owner refused to transfer the land.

- ix. The State Govt. has identified new CA land (NFL) to an extent of 19.05 Ha, 27-17 acre Gunte (10.29 ha) in Sy No. 139 and 21.26 acre gunte (8.76 ha) in Sy No. 143 at Halbhavi village, Lingasuguru Taluk, Raichuru District.
 - x. AC also observed that as per site suitability certificate submitted by DCF (Raichur), plantation can only be done in the identified CA (NFL) at a rate of 200 plants per hectare. Therefore, another CA site (DFL) has been identified for the plantation of balance seedlings over an extent of 30 ha in Lingasuguru RF of Raichur District.
 - xi. AC also deliberated that as per the DSS the proposed CA land is located at an approx. aerial distance of 1.5 Km from Tangarbal RF (nearest RF/PF).
5. **Decision of the Advisory Committee:** - After thorough deliberation and discussion with PCCF/Nodal Officer, Karnataka and IRO Bengaluru observed that the CA land has been changed after Stage I approval since the earlier identified CA land could not be registered. In this regard the State Government has identified new CA land (NFL) to an extent of 19.05 Ha in Sy No. 139 (10.29 ha) and in Sy No. 143 (8.76 ha) at Halbhavi village, Lingasuguru Taluk, Raichuru District. It was also informed that plantation can only be done in the identified CA (NFL) at a rate of 200 plants per hectare, therefore State Government has also identified 30 ha of DFL in Lingasuguru RF of Raichur District for plantation of balance seedlings.

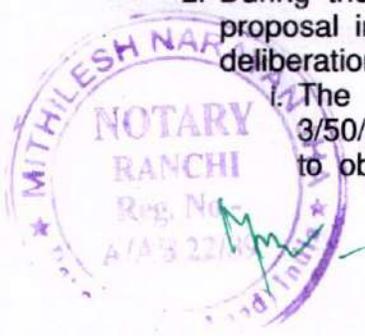
Advisory Committee agreed to the justification by the State Government w.r.t. the change of CA land and recommended to accept the changed CA area as proposed by the State Government, further noting that other compliances wrt the stipulated conditions as per Stage-I approval accorded vide letter dt 31.12.2018 has been made by the user agency & State Govt. while seeking final approval in the instant proposal.

Agenda No. 4

F. No. 8-28/2021-FC

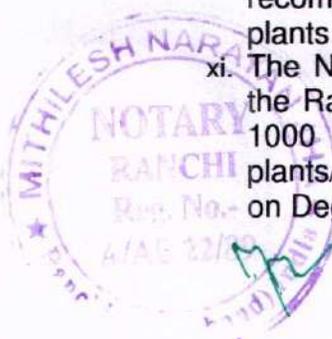
Sub: Diversion of 1305.142 ha (instead of 1248.821 ha) forest land for the construction of Maa Ratangarh Multipurpose Project in favour of Executive Engineer, Dabra under Datia and Gwalior Districts of Madhya Pradesh State (Online No. FP/MP/IRRIG/40397/2019) - reg.

1. This proposal was considered by the AC in its meeting held on 26.04.2023. The details of the proposal may be seen at www.parivesh.nic.in.
2. During the meeting, all the factual details along with examination of the proposal in the DSS were presented before the AC which after thorough deliberation and discussion observed that:
 - i. The Government of Madhya Pradesh vide their letter No. F-3/50/2019/10-11/6/3729 dated 11.11.2021 forwarded a fresh proposal to obtain prior approval of the Central Government, in terms of the



Section-2 of the Forest (Conservation) Act, 1980 on the above-mentioned subject.

- ii. The AC noted that the present project is spread over two Forest Divisions Datia(T) and Gwalior(T) and total of 51,121 no. of trees are marked for felling at FRL-4-meter Level.
- iii. Legal status of land proposed for diversion: 651.135 ha is Protected Forest land, 654.007 ha is Reserved Forest land and 1840.11 ha non-forest land is also involved in the project. Density of the area proposed for diversion is reported to be 0.3, Eco-class-03.
- iv. Proposal does not form part of any PA, Biosphere Reserve, Elephant corridor etc. No protected archaeological/ heritage site/defence establishment or any other important monuments is located in the area.
- v. Wildlife like Wolf, Wild bear and other wild animals such as Hyna, Chital, Nilgai, wild pig etc. are reported in the forest land proposed for diversion under Datia District and Blue Bull, Jackal, chinkarka, rabbit, crocodile etc. are reported under Gwalior district.
- vi. The Nodal Officer, FCA, Government of Madhya Pradesh attended the meeting and informed that the main purpose of this project is irrigation of the areas having medium to low rainfall in Bundelkhand Region and purposed to be constructed on the River Sindh which is a tributary of the River Chambal.
- vii. The Regional Officer, Integrated Regional Office, Bhopal who has conducted the Site Inspection for this proposal attended the meeting. The Site inspection report inter-alia mentions the following with regard to forest land for diversion:
 - a. **Gwalior Division:** soil is highly prone to erosion causing formation of ravine which is expanding on either side of the river with passage of time. Due to erosion the river is also having large quantity of Sand in it.
 - b. **Datia Division:** the ravine formation on the banks on either side of the river is expanding inland. Therefore, it is suggested to provide strong bunds with suitable culverts all regular intervals with silt traps to allow the rain water to drain in with minimum silt load. This would also prevent spread of ravines further in the plain lands and also siltation of the project would be minimised.
- viii. The IRO in its inspection report revealed that one CA patch of Birdha Village is overlapping with the CA area of another approved proposal. Therefore, the State Govt. has revised the CA sites.
- ix. The AC observed that the Compensatory afforestation has been proposed over non forest land (Ravine land) in Bhind and Shivpuri District, Madhya Pradesh.
- x. The issue of raising plantation on ravine land was deliberated. The concerned CCF had earlier recommended that ravine areas should be avoided for raising the Compensatory Afforestation. The State thereafter constituted a committee of the senior officers, which recommended that the ravine areas can be used for planting 200-300 plants per hectare.
- xi. The Nodal Officer, FCA, Govt. of M.P. informed that the plantation in the Ravine areas proposed for CA may not be possible at the rate of 1000 plants/ha but the area may accommodate about 200 to 300 plants/ha. The balance no. of plants have to be taken up for plantation on Degraded Forest Land.



- xii. The proposal is for the construction of barrage and submergence area. The details of distribution network like canals and pipelines are not there. The nodal Officer MP informed that the distribution will be done through underground pipelines. The committee however observed that a holistic proposal is required to be submitted as forest land may be required for laying of underground pipelines as well.
- xiii. The AC observed that river Chambal is important for aquatic fauna. The construction of any project over a tributary of Chambal will affect the quality and quantity of water in Chambal, which may be detrimental for the protection and conservation of wildlife. The matter would therefore require detailed examination from wildlife point of view.
3. **Decision of the Advisory Committee:** After thorough deliberations and discussions with the Nodal Officer, FCA, Government of Madhya Pradesh and Regional Officer, IRO, Bhopal. After going through the facts of the proposal and submissions made by the Nodal Officer, the Committee deferred the proposal for diversion of 1305.142 ha forest land for the construction of Maa Ratangarh Multipurpose Project and sought the following details:
- The details of distribution network like canals and pipelines, which may further have required diversion of forest land etc. has not been given. A holistic proposal is required to be submitted as forest land may be required for laying of underground pipelines as well. The State Govt. shall therefore provide the complete lay out plan indicating all the components like canal, pipelines etc. The detail of the area requirement for these components shall also be submitted.
 - Sindh is a Tributary of Chambal River and therefore the impact of the proposed project on Chambal Wildlife Sanctuary and its surrounding water regimes shall be provided by the State Govt. along with the recommendations of the Chief Wildlife Warden of the State.
 - The detailed Compensatory Afforestation scheme for the proposed non forest land (Ravine land) and degraded forest land shall be submitted.

Agenda No. 5

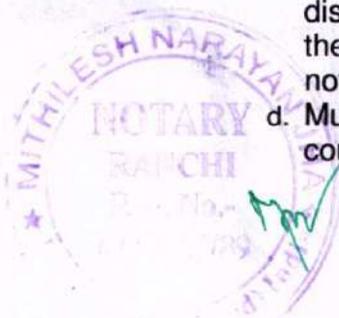
F. No. 6- MPC018/2021-BHO

Subject: Proposal for diversion of 12.8042 ha (previous proposed area 13.1959 ha) of Protected Forest land in Survey No. PF-112 of forest range, Sirmour in Rewa division for construction of Hydro Power Project in favour of Manager, Marshal Small Hydro Power Private Limited, in Rewa District of Madhya Pradesh (Online No. FP/MP/HYD/42686/2019) – regarding.

- The agenda item was considered by the AC in its meeting held on 25.04.2023. The corresponding agenda note may be seen at www.parivesh.nic.in.
- During the meeting, all the facts and background of the proposal, along with examination of the proposal in the DSS were presented and explained by the Member Secretary before the AC for their examination and analysis. Committee was also apprised of the relevant provisions under other Acts & Rules relevant to the proposal and their significance.
- The Regional Officer, IRO, Bhopal and Nodal Officer (FCA), Government of Madhya Pradesh attended the meeting:



- i. The Government of Madhya Pradesh vide their letter No. F-4/49/2021/10-11/673 dated 11.02.2021 forwarded a fresh proposal to obtain prior approval of the Central Government, in terms of the Section-2 of the Forest (Conservation) Act, 1980 for diversion of 12.8042 ha (previous proposed area 13.1959 ha) of Protected Forest land in Survey No. PF-112 of forest range, Sirmour in Rewa division for construction of Hydro Power Project in favour of Manager, Marshal Small Hydro Power Private Limited, in Rewa District of Madhya Pradesh.
- ii. The proposed diversion area is 12.8042 ha and a total of 2,938 no. of trees are marked for felling at FRL.
- iii. The proposal envisages construction of Hydro Electric Project of 24.75 MW capacity in village Chachai of Rewa District of Madhya Pradesh. Entire land proposed for the project is forest land (Protected Forest). No non-forest land is involved in the project.
- iv. Compensatory afforestation has been proposed over equivalent non-forest land in a single patch. A small patch is observed to be sandwiched between the CA patch identified for CA. The User Agency has provided access by way of an approach road to the said small patch. Suitability of the area has been certified by the Nodal Officer.
- v. The Regional Empowered Committee discussed and recommended the proposal in its meeting held on 03.03.2021 for approval under the Forest (Conservation) Act, 1980. Hydel projects involve earth cutting and quarrying requiring scientific disposal of muck generated from such activities. All hydel projects are invariably accompanied with the Muck Disposal Plan and Techno-economic clearance (TEC). No such plan/TEC has been submitted along with the proposal. The Muck Disposal Plan was neither demanded by the IRO nor this issue was deliberated in the REC meeting. Keeping in view the importance of Muck Disposal Plan, the IRO was asked to ensure that a detailed plan in this regard is provided by the State Government.
- vi. The IRO Bhopal vide letter dated 02.08.2021 and 18.04.2022 requested the Government of Madhya Pradesh for sending details regarding muck disposal plan. Govt. of Madhya Pradesh vide letter dated 28.12.2021 and letter dated 23.09.2022 informed as below:
 - a. The Nodal Officer submitted a muck disposal plan on 0.42 ha non- forest land and informed that the muck will be disposed on private land which is acquired by UA on lease.
 - b. The Nodal Officer, Govt. of MP also requested that the UA had demanded 0.3917 ha area in the original proposal for disposal of muck. Further as per revised proposal the muck would be disposed on private land, hence requested to revise the proposed diversion area to (13.1959 ha - 0.3917 ha) 12.8042 ha only and the vacant area (previous proposed muck area 0.3917 ha) may be used as Green Belt.
 - c. The IRO, Bhopal observed that the area indicated in the muck disposal plan is 42026 Sq. m. = 4.20 ha but the covering letter of the Nodal Officer indicated that the area is only 0.42 ha which is not supported by any documentary proof.
 - d. Muck Disposal Plan with revised non forest area (3.48 ha) and countersigned by DFO Rewa is submitted.



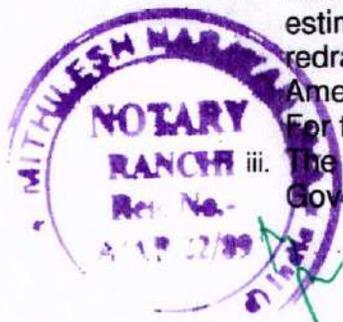
- e. The UA submitted an undertaking that no muck shall be disposed on forest land.
- vii. The proposed forest area for diversion has been revised from 13.1959 ha to 12.8042 ha and the proposal was again discussed in REC Meeting held on 18.11.2022. The REC examined the proposal for diversion of forest land under the Forest (Conservation) Act, 1980 and recommended the proposal for diversion of 12.8042 ha on usual terms and conditions.
- viii. The AC observed that a patch of thick forest is existing between the water body and area proposed for diversion and no precautions as such have been proposed for saving this while construction. Moreover, the REC while recommending the proposal for diversion of 12.8042 ha has not taken this important aspect into consideration.
4. **Decision of the Advisory Committee:** The Committee had detailed discussion and deliberation with the Nodal Officer (FCA), Madhya Pradesh and Regional Officer, IRO Bhopal. After going through the facts of the proposal and submissions made by the Regional Officer, IRO Bhopal, the Committee decided that the proposal cannot be accepted in its present proposition due to following reasons:
- i. A patch of thick forest is existing between the water body and area proposed for diversion. The measures to safeguard the said forest patch while construction have not been submitted.

Agenda No. 6

F. No. 8-69/2018-FC

Subject: Proposal for diversion of 353.764 ha. of forest land (instead of 390.264 ha. of forest land) in favour of M/s Northern Coalfields Limited, for Bina Kakri Open Cast Coal Mining, under Forest Division and District Singaruali in the State of Madhya Pradesh -regarding (Online proposal No. FP/MP/MIN/20225/2016) – regarding.

1. The agenda item was considered by the AC in its meeting held on 25.04.2023. The corresponding agenda note may be seen at www.parivesh.nic.in.
2. During the meeting, all the facts and background of the proposal, along with examination of the proposal in the DSS were presented and explained by the Member Secretary before the AC for their examination and analysis. Committee was also apprised of the relevant provisions under other Acts & Rules relevant to the proposal and their significance.
3. The Regional Officer, IRO, Bhopal and Nodal Officer (FCA), Government of Madhya Pradesh attended the meeting:
 - i. This proposal was considered in the FAC meeting held on 19.12.2019.
 - ii. FAC, while deliberating on the proposal, observed that the State Govt. was advised to review the proposal and submit report in the light of estimated area under VDF and MDF. They were also requested to redraw the proposed diversion proposal on the lines of analysis of Amelia Coal Block by FAC, excluding the certain area from proposal. For this purpose, State Govt. was asked to seek help from FSI Nagpur. The response to the above observations was furnished by the State Government vide letter dated 09.12.2019 wherein it has been informed
 - iii. The response to the above observations was furnished by the State Government vide letter dated 09.12.2019 wherein it has been informed

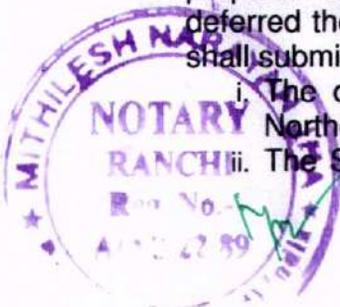


that the KML file of proposed diversion had been forwarded to FSI, Nagpur for examination/ analysis on the similar lines as per the analysis of Amelia Coal Block by FSI, Nagpur. The FSI, Nagpur on examination of KML file has reported that within the proposed forest area two patches possess Very Dense Forest and eradicating this area is not possible. Hence it is not possible to reduce the forest area within this proposal like Amelia Coal Block Moreover, Amelia Coal Block engulfs dense forest on the upper top part of the proposal whereas in present proposal dense forest is scattered in different pockets within the proposed area. However, the copy of the said report was not submitted by the State Government and accordingly the FAC recommended the proposal with specific condition no. (iii) of Stage-I approval dated 13.01.2020 "The copy of report of FSI, Nagpur regarding inability to redraw the proposal on the lines of analysis of Amelia Coal Block shall be submitted prior to Stage-II approval".

- iv. The Government of Madhya Pradesh vide their letter dated 01.02.2021, dated 10.06.2021, dated 21.10.2022, dated 18.01.2023 and dated 29.03.2023 submitted report on compliance of conditions stipulated in the Stage-I approval.
- v. However, the State Govt. expressed its inability to submit the report of FSI, Nagpur citing the reason that such technical expertise is now not available in Nagpur.
- vi. The FAC earlier observed that FSI, Nagpur has reported that it is not possible to reduce the forest area within this proposal like Amelia Coal Block. However, the said report could not be produced and now a report from FSI Dehradun has been submitted. The report of FSI Dehradun is however not conclusive and does not answer the specific questions asked.
- vii. The Member Secretary informed that now the State Govt. has submitted a request that report of FSI Dehradun be sent to Shri P. Subramanyam, Regional Officer, IRO, Bangalore who was posted in FSI, Nagpur at that time, to comment and confirm it on the lines of Amelia block.
- viii. The AC examined the area on DSS and observed that the proposed area is on the edge of already mined out area. Apparently, it is the last patch between the already existing mines and the habitation. If this patch is also diverted, then we may not be left with any other buffer or green belt. The committee expressed their concern over the presence of very dense forest, hydrological regimes and effect on the catchment of adjoining area due to mining activity.
- ix. The committee observed that the status of reclamation measures in the already existing mines are also required to be examined before taking any further decision in this regard.

4. **Decision of the Advisory Committee:** The Committee had detailed discussion and deliberation with the Nodal Officer (FCA), Madhya Pradesh and Regional Officer, IRO Bhopal. After going through the facts of the proposal and submissions made by the Nodal Officer, the Committee deferred the proposal and decided that the Government of Madhya Pradesh shall submit the following information:

- i. The details of total number of proposals approved in favour of M/s Northern Coalfields Limited in the existing landscape.
- ii. The Status of reclamation of mined out areas in case of mines under



the control of M/s Northern Coalfields Limited in this region.

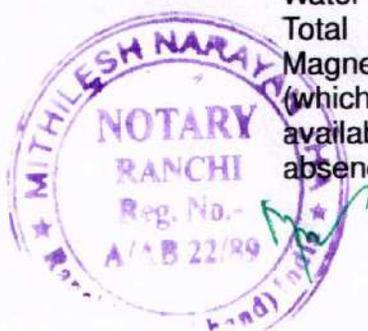
- iii. The status of compliance of conditions stipulated in all approved proposals in favour of M/s Northern Coalfields Limited in the existing landscape will be submitted by the State through IRO Bhopal, who in turn examine the same and will visit the areas if needed and submit a comprehensive report in this regard within 45 days.

Agenda No. 7

File No. 8-18/2022-FC

Sub: Application for Permission under Section-2 (iii) of Forest Conservation Act, 1980 by M/s Dalmia Cement (Bharat) Limited) (DCBL) over 575.16 ha of forest land within the granted ML area over 802.255 ha for Kottameta Lime Limestone mining in Katamateru village under Malkangiri Tahasil of Malakangiri District, Odisha (Online Proposal No. FP/OR/MIN/144696/2021)

1. The agenda item was considered by the AC in its meeting held on 25.04.2023. The corresponding agenda note may be seen at www.parivesh.nic.in. Nodal Officer (FCA), Odisha also attended the meeting.
2. Member Secretary placed all the facts and background of the proposal, along with examination of the proposal in the DSS, before the AC for their examination and analysis. The Committee was also apprised of the provisions of other Acts & Rules relevant to the proposal and their significance.
3. The AC after through deliberation and discussion observed that:
 - i. The proposal was also discussed in the AC meeting held on 17.10.2022 wherein after detailed discussion and deliberation on the proposal with the Nodal Officer (FCA), Odisha and Regional Officer, Bhubaneswar, the AC observed that since the area falls into High Conservation Value Zone due to its close proximity with river Kolab, therefore before taking further view on the proposal, to ensure in-depth examination and to avoid *fait accompli* situation in the matter, following detail will be furnished by the concerned IRO:
 - a. Likely impact of mining on the river Kolab and mitigating measures required to be undertaken to minimize the impact on hydrological regimes of the area.
 - b. As per progressive Mine Closure Plan an area of 2.584 ha has been used for roads, the IRO may ascertain if the use of road in the past was with prior approval or otherwise and factual position may be intimated to the Ministry.
 - ii. The report of IRO, Bhubaneswar dated 24.02.2023 on the above observation mentions that if the untreated water from lime stone mining area is released into Kolab River, there will be substantial increase in Water Temperature, pH level of water, Electrical Conductivity (EC), Total Dissolved Solids (TDS), Alkalinity, Hardness, Calcium, Magnesium, Dissolved Oxygen (DO), content of the water, Sulphates (which needs to be quantified, monitored regularly). Due to non-availability of any empirical study in the proposed area, the presence or absence of other elements and heavy metals cannot be ascertained.

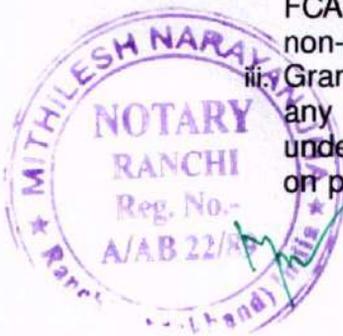


Thus, the change in chemical composition in untreated disposed water from mining lease area will have impact on the ecosystem and will change the flora & fauna composition of Kolab river eco- system.

- iii. Mitigative measures like Establishing an inviolate green buffer zone, Catchment Area Treatment Plan etc have been proposed to reduce the likely impact of the proposed lime stone mining on hydrological regime of the river Kolab.
- iv. The report submitted by the IRO mentioned that a 1250 square meter structure with a defined barricade was observed in the satellite imagery, however there was no clarity whether the structure involved violation of Forest (Conservation) Act 1980 or not. Accordingly, the Ministry sought the comments from the State Govt. and also asked the IRO Bhubneshwar to verify the status of violation within the proposed lease area.
- v. With respect to the violation of the provisions of FCA,1980, the IRO Bhubneshwar reported that:
 - a. There is a temporary, small thatched shed made up of dried wood and covered with locally available leaves. The space in front of the shed is being used to dry the collected Mahua flowers and the thatched shed is being used to store the dried Mahua flowers. As enquired, it is known that it was erected a year ago by some villagers.
 - b. There is also a temporary water body excavated adjacent to thatched hut to store rain water which is about a meter depth and almost dried up at the time of the visit.
 - c. A temporary barricade was made all around like a fence with brushwood and bamboos, which were dried and damaged at some points. All these are temporary structures were made by unknown villagers and according to DFO Malkangiri, can be removed.

4. **Decision of the Advisory Committee:** After detailed discussion and deliberation with the Nodal Officer(FCA) , The Regional Officer, IRO Bhubneshwar and considering all aspects, the Advisory Committee recommended the proposal for approval under Section 2 (iii) of Forest (Conservation) Act, 1980 for grant of lease over in favour of M/s Dalmia Cement (Bharat) Limited) (DCBL) over 575.16 ha of forest land within the granted ML area over 802.255 ha for Kottameta Lime Limestone mining in Katamateru village under Malkangiri Tahasil of Malakangiri District, Odisha subject to the General, Standard and following specific conditions:

- i. This approval under section 2(iii) will automatically lapse within a period of two years from the date of in principal approval by Central Government, unless the user agency applies for approval under section 2(ii).
- ii. The approval under section 2(iii) does not in any manner exempt the user agency from obtaining prior approval under section 2(ii) of the FCA,1980 in regard to such area of forest land which is to be used for non-forest purpose.
- iii. Grant of approval under section 2(iii) does not in any manner create any right or equity in favour of the user agency for grant of approval under section 2 (ii) of the Forest (Conservation) Act,1980 and decision on proposal under section 2 (ii) will be taken purely on the merit of the



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case.

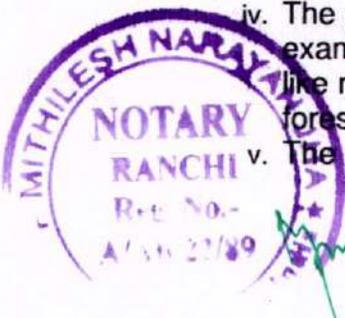
- iv. The State govt. shall ensure that breaking up of land or mining operations within the lease area are not allowed without prior approval of the Central Govt. under Section 2(ii) of Forest (Conservation) Act, 1980. The user agency shall be responsible for the protection of the forest land located in the mining lease. However, administrative and management control of such forest land will remain with the State Forest department or other forest land owning agencies.

Agenda No. 8

File No. 8-01/2023-FC

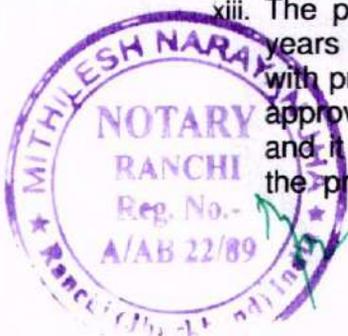
Sub: Proposal for seeking prior approval of the Central Government under Section 2 (ii) of the Forest (Conservation) Act, 1980 in favour of M/s Rungta Mines Ltd. for non-forestry use of 83.602 ha of forest land including 2.529 ha of Safety Zone in Chandiposhi Iron Ore Block in Koira Tahasil of Bonai Forest Division of Sundargarh District, Odisha (Online proposal no. FP/OR/MIN/150057/2021)- reg.

1. The agenda item was considered by the Advisory Committee in the meeting held on 25.04.2023. The corresponding agenda note may be seen at www.parivesh.nic.in. Nodal Officer (FCA), Odisha also attended the meeting.
2. The Member Secretary placed all the facts and background of the proposal, along with examination of the proposal in the DSS, before the AC for examination and analysis. The Committee was also apprised of the provisions of other Acts & Rules relevant to the proposal and their significance.
3. The AC after through deliberation and discussion observed that:
 - i. The Government of Odisha vide their letter No. FE-DIV-FLD-0001-2023-300/FE&CC dated 06.01.2023 submitted a proposal to obtain prior approval under section-2 of the Forest (Conservation) Act, 1980 for non-forestry use of 83.602 ha of forest land including 2.529 ha of Safety Zone in Chandiposhi Iron Ore Block of M/s Rungta Mines Ltd. in Koira Tehsil of Bonai Forest Division of Sundargarh District, Odisha.
 - ii. The Government of Odisha, Steel & Mines Department issued Letter of Intent (LOI) for grant of Mining Lease for Chandiposhi Iron Ore Block over 131.580 ha for Iron Ore located at a distance of 8 km to the east of Koira town, Koira Tahasil, Sundargarh district to Rungta Mines Ltd. for a period of 50 (Fifty) years.
 - iii. Out of 131.580 ha DGPS surveyed lease area, 83.602 ha (including 2.529 ha of safety zone) is forest land (DLC Forest-57.215 ha + Revenue Forest- 26.387 ha) and the remaining 47.978 ha is non-forest land.
 - iv. The purpose wise breakup of the forest land applied for diversion was examined and it was observed that certain non-site-specific components like mineral stack yard, ore processing site etc. have been proposed on forest land.
 - v. The Nodal Officer informed during the meeting that 1.985 ha area (Mine



road-1.967 ha + Infrastructure-0.018 ha are all temporary features) will come under active mining operation to mine out the total Iron Ore resource, before the expiry of the lease period. Hence total mined out area will be 87.548 ha. DLC forest land over 4.536 ha and 5.687 ha will be used for Ore processing site and Mineral stack yard respectively as the part of the forest land is non-mineralized and there is no other free non-forest land available within the block area for the said purpose.

- vi. As far as other non-site-specific components like mineral stack yard, ore processing site etc. are concerned, the Nodal officer explained that no suitable non-forest land is available for these essential works.
- vii. Faunal species such as Elephant, Wild boar, Hanuman langur, Indian Hare, Indian Palm Squirrel, Jungle Cat, Rat and different types of Snakes and Birds have been recorded from the applied area. The distance of the project site from the nearest Protected area (Similipal WL Sanctuary) is 80.460 Km. The project site is 11.53 Kms away from the nearest Elephant Corridor (Karo-Karampada).
- viii. Total No. of trees over forest land proposed to be diverted is 19013 nos. (which includes 575 nos. of trees within Safety Zone area) The DFO, Bonai Forest Division has reported that, enumeration has been conducted in 21 nos. of sample plot of 1.0 ha each within 83.602 ha of forest land including 2.529 ha of Safety Zone area and total 4,776 nos. of tree enumerated above 30 cm girth. By extrapolation of the above said data, total no. of trees (above 30 cm girth) has been calculated.
- ix. Compensatory Afforestation Scheme has been prepared over 83.602 ha of Govt. non-forest land identified in village Talabarada under Banspal Tahasil of Keonjhar Forest Division of Keonjhar District The 83.602 ha of Non-Forest land identified in village Talabarada has been allotted by Collector, Keonjhar for raising compensatory Afforestation.
- x. There are few houses located in the north-eastern side within the auctioned block. There will not be any mining and ancillary activity in that area and will not affect those people. Hence, no rehabilitation plan has been envisaged. Moreover, these houses are situated on the non-forest land.
- xi. A Comprehensive Wildlife Management Plan covering the entire forest area Bonai & Keonjhar Division for management of wildlife has already been prepared. Accordingly, the User Agency has to pay @₹82,000/- per hectare for the entire Block area of 131.580 ha as per revised norm approved by Govt. of Odisha. The User Agency has furnished an undertaking duly countersigned by the DFO, Bonai Forest Division to bear the cost of Comprehensive Wildlife Management Plan.
- xii. The forest area proposed to be diverted under the project and neighbouring forest area are characterized by variety of flora and fauna. A Site-Specific Wildlife Conservation Plan has been suggested to be prepared and implemented. The User Agency has submitted an undertaking duly countersigned by the DFO, Bonai Forest Division to bear the cost of the said plan.
- xiii. The proposal for diversion of forest land has been submitted for 50 years whereas the Mining Plan of Chandiposhi Iron Ore Block along with progressive mine closure plan over an area of 131.58 ha has been approved by IBM, for five years. In this regard the State has reported and it was also informed by the Nodal officer during the meeting that the proposal for diversion of forest land has been submitted for 50



years, which is in accordance with the notification of Govt. of India vide No. 11-51/2015-FC dt.01.04.2015 which states that "period of the validity of approvals accorded under Section-2 of the FC Act shall be extended and shall be deemed to have been extended upto a period co-terminous with the period of mining lease, i.e, 50 years".

- xiv. Further, the mining plan for Chandiposhi Iron Ore block was approved for 5 years by India Bureau of Mines. This is in accordance with Rule 13 of MCR, 2016, which states that, "No mining operation shall be undertaken except in accordance with a mining plan and the mining plan shall incorporate, a tentative scheme of mining and annual programme and plan for excavation from year to year for five years". Further, as per Rule 17 (1) of MCR, 2016 "The mine plan once approved shall be subject to review and updation at an interval of every five years, starting from date of execution of the duly executed lease deed". Moreover, mining is a dynamic process and changes may happen keeping in view, change in the business environment, for facilitating increase in production capacity or in the interest of safe and scientific mining, conservation of minerals, protection of Environment, technological transformation or any other reasons.
- xv. A nalla is passing through the mining lease area, and the natural course of flow of water in this nalla has to be maintained. It is very important to stabilize the bank to avoid siltation and flood. At the same time, it is essential to ensure that no discharge from the mining site enters to the natural river and stream. The IRO in its report has recommended that a safety zone of 50 meters on both side of nala shall be maintained as green belt. There is a need for soil and moisture conservation measures in the rest catchment of this nala and the forest lands in and around the proposed site to ensure recharge of water.
4. **Decision of the Advisory Committee:** After detailed discussion and deliberation with the Nodal Officer (FCA) Govt. of Odisha, the Regional Officer, IRO Bhubneshwar and considering all aspects, the Advisory Committee recommended the proposal for seeking prior approval under Section 2 (ii) of the Forest (Conservation) Act, 1980 in favour of M/s Rungta Mines Ltd. for non-forestry use of 83.602 ha of forest land including 2.529 ha of Safety Zone in Chandiposhi Iron Ore Block in Koira Tahasil of Bonai Forest Division of Sundargarh District, Odisha subject to the General, Standard and following specific conditions:

- i. A Site-Specific Wildlife Conservation Plan shall be prepared and implemented at project cost;
- ii. An Integrated Regional Wildlife Conservation Plan specially addressing the movement of elephant in the entire Sundargarh and Keonjhar district comprising Jharsuguda, Sundargarh, Bonai and Keonjhar Forest Division may be prepared by the State Govt. to mitigate adverse impact of mining on the movement of elephant and other wildlife by proportional share from the lease holders.

- iii. The State/User Agency shall raise thick plantations as a green belt, to minimize air and sound pollution, around habitations near to their mine. A far as possible the user agency should address the livelihood of the villagers by providing direct/indirect employment and should regularly



check their health issues and related treatment as long as they are not properly rehabilitated;

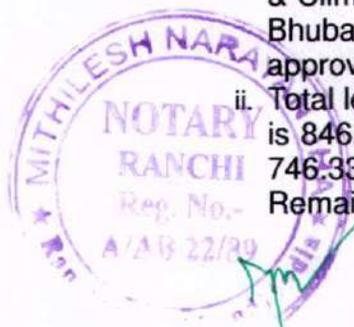
- iv. The Nalla situated in the mining lease area shall not be diverted so as to retain the natural course of flow of water. No discharge from the mining site should enter the natural river and stream. To stabilize the bank of Nalla and to avoid siltation and flood a safety zone of 50 meter on both sides of Nala shall be maintained as green belt;
- v. Soil and moisture conservation measures in the rest of the catchment of this Nala and the forest lands in and around the proposed site shall be carried out to ensure recharge of water;
- vi. As per the mining plan no activities have been proposed in 6.120 ha of non-forest land. Fruit bearing trees shall be raised in this 6.120 ha of land wherever possible;
- vii. Transportation of ore should be done as per the recommendation of NEERI;

Agenda No. 9

File No. 8-28/2015-FC

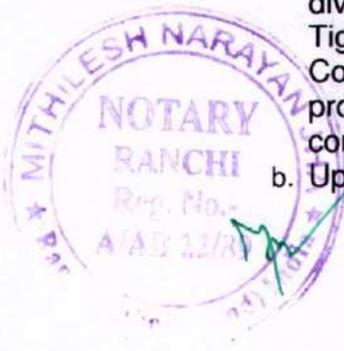
Sub: Diversion of balance forest land of 746.3325 ha including 1.8305 ha for safety zone (excluding 95.60 ha Pre-1980 broken up forest land already diverted and 4.467 ha of forest land being proposed for diversion in separate proposal mining infrastructure of Daitari ML) within total forest of 846.3995 ha located within approved Mining Lease area of 1018.3085 ha for Iron Ore Mining in Daitari Mining Lease in Cuttack Forest Division of Jujpur District and Keonjhar (WL) Division of Keonjhar District, Odisha of OMC Ld. During Mining Lease period as extended under the Amendment provision MMDR Act- submission of final Study Report regarding (Online Proposal No. FP/OR/MIN/9112/2015)

1. The agenda item was considered by the Advisory Committee in the meeting held on 25.04.2023. The corresponding agenda note may be seen at www.parivesh.nic.in. Nodal Officer (FCA), Odisha also attended the meeting.
2. The Member Secretary placed all the facts and background of the proposal, along with examination of the proposal in the DSS, before the AC for examination and analysis. The Committee was also apprised of the provisions of other Acts & Rules relevant to the proposal and their significance.
3. The AC after through deliberation and discussion observed that:
 - i. The State Government of Odisha, Department of Environment, Forests & Climate Change, vide his letter No. 10F (Cons) 210/2015, 16637/F/E, Bhubaneshwar, dated 19.09.2015 submitted a proposal to obtain prior approval of the Central Government for the diversion of forest land.
 - ii. Total lease area of the project is 1018.3085 ha. Out of which forest area is 846.3995 ha. Out of 846.3995 ha forest land, diversion is sought for 746.3325 ha. and 95.60 ha had already been diverted in 2005. Remaining 4 ha is included in another proposal which is in the process



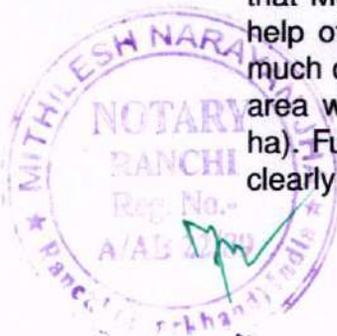
of submission for diversion.

- iii. The mining lease was originally granted over an area of 7 Sq. Miles in Talpada (Daitari) for iron ore mining in favour of Orissa Mining Corporation by the erstwhile Mining and Geology Department of State Government vide Proceedings No. III (G) M - 1/ 65-2272 MG dated 16.03.1965 and the Mining lease was executed on 27.01.1966 for a period of 30 years. Thus, the original lease period expired on 26.01.1996. The surface rights were granted to OMC Ltd. by the Collector, Cuttack vide his letter dt. 17.11.1966. First renewal was done on 27.01.1996 up to 26.01.2016 which was extended up to 21.03.2020 under the amended provision of MMDR Act.
- iv. The lease area is located in two forest divisions i.e. in Keonjhar WL Division (533.659 ha) and Cuttack Forest Division (193.2666 ha). Legal status of forest land is Reserve Forest & Gramya Jungle in Keonjhar WLD and DPF in Cuttack FD. Density of vegetation as reported by state is 0.8-1.0 (Eco-class-I in Keonjhar WLD) and 0.6 (Eco-class-I in Cuttack FD).
- v. A total no. of trees of 1,65,869 in Keonjhar WLD and 70,697 & 35,838 No. of poles in Cuttack FD are assessed to be affected under this mining project.
- vi. The area applied for diversion in Keonjhar WL does not involve any notified Eco-Sensitive Zone/ National Park / sanctuary. However, this area was supporting Royal Bengal Tigers. Recently, National Tiger Conservation Authority (NTCA) has proposed a tiger corridor interlinking Similipal Tiger Reserve & Satkosia Tiger Reserve in Odisha which is essential for long term Tiger/Wildlife conservation in our country. The area proposed for forest diversion comes within the proposed tiger corridor.
- vii. It has been reported that a big patch of Gramya Jungle was found without vegetative cover, which was abnormal considering the dense canopy of the adjacent forest. During field verification by the DFO it was found that approximately 28.67 ha. of Gramya Jungle coming within the lease hold area was found to be Podu/Jhoom/shifting cultivation ravaged. It has been further mentioned that since the area is within the Mining lease, therefore the same amounts to violation of FCA,1980 by the User Agency.
- viii. The above facts along-with SIR, were considered in the meeting of Forest Advisory Committee (FAC) held on 12.07.2016 and FAC recommended that:
 - a. It has been reported by the DFO, Keonjhar (WL) division and RCCF, Rourkela, that the area was supporting Royal Bengal Tigers in the past. The last confirmed presence of Tigers in this area was in the year 1997. National Tiger Conservation Authority has proposed a Tiger corridor interlinking Similipal Tiger Reserve and Satkosia Tiger Reserve in Odisha for long term Tiger/ Wildlife conservation in the country. The area proposed for forest diversion for this infrastructure project comes within the proposed Tiger corridor. The same shall be examined by National Tiger Conservation Authority in view of section 38(G) of Wild life protection Act 1972 and their views will be provided to FAC for consideration.
 - b. Upon examination of the proposal under Decision support System



of the MOEF and CC, it is evident that the area falls in the proposed inviolate category. The shape files of the proposed area shall be provided to FSI Dehradun so that the status of the forest land can be reconfirmed in accordance with the draft criteria for classifying forest area as inviolate.

- ix. Along with the comments of IA Division and NTCA recommendation on the above points, the proposal was again considered by the FAC in its meeting held on 20.07.2017. FAC after thorough deliberations and discussion with the user agency, the representative of State Government and Regional office observed that the forest area is of pristine nature which has more than 2,72,535 trees with density about 0.8 and National Tiger Conservation Authority (NTCA) has proposed a tiger corridor interlinking Similipal Tiger Reserve & Satkosia Tiger Reserve in Odisha which is essential for long term Tiger / Wildlife conservation in our country. In this backdrop FAC recommended that:
 - a. State government in consultation with Regional Office shall take a holistic view of all mines existing in that area and analyse how this mine along with other existing mines in the area will affect the corridor connectivity and biodiversity value of the area.
 - b. It is reported that a big patch of Gramya Jungle was found without vegetative cover, which was abnormal considering the dense canopy of the adjacent forest, the area is adjacent to village Talapada. Approximately 28.67 ha. of Gramya Jungle coming within the lease area. The state government shall enquire the reason for less vegetation in the lease area under the control of the user agency and submit the report to the Ministry. Comments of IA Division of MOEF and CC may be sought regarding applicability of NEERI report.
- x. Accordingly, the State Government was requested vide this Ministry's letter dated 24.08.2017 to take necessary action in accordance with recommendation of FAC on 20.07.2017 as given in para above.
- xi. The State Government of Odisha vide letter dated 01.05.2018 submitted their response on Ministry's letter dated 24.08.2017. The point wise information as sought by this Ministry and reply there of given by the State Government was placed before the FAC meeting held on 26.07.2018.
- xii. The Committee inter alia observed that the said diversion proposal is situated, in a virgin, very dense, nearly undisturbed pristine forest having immense biodiversity value. It was also observed (DSS) that the said OMC mine (currently operating in 95.60 ha) is a lone mine situated on hill top and is aerially 5 KM (approx.) apart/ away from the Chromite mine cluster which are situated in the valley.
- xiii. Taking all these factors into consideration FAC inter-alia recommended that MoEF&CC may conduct a study through ICFRE, which may take help of IBM, to ascertain the technical feasibility of the fact that how much quantity of ore material can be extracted from already opened up area without further expansion of the existing mining area (i.e. 95.60 ha). Further it has been asked that the recommendation of study shall clearly come with comparative statement of environmental loss vis a vis



benefit (comparison in monetary terms including both tangible and intangible benefits/loss) which will be accrued/lost if the area is allowed for mining."

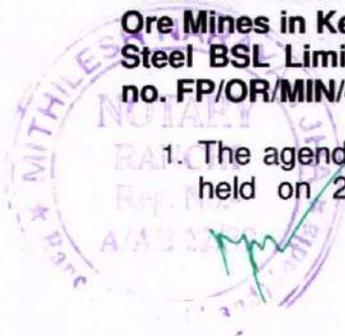
- xiv. The Government of Odisha vide letter No. dated 17.03.2023 has submitted a copy of the final report in Vol.I and Vol-II and Executive Summary on Carrying Capacity and Biodiversity Assessment Study Report of Daitari Iron Ore Mine of Odisha Mining Corporation Ltd., Odisha prepared by ICFRE, Dehradun in association with Wildlife Institute of India, Dehradun.
 - xv. The ICFRE suggested modifications in the configurations of the mining interventions contributing to reduction in an area of 309.66 ha from the applied area by M/s. OMCL (i.e., 746.33 ha) and preserve an area of 613.05 ha intact within DIOM lease (Table ES-6) comprising of very dense forest (367.98 ha) moderate forest (87.85 ha) and open forest (129.01 ha) that fall both in Keonjhar Wildlife Division and Cuttack Forest Division as well as non- forest area (28.21 ha) within the total DIOM mining lease area.
 - xvi. The Committee observed that the report submitted requires in-depth analysis. Further, the analysis of the report shall be more fruitful in case a field visit of the area is also carried out.
4. **Decision of the Advisory Committee:** After detailed discussion and deliberation on the proposal with the Nodal Officer (FCA), Odisha and Regional Officer, IRO, Bhubaneswar on the recommendations of the Study report of ICFRE, the Advisory Committee deferred the proposal and decided to seek the following details:
- I. The State Government shall submit a detailed report on the present status of Jhum/Shifting cultivation and the time period during which the Jhum/shifting cultivation has taken place within the mining lease area.
 - II. A subcommittee consisting of following members shall visit the area and submit a detailed report along with their recommendations after in-depth analysis of the report prepared by the ICFRE:
 - i. Shri S.D. Vora, Member of the Advisory Committee
 - ii. Shri Manoj Pant, Member of Advisory Committee.
 - iii. DDGF (Central) IRO, Bhubaneshwar.
 - iv. Nodal Officer (FCA), Govt. of Odisha
 - v. AIGF (NTCA), MoEF&CC, New Delhi.

Agenda No. 10

File No. 8-13/2022-FC

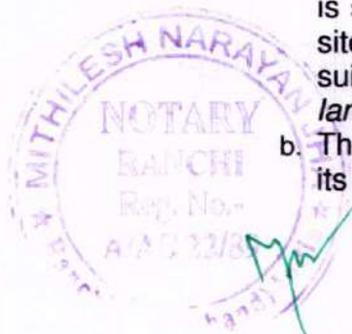
Sub: Proposal for seeking prior approval of the Central Government under Section 2 (ii) of the Forest (Conservation) Act, 1980 for non-forestry use of 42.608 ha of forest land (16.658 ha in Keonjhar Forest Division and 25.950 ha in Bonai Forest Division) within Kalmang West (Northern Part) Block for Iron Ore Mines in Keonjhar and Sundargarh District of Odisha, allotted to M/s Tata Steel BSL Limited (Formerly known as Bhusan Steel Ltd) (Online proposal no. FP/OR/MIN/49169/2020).

1. The agenda item was considered by the Advisory Committee in the meeting held on 25.04.2023. The corresponding agenda note may be seen at



www.parivesh.nic.in. Nodal Officer (FCA), Odisha also attended the meeting.

2. The Member Secretary placed all the facts and background of the proposal, along with examination of the proposal in the DSS, before the AC for examination and analysis. The Committee was also apprised of the provisions of other Acts & Rules relevant to the proposal and their significance.
3. The AC after through deliberation and discussion observed that:
 - i. The Sub-committee in its report has mentioned that any additional mining lease in the area shall impact the movement of elephants not only in the Sundergarh district but also in adjoin states of Jharkhand and Chhattisgarh. Further, considering the present situation of mining in the area and rise in human elephant conflict the committee is of the opinion that the possibility of mitigating the impact is not foreseen. Mitigation measures have been suggested to reduce the impact of ongoing mining activities. Further, it has been mentioned that if these mitigation measures are implemented, in future, the government may consider for additional mining lease after due evaluation. The State Govt. shall give justification for the instant proposal in view of above.
 - ii. State Government shall submit a pointwise reply/comments/justification on the mitigation measures suggested and issues raised in the report of the sub-committee as above.
 - iii. The State Govt. shall compile the detail of all the functional/non-functional and other mines under various stages of approval and their possible impact on the larger landscape.
 - iv. The State Government has submitted that to address the issue of interstate movement of elephants in the larger landscape comprising of Odisha, Jharkhand, Chhattisgarh and South Western part of West Bengal; MoEF&CC (Project Elephant Division) may assign reputed organization/ institution to prepare Comprehensive Elephant Management Plan for the said Region. Keeping this in view the Ministry shall seek the comments of the Project Elephant Division on the instant proposal.
 - v. The proposal has been submitted for prior approval of the Central Govt under Section 2(ii) of the FCA,1980. The State Govt earlier submitted a proposal under Section 2(iii) for this area and the said proposal has been approved vide letter dated 31.01.2022.
 - vi. The applied area does not form part of any National Park/ Wildlife Sanctuary/ Biosphere reserve, Tiger Reserve, Elephant Corridor, etc. However, movement of wild Elephants in the proposed forest blocks for diversion is noticed. The project area is 8.6 Km from the Karo-Karampada Elephant Corridor.
 - vii. The Compensatory Afforestation is proposed to be taken up in Keonjhar Division over 42.608 ha non Forest land identified in village Jaladihi of Bansapal Tahsil in Keonjhar district
 - a. It has been reported that the land for compensatory Afforestation is suitable from plantation and management point of view. During site inspection also, it was found that it is a non-forest land and suitable for plantation. *DSS report showed presence of agriculture land in the CA area but it could not be located at site.*
 - b. The instant proposal was examined by the Advisory Committee in its meeting held on 09.12.2022 and the AC decided that the



recommendation made by the Committee in the case of Netrabandha Pahar Iron Ore Block allotted to M/s Bhusan Power and Steel Limited (under agenda items no. 3 in the minutes of meeting of AC dated 09.12.2022) will apply *mutatis mutandis* to the extant proposal.

- c. The Government of Odisha has submitted a proposal for seeking prior approval of the Central Government under Section 2 (ii) of the Forest (Conservation) Act, 1980 in favour of M/s Bhusan Power & Steel Limited for non-forestry use of 112.621 ha of Forest land (including 1.808 ha earmarked for Safety Zone) in village Baldihi under Koira Tahasil and Koira Range of Bonai Forest Division of Sundargarh District within the block area of 139.223 ha in respect of Netrabandha Pahar Iron Ore Block in Odisha State (Online proposal no. FP/OR/MIN/26965/2017).
- d. The above said proposal was considered in the Advisory Committee meeting held on 24.03.2023 and following decisions were made:

4. **Decision of Advisory Committee:** After detailed discussion and deliberation on the proposal with the Nodal Officer (FCA), Odisha and Regional Officer, IRO, Bhubaneswar, the Advisory Committee decided that recommendation made in the proposal mentioned at agenda item no. 7 placed before the Advisory Committee meeting held on 24.03.2023 will apply *mutatis mutandis* to the extant proposal and decided to defer the proposal and seek the following information:

- i. The Sub-committee in its report has mentioned that any additional mining lease in the area shall impact the movement of elephants not only in the Sundergarh district but also in adjoin states of Jharkhand and Chhattisgarh. Further, considering the present situation of mining in the area and rise in human elephant conflict the committee is of the opinion that the possibility of mitigating the impact is not foreseen. Mitigation measures have been suggested to reduce the impact of ongoing mining activities. Further, it has been mentioned that if these mitigation measures are implemented, in future, the government may consider for additional mining lease after due evaluation. The State Govt. shall give justification for the instant proposal in view of above.
- ii. State Government shall submit a point wise reply/comments/justification on the mitigation measures suggested and issues raised in the report of the sub-committee as above.
- iii. The State Govt. shall compile the detail of all the functional/non-functional and other mines under various stages of approval and their possible impact on the larger landscape.
- iv. The State Government has submitted that to address the issue of interstate movement of elephants in the larger landscape comprising of Odisha, Jharkhand, Chhattisgarh and South Western part of West Bengal; MoEF&CC (Project Elephant Division) may assign reputed organization/ institution to prepare Comprehensive Elephant Management Plan for the said Region. Keeping this in view the Ministry shall seek the comments of the Project Elephant Division on the instant proposal.



Agenda No. 11**File No. 8-87/1998-FC**

Sub: Proposal for seeking prior approval of the Central Government under Section 2 (ii) of the Forest Conservation Act, 1980 for non-forestry use of 465.62 ha of forest land (160.73 ha already broken up area+ 37.25 ha area to be worked during present renewal period + balance 267.64 ha to be maintained as forest) in favour of M/s Steel Authority of India Ltd (SAIL) for first renewal of their Bolani Ores Mines, Keonjhar District, Odisha –reg. (Online Proposal Id: FP/OR/MIN/189/1996)- (For acceptance of CA land for issuing of Stage-II approval)

1. The agenda item was considered by the Advisory Committee in the meeting held on 25.04.2023. The corresponding agenda note may be seen at www.parivesh.nic.in. Nodal Officer (FCA), Odisha also attended the meeting.
2. The Member Secretary placed all the facts and background of the proposal, along with examination of the proposal in the DSS, before the AC for examination and analysis. The Committee was also apprised of the provisions of other Acts & Rules relevant to the proposal and their significance.
3. The AC after through deliberation and discussion observed that:
 - i. The Ministry vide letter dated 24.02.1999 had accorded Stage-I approval for above subject proposal subject to fulfilment of certain conditions prescribed therein.
 - ii. The State vide letter dated 31.01.2014 submitted a request to modify the conditions as stipulated in the Stage-I approval regarding change in Compensatory Afforestation area from NFL to DFL.
 - iii. The proposal for change in the conditions related to raising of Compensatory Afforestation on NFL instead of DFL was placed before the FAC in its meeting held on 16.05.2017. The FAC recommended the proposal from changing the condition of CA from NFL to DFL and after the approval of the competent authority, the Ministry vide letter dated 24.07.2017 modified the conditions for raising Compensatory Afforestation.
 - iv. At the time of modification of the conditions the details of the CA areas identified on DFL were not available, therefore the proposal was placed before the AC for ratification of CA areas. The inspection of the Compensatory afforestation was not done by the Regional office as the areas were revised after the Stage-1 approval.
 - v. The Government of Odisha vide letter dated 02.07.2019 has submitted the details of the identified CA areas on DFL along with revised CA schemes, site suitability certificate, KML files DGPS Maps, Sol top sheets etc. The State Government/User agency has reported the compliance of all conditions stipulated in the Stage-I approval dated 24.02.1999 read with letter dated 24.07.2017.
 - vi. Total 1319.8 ha of degraded forest land has been proposed for raising Compensatory Afforestation comprising of 609.78 ha of normal CA in lieu of 304.89 ha of fresh forest land, 321.46 in lieu of land broken before 25.10.1980, Penal CA over 367.89 ha in lieu of 160.73 ha of broken up forest land and afforestation over 60.9 ha in lieu of 40.6 ha of forest land located in the safety zone.



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- vii. The DSS analysis of the proposed Compensatory Afforestation areas was examined by the Committee which found the areas to be suitable. The committee observed that the State Government has provided the site suitability certificates of the areas proposed for Compensatory Afforestation and the areas proposed over Degraded Forest land are suitable as per DSS analysis therefore field inspection of the areas is not required at this stage.
4. **Decision of the Advisory Committee:** After detailed discussion and deliberation on the proposal with the Nodal Officer (FCA), Odisha and Regional Officer, IRO, Bhubaneswar, the Advisory Committee decided to accept the areas proposed for Compensatory afforestation over Degraded Forest Land (DFL) in case of the instant proposal for diversion of 465.62 ha of forest land (160.73 ha already broken up area+ 37.25 ha area to be worked during present renewal period + balance 267.64 ha to be maintained as forest) in favour of M/s Steel Authority of India Ltd (SAIL) for renewal of their Bolani Ores Mines, Keonjhar District, Odisha.

Agenda No. 12

File no. 8-107/2014-FC

Subject: Proposal for diversion of 149.3002 ha of forest land for open cast Iron Ore Mining in favour of M/s Ojaswi Marble & Granite Pvt. Ltd. in District Sikar, Rajasthan (Online proposal No. FP/RJ/MIN/3869/2013) -regarding.

1. The agenda item for above subject proposal was considered by the Advisory Committee in the meeting held on 25.04.2023.
2. The corresponding agenda note may be seen at www.parivesh.nic.in.
3. The Nodal Officer (FCA), Government of Rajasthan was present in the meeting.
4. The Member Secretary placed all the facts and background of the proposal, along with examination of the proposal in the DSS, before the AC for examination and analysis. The Committee was also apprised of the provisions of other Acts & Rules relevant to the proposal and their significance.
5. The AC after through deliberation and discussion observed that:
 - i. The State Government of Rajasthan vide their letter No. P. 1(11) Van/2014 dated 03.12.2014 submitted the above-mentioned proposal seeking prior approval of the Central Government under Section-2 (ii) of the Forest (Conservation) Act, 1980. Proposal envisages mining of Iron Ore over 180 ha of lease area in Ramliyawas Village & Ghata Ganwar in Nim Ka Thana Tehsil in Sikar District. The lease area involves 149.3002 ha of forest land while 30.9758 ha of non-forest (revenue land).
 - ii. State Government vide their letter dated 29.11.2016 also forwarded an application of M/s Ojaswi Marble & Granite Pvt. Ltd seeking approval of MoEF & CC under Section 2(iii) of Forest Conservation Act, 1980 over 149.3002 ha forest land pertaining to open cast Iron Ore Mining in District Sikar, Rajasthan and the said proposal was examined by the Forest Advisory Committee. After recommendations of the Forest Advisory Committee and its acceptance by the competent authority, approval of the Central Government was accorded on 06.01.2017 under



Section 2(iii) of FC Act, 1980.

- iii. The instant proposal under section 2(ii) has earlier been considered in Advisory Committee Meetings held on 30.04.2015, 16.02.2016, 16.03.2016 and 07.11.2022.
- iv. The proposal under section 2(ii) was considered by the FAC on 16.03.2016 which recommended the proposal for diversion subject to the standard conditions and specific condition that no mining will be done in a width of 150 mts on either side of the water course and regular monitoring of the silt levels in the water body will be done by the State Forest Department. However, the file will be put up to the competent authority for approval only after receipt of revised Compensatory Afforestation scheme as per actual site conditions and certificate from the DFO that the Compensatory Afforestation site is free from all encumbrances.
- v. The Revised CA scheme has been submitted and thereafter the state govt has forwarded the certificate that the CA land is free from all encumbrances, which also mentioned that the said certificate has been given with the condition that the 0.15 ha of govt land situated in-between the NFL proposed for CA will be kept reserved for allotments in the interest of the state.
- vi. The Compensatory Afforestation has now been proposed in two patches i.e. 135.03 ha non-forest land in Udaipur District and 14.27ha. in Pratapgarh District. Since the non-forest land cannot accommodate 1000 plants/ha therefore, in addition the State Govt. has also identified a total of 242.31 ha degraded forest land (DFL) [(226 ha DFL in Udaipur District) and (16.31 ha DFL in Pratapgarh District)] with a view to accommodate the balance seedlings.
- vii. As per DSS analysis the NFL proposed for CA was found to be partially situated within the boundary of the forest. The observation of the DSS cell was based upon the boundaries of forests as available on the website of the Rajasthan Forest Department and those available on the DSS software. The boundaries on DSS software are also based upon the information provided by the State Govt.
- viii. The State Govt. and IRO Jaipur have now verified that the land proposed for Compensatory Afforestation is non-forest land.
- ix. The proposal was considered by the Committee in its meeting dated 07.11.2022 wherein it was deferred and the state was asked to remove the discrepancy in case of digital boundaries of forest land overlapping with that of the NFL proposed for CA, and submit an undertaking that it will not have any right to claim the Right of Way (RoW) for the 0.15 ha Govt. land in the Khasra No.3186/88, Vikas Nagar, Tehsil Khairwada, through the non-forest land block proposed for Compensatory Afforestation.
- x. State Govt. of Rajasthan has carried out the necessary corrections in forest compartment boundaries and now the corrected forest compartment boundary has been uploaded on the State Forest Department website i.e. <https://forest.rajasthan.gov.in> and State Govt. has also intimated that the corrected boundaries have been sent to the Forest Survey of India, Dehradun for correction in DSS.
- xi. The 0.15 ha Govt. land in the Khasra No.3186/88, Vikas Nagar, Tehsil Khairwada, Rajasthan which is located inside the non-forest land block designated for CA has been transferred in favour of State Forest



Department vide Order No.450-456 dated 03.02.2023 issued by District Collector Udaipur.

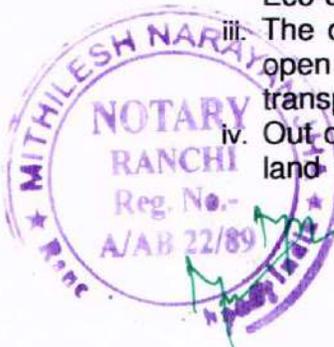
6. **Decision of the Advisory Committee:** The Committee had detailed discussion and deliberation with the Regional Officer In-charge, IRO Jaipur and Nodal Officer (FCA), Rajasthan. After going through the facts of the proposal, the Committee recommended the proposal for Stage-I approval under Forest (Conservation) Act, 1980 with general, standard and following specific conditions:
- i. As recommended by the committee during its meeting dated 16.03.2016, no mining will be done in a width of 150 mts on both side of the water course and regular monitoring of the silt levels in the water body will be done by the State Forest Department.
 - ii. Green belt will be created mining will be done in a width of 100 mts on both side of the water course
 - iii. 0.15 ha Govt. land in the Khasra No.3186/88, Vikas Nagar, Tehsil Khairwada, Rajasthan which is transferred in favour of State Forest Department by vide District Collector Udaipur's order dated 03.02.2023 shall be notified as RF/PF along with the NFL proposed for Compensatory Afforestation prior to Stage-II approval.

Agenda No. 13

File No. 8-04/2023-FC

Subject: Proposal for diversion of 74.2490 Ha. Forest Land infavour of RDSA Mining LLP for opencast Marble Mining in Revenue Village - Danta, Tehsil-Pipalkhunth, District – Pratapgarh, Rajasthan- regarding.

1. The agenda item for above subject proposal was considered by the Advisory Committee in the meeting held on 25.04.2023.
2. The corresponding agenda note may be seen at www.parivesh.nic.in.
3. The Nodal Officer (FCA), Government of Rajasthan was present in the meeting.
4. The Member Secretary placed all the facts and background of the proposal, along with examination of the proposal in the DSS, before the AC for examination and analysis. The Committee was also apprised of the provisions of other Acts & Rules relevant to the proposal and their significance.
5. The AC after through deliberation and discussion observed that:
 - i. The Govt. of Rajasthan has submitted the above-mentioned proposal seeking prior approval of the Central Govt. under Forest (Conservation) Act, 1980.
 - ii. Legal status of land proposed for diversion is Protected Forest land. The Density of the area proposed for diversion is reported to be 0.3, Eco-class-03 and 26321 number of trees are reported to be felled.
 - iii. The diversion proposal is for Marble Mining through fully mechanized open cast method. As per the approved Mine plan, the mode of transportation of mined-out mineral has been mentioned through road.
 - iv. Out of total 74 ha (as per DSS) forest area of instant project, 46 ha of land is characterized with Open Forest, 11 ha is Scrub and 17 ha as



Non-Forest or Non-wooded (land devoid of tree cover) in terms of forest classes (as per the ISFR 2019) based on the interpretation of satellite data period 2017-2018.

- v. Proposal does not form part of any Protected Area, Biosphere Reserve, Elephant corridor etc. No protected archaeological/ heritage site/defence establishment or any other important monuments is located in the area.
- vi. The instant proposal for diversion falls under Inviolable area or In-High conservation zone value (HCV) as per DSS Rule-I due to presence of Hydrological feature i.e. Mahi River adjacent to the land proposed for diversion. However, the proposed forest land for diversion is falling in Not- Inviolable area or Not In-High conservation zone value (NHCV) as per the DSS Rule-II considering the average score of four major layers i.e. Forest Cover Map, Forest Type Map, Biological Richness & Landscape Integrity. Thus, the final result is Not-Inviolable.
- vii. It is reported that the 0.75 ha forest area proposed for roads and buildings in the proposal, 0.71 ha will be used for roads is essentially required to carry out mining activities such as extraction and transportation of mined out mineral while only 0.04 hectare (400 square metre) area is to be used for temporary portable structures such as workshop, storage of tools and plants, rest Shelters and small office essential on site to carry out mining activities. All these structures will be temporary in nature and will be removed at the time of closure of mining activities and before handing over the proposed forest land back to the State Forest Department.
- viii. The District Collector, Pratapgarh vide their order No. राजस्व/ भूआ./2022-23/2535-45 dated 17.08.2022 set apart the 75 ha Government Revenue land and transferred the same in the name of Forest Department for carrying out Compensatory Afforestation.
- ix. Compensatory afforestation (CA) has been proposed over 75 ha. Non-forest land (NFL) in three patches located in Villages namely Amlikhora (16 ha), Miyala (13.50 ha) and Pahada (45.50 ha) located in Pratapgarh district of Rajasthan. wherein 200 plants/ha can be planted and to accommodate the balance saplings a degraded forest patch comprising 85 ha. has also been proposed.
- x. Out of identified 75 ha. non-forest land for CA, 13 ha. is Moderately Dense (MDF), 39 ha. is Open Forest (OF), 02 ha is Scrub and remaining 21 ha is Non-forest. In addition, 85 ha degraded forest land (DFL) has been proposed in a single patch located under Sukad (R.F.), Dhawada Village, Chotisadri Tehsil under Pratapgarh District of Rajasthan State. Out of 85 ha forest land for CA, 2 ha of land is having Open forest and 83 ha land as Non-forest/ Non-wooded in terms of forest classes (as per the ISFR 2019) based on the interpretation of satellite data period 2017- 2018.
- xi. The AC noted that one of the CA patch namely Village Pahada was earlier falling in the forest compartment boundary as per the DSS analysis. In this regard, the Nodal Officer informed that the forest compartment boundaries available on the department website have been updated recently.
- xii. Site suitability certificate of the proposed NFL for compensatory Afforestation identified in Village Amlikhora (16 ha) , Pahada (45.50 ha) and Village Miyala has been given. In addition, the state has also



informed that 85 ha DFL identified for raising balance plants is also suitable for raising plantation.

- xiii. The Site Inspector report of the IRO also mentions that the NFL proposed for CA is found to be suitable for carrying out the CA plantation and already have good number of trees and only about 200 trees per hectare is possible to plant. State Govt. proposed to carry out remaining CA plantation on 85.00-hectare DFL in Pratapgarh Division to accommodate the remaining plants.
 - xiv. A road measuring 452.18 meter length connects the instant mine lease boundary and out of which only 56.80 meter length falls under the forest land. It is reported that the said road existed since long and it is currently used by the local people. Moreover, Govt. of Rajasthan has further informed that an approach road already existing since many years which has been in use by the inhabitants of the Danta village. The road is partially passing through the fringe of the proposed forest area and connects the school. The user agency will not block the said approach road and the road will always be available for use of general public.
 - xv. As per the Mining plan, it is reported that the 'waste produced during mining like Marble Khanda (40%) and 10% other waste will be dumped within Mining Lease (ML) and explored for utilization in other industries at nearby areas. Other waste will be used for road development within lease. With regard to void filling plan, it is indicated that there is no proposal for back filling of excavated area around pit nor has a stage reached where back filling of mined out area can be started in next five years.
 - xvi. The IRO, Jaipur in their Site inspection report has recommended the proposal with the following specific recommendations:
 - a. Embankment of sufficient height will be constructed by the User Agency along the bank of the River Mahi so that the muck and waste will not enter into the river.
 - b. Muck will not be disposed on forest/charagah land outside the proposed diversion land area.
 - c. Six feet boundary wall shall be constructed along the boundary of the Non-Forest Land (NFL) proposed for CA in all the three patches towards the habitation and agriculture fields to prevent encroachment at the cost of user agency.
6. **Decision of the Advisory Committee:** The Committee had detailed discussion and deliberation with the Regional Officer, IRO Jaipur and Nodal Officer (FCA), Rajasthan. After going through the facts of the proposal, the Committee recommended the proposal for Stage-I approval under Forest (Conservation) Act, 1980 with general, standard and following specific conditions:
- i. Embankment of sufficient height shall be constructed by the User Agency along the bank of the River Mahi so that the muck and waste does not enter into the river.
 - ii. A green belt along with this embankment should be raised for a width of 50 mtrs at the cost of User Agency.
 - iii. Muck will not be disposed on forest/charagah land outside the proposed diversion area.
 - iv. Six feet boundary wall shall be constructed along the boundary of the

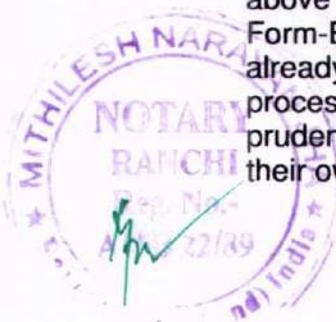


Non-Forest Land (NFL) proposed for CA in all the three patches towards the habitation and agriculture fields to prevent encroachment at the cost of user agency.

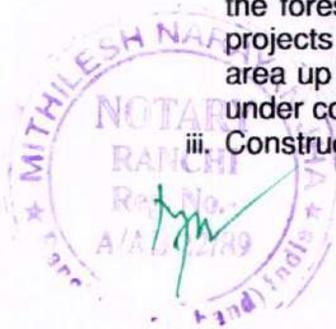
Policy Issue No. 1

Sub: Policy issues referred by the Department of Telecommunication, Ministry of Communication regarding streamlining the process of approval under the Forest (Conservation) Act, 1980 – reg.

1. The policy agenda item was considered by the Advisory Committee in its meeting held on 25.04.2023. The Member Secretary briefed the Advisory Committee about the issue and development took place in the matter.
2. The Advisory Committee, after examination of the matter, observed as under:
 - i. The Department of Telecom vide their DO dated 13.03.2023 requested the MoEF&CC to issue instructions/revise guidelines in respect of proposals pertaining to DoT. Interventions have been sought by the Department of Telecommunication on the following:
 - a. Authorizing the user agency of already diverted forest land in its Right of way (ROW) to allow at their own level for laying of optical fibre on available ROW.
 - b. Installation of towers and laying of OFC by TSPs/IPs in forest Area
 - c. Inclusion of Mobile towers in the definition of "Communication Posts" under clause 4.3 of Handbook of Forest (Conservation) Act, 1980 and Forest Conservation Rules.
 - d. Submitting the RoW approval document for existing EB poles may not be insisted to lay aerial OFC over existing poles.
 - ii. As regards to authorisation of the user agency for laying OFC in the RoW at their own, the DoT has adverted to the minutes of the meeting of the FAC dated 21.12.2022 wherein FAC turned down the change in the land use at the level of user agency citing the fact that number of such cases is very small, therefore, such cases may be dealt at the MoEF&CC level on case-to-case basis. The Committee observed that proposal for laying of Optical Fiber Cables in the RoW of roads is categorized as re-diversion i.e. when forest land is transferred from the primary agency to secondary agency for a different land use. While change in land use is perceived as change in the land use for the same project by the same user agency. Therefore, re-diversion and change in land use cannot be equated, as the both are different in nature. Moreover, Ministry has recently taken several initiatives to streamline the process of approval for laying of OFC in the forest areas such as authorizing the Nodal Officer to issue permission, allowing laying of above ground OFC over existing poles, development of simplified Form-E for submission of re-diversion proposals. Given the initiatives already undertaken by the Ministry to streamline and simplify the process and keeping in view the protection of forest land, it may not be prudent for the Ministry to allow the user agency for laying of OFCs at their own.



- iii. Regarding inclusion of private operators for laying of OFCs in the forest areas under para 4.3 (General Approval) of the Handbook of FC Act, 1980, the Committee observed that as per the provisions of the said Guidelines, General Approval has been considered for the public utility projects to be implemented by the Government Department. Provisions of Indian Telegraph Act, 1985, referred by the DoT, may hold good for implementing the provisions of said Act, however, such provisions are not be a binding on the provisions of Forest (Conservation) Act 1980 and hence the request to include private operators/Licensee in the General Approval category does not seem to be tenable.
 - iv. On the matter related to consideration of mobile towers at par with communication posts, the Committee opined that the General Approval has been granted to the public utility projects to be implemented by the Government. As per para 4.3 of Handbook of Forest (Conservation) Act, 1980, 15 categories of public utilities projects to be implemented by the Government Department involving area up to 1 ha and felling of 50 trees per ha, have been granted General Approval. Communication post is one of the category included in the array of General approval categories allowed by the Central Government which is under consideration for a clarification. However, these days mobile towers are being constructed by the private enterprises also. Moreover, in comparison to communication post, the density of mobile towers per unit area is quite high requiring more forest lands.
 - v. The Committee also observed that construction of mobile towers in the forest areas relatively involves more disturbances to the forest due to ancillary activities such construction of approach/access road, establishment of generator sets, electric lines, maintenance, etc. Therefore, consideration of mobile towers at par with the communication posts will tantamount to more biotic disturbances to forests.
 - vi. Issue related to exemption from submission of documents pertaining to the existing poles for laying of overhead OFCs, has already been resolved by the Ministry in consultation with the NIC.
3. **Decision of the Advisory Committee:** The Advisory Committee, after deliberations and discussion with the Regional Officers and official of the Forest Conservation Division, recommended the following:
- i. Authorisation of the user agency for laying OFC in the RoW at their own is not tenable in view of the fact that the proposals for laying of OFCs cable fall under re-diversion category and not under change in land use category and Ministry has already taken a number of initiatives such as replacement of length Form-A with simpler Form-E and authorization of Nodal Officer (FCA) in the State Government to grant approval to proposals pertaining to laying of OFC cable.
 - ii. Considering the mobile towers as a commercial activity, the provisions of General Approval given under para 4.3 of the Handbook of FC Act, 1980 may not be extended to the private operators for laying of OFCs in the forest areas as the same was considered only for the public utility projects to be implemented by the Government Departments involving area up to 1 ha and felling of maximum up to 50 trees per ha, which is under consideration for a clarification.
 - iii. Construction of mobile towers in the forest areas may not be



considered at par with the communication posts as mobile towers involve much more area for construction and it will also tantamount to more biotic and abiotic disturbances to forests due to ancillary activities such construction of approach/access road, establishment of generator sets, electric lines, maintenance, etc.

Policy Issue No. 2

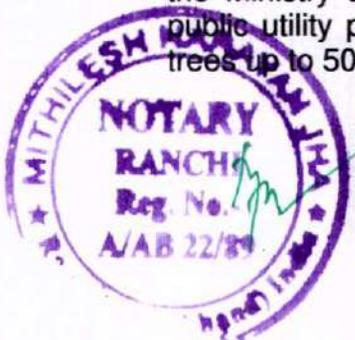
Sub: General Approval granted under the Forest (Conservation) Act, 1980, incorporated under para 4.3 of the Handbook of Forest (Conservation) Act, 1980 for specified public utility projects to be implemented by Government Department involving area up to 1 ha and felling of 50 trees per ha – reg.

1. The policy agenda item was considered by the Advisory Committee in its meeting held on 25.04.2023. The Member Secretary briefed the Advisory Committee about the issue and development took place in the matter.
2. The Advisory Committee, after examination of the matter, observed as under:
 - i. General approval has been granted under the Forest (Conservation) Act, 1980 to States/UTs for public utilities projects to be implemented by the Government Departments involving forest land up to 1 ha and felling of 50 trees per ha to develop public utility and other critical infrastructure, including roads, in forest fringe areas, including in LWE Districts.
 - ii. Ministry has been continuously receiving representations from the various Ministries and States to clarify on the extension of General Approval granted under the FC Act, 1980. Accordingly, the issue related to extension of General Approval was consulted with the MoL&J and their opinion in the matter was solicited. The MoL&J on various occasion has opined that *As such, the guidelines issued by the administrative Ministry granting general approval under section 2 of the Act of 1980 for diversion of forest land for non-forest purposes are not in conformity with the provisions of the Act of 1980 and Rules of 2003.*"
 - iii. The Committee also observed the during the last two decades, the Ministry has introduced a number of systemic reforms to ensure more streamlined process of approval under the Act. Important initiatives are as under:
 - a. Rationale for Considering the General Approval in the past to develop public utility and other critical infrastructure, including roads, in forest fringe areas. Grant of general approval in the past was appropriate in light of the various facts such as delay in processing the cases, lesser number of Regional Officer (6 Nos), non-availability of technological interventions reducing human interface in the process of approval, etc. Therefore, to ensure that implementation of smaller projects of public utility such drinking water pipelines, telecommunication lines, schools, etc. by the State not suffer from the process of obtaining approval under the FC Act, 1980, general approval was granted to the State. In present times, the situation prevalent 20 years back has been transformed drastically i.e. number of Regional Officer have been increased from 6 to 19 thereby increasing outreach of Ministry



almost in every State, technological intervention (Online submission and monitoring of proposals through PARIVESH) have been introduced which have reduced the human interface substantially.

- b. Introduction of Technological Intervention have been introduced in the process of approval i.e. approval process has been made online since 15.07.2014. Recently, upgrade version of PARIVESH has been made live by the Ministry to simplify the process and reducing the human interface. With the introduction of online module, the time taken for granting approval under the FC Act has been reduced substantially. Further simplification of online portal is continuously being undertaken by the Ministry to make it more user friendly and streamline the process of approvals.
 - c. Ministry has increased the number of its Integrated Regional Offices (IROs). Initially 6 IROs were operating at 6 locations which were subsequently increased to 10 in 2014. Recently, Ministry vide its Notification dated 13.08.2020 has increased the number of Regional Offices of Ministry to nineteen (19) i.e. 9 more Regional Offices of the Ministry have been added to enhance the outreach of the Ministry to almost all States.
 - d. MoEF&CC promulgated Forest (Conservation) Rules, 2022 wherein the process of approval has been further streamlined and concerned IRO have been empowered to finally dispose of the cases, except de-reservation, encroachment and violations, involving areas up to 5 ha (including mining) and REC has been empowered to dispose off the cases involving area from 5 to 40 ha and linear projects irrespective of area involved. Earlier, such cases were used to be submitted to MoEF&CC for the approval of competent authority.
 - e. Frequency of conduction of meeting of Regional Empowered Committee has been increased to twice a month besides organizing Fortnightly Review and Coordination Meetings (FRCM) at IROs to review the pending project.
- iv. The Committee noted that the Ministry has already undertaken a number of initiatives to streamline and simplify the process of approval envisaged under the Forest (Conservation) Act, 1980. Therefore, in view of the aforementioned initiatives, it may not be prudent for the Ministry to continue the General Approval in future.
3. **Decision of the Advisory Committee:** The Advisory Committee, after deliberations and discussion with the Regional Officers and official of the Forest Conservation Division, observed that in view of the opinion of the M/o Law and Justice and initiatives undertaken by the Ministry, the General Approvals granted by the Ministry should not be continued further and accordingly, the Committee recommended that General Approval granted by the Ministry under the Forest (Conservation) Act, 1980 for construction of public utility projects by Government involving area of up to 1 ha felling of trees up to 50 per ha may be withdrawn by the Ministry.



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(Confirmed through email)
(Dr. Naveen Chandra Bisht)
(non-official Member)

(Confirmed through email)
Shri S. D. Vora
(non-official Member)

(Confirmed through email)
Shri Manoj Pant
(non-official Member)

(Confirmed through email)
Dr. Dhura Ram
Addl. Commissioner (NRM)
(Member)

(Confirmed through email)
Shri Bivash Ranjan
Additional Director General of Forests(WL)
(Member)

(Confirmed)
Shri S. P. Yadav
Additional Director General of
Forests(FC)
(Member)

(Confirmed)
Shri Ramesh Kumar Pandey
Inspector General of Forests
(Member Secretary)

(Approved)
Shri C. P. Goyal
(Director General of Forests and Special Secretary)
(Chairperson)



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

Indira Paryavaran Bhawan,
 Aliganj, Jor Bag Road,
 New Delhi - 110003

Dated: 25th May, 2023

To,

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

Subject: Diversion of 1026.438 ha of forest land for coal mining Pakribarwadih Project in favour of M/s NTPC Ltd. in Hazaribag West Forest Division in Hazaribag District of Jharkhand - Modification in condition of Stage-II approval and violation of FC Act - regarding.

Madam/Sir,

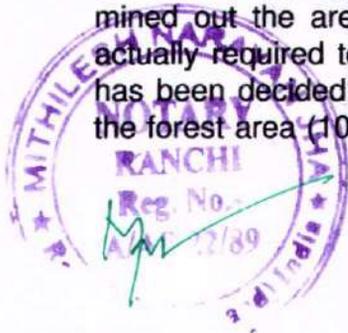
I am directed to refer to the State Government of Jharkhand's letter no. vanbhumi-75/2009-1915 V.P. dated 08.07.2022 requesting for modification of condition no. 8 of Stage-II approval dated 17.09.2010 issued under Section 2 (ii) of Forest (Conservation) Act, 1980. The said condition at Sr no. 8 of the approval dated 17.09.2010 is as under:

"The user agency will take up program for at least 50 m green belt along the sides of the Pakwa nallah and Dumhani nallah from the initial years under the supervision of the state forest department".

2. The request of the State Government was considered by the Advisory Committee in its meeting held on 25.04.2023. After careful examination of the request of the State Government, on the basis of the recommendations of the Advisory Committee, and its acceptance by the competent authority in this Ministry, the Central Government hereby accords its approval to modify the condition no. 8 of the Stage-II approval dated 17.09.2010 as under:

"The user agency shall restore and conserve the Khorra Nalla (west) and Pakwa Nalla (east) watersheds on priority basis under supervision of the forest department and expert hydrologists/agencies and develop their watershed status as per the Survey of India toposheet no. 73 E/I. A greenbelt of 100 meters on either side of both Khorra Nalla and Pakwa Nalla shall be maintained".

3. Further, in total disregard to the conditions of approval, the user agency has mined out the area and changed the course of the Dumuhani nala which was actually required to be protected and maintained as green belt. In view of this, it has been decided that the penalty shall be imposed for violation committed over the forest area (1026.438 ha) without approval equal to five times the normal NPV



I/44677/2023

plus simple interest of 12 % from the date of actual violation committed till the deposition of penalty.

4. The remaining conditions stipulated in approval dated 17.09.2010 for instant proposal shall remain the same.

5. This issues with the approval of competent authority.

Yours faithfully,

Signed by

Suneet Bhardwaj

Date: 25-05-2023 15:00:30

Sd/-

(Suneet Bhardwaj)

Assistant Inspector General of Forests

Copy to:

1. Principal Chief Conservation of Forests, Government of Jharkhand, Ranchi
2. Regional Officer, Integrated Regional Office (Eastern Zone), Ranchi
3. Nodal Officer, O/o the PCCF, Govt. of Jharkhand, Ranchi
4. User Agency
5. Monitoring Cell, FC Division, MoEF&CC, New Delhi

