



उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड  
UTTAR PRADESH POLLUTION CONTROL BOARD

संदर्भ सं./90398  
Ref. No.

/C-2/NGT-07/2023

दिनांक 9-3-23  
Date

To,

The Registrar,  
Hon'ble National Green Tribunal,  
Copernicus Marg, New Delhi.  
E-mail - judicial-ngt@gov.in

**Subject: Submission of Response of District Administration, Sonbhadra and U.P. Pollution Control Board in compliance of directions issued by Hon'ble NGT vide order dated 21.12.2022 in O.A. No. 512/2022 Sanjay Kushwaha Versus State of U.P. & Others.**

Sir,

In compliance of Hon'ble NGT order dated 21.12.2022 in the matter of O.A. No. 512/2022 Sanjay Kushwaha Versus State of U.P. & Others, the response of District Administration, Sonbhadra and U.P. Pollution Control Board is being filed herewith.

It is requested that the aforesaid response of District Administration, Sonbhadra and U.P. Pollution Control Board may be presented before the Hon'ble Tribunal for kind consideration.

Encl: As above.

Yours faithfully,

(Rajendra Singh)  
Chief Environmental Officer  
Circle-2

**Response Of District Administration And U.P. Pollution Control Board  
In Compliance Of Hon'ble National Green Tribunal (NGT), New Delhi  
O.A. No. 512/2022 Sanjay Kushwaha Versus State of U.P.& Others.**

**A. Background**

That the Hon'ble NGT has passed order on dated 21.12.2022 in the matter of O.A. No. 512/2022 Sanjay Kushwaha Versus State of U.P. & Others. The order passed by Hon'ble NGT is as follows:-

1. *Mr. Sanjay Kushwaha resident of village Chilkadand Basti, Post Office Shakti Nagar, District Sonbhadra, Uttar Pradesh has complained about loading/unloading of coal by hundreds of vehicles plying on the Hal road of NCL Khadia project at Shakti Nagar, Sonbhadra adjacent to rehabilitated village Chilkadand in violation of environmental norms, creating heavy dust pollution and thereby causing serious health hazard to local residents.*
2. *Vide order dated 30.08.2022, this Tribunal constituted a Joint Committee comprising of representative of Chairman-cum-Managing Director, Northern Coalfields Limited (NCL), Khadia, State PCB and District Magistrate, Sonbhadra and directed the same to submit factual and action taken report within one month.*
3. *In compliance thereof, Dr. T.N. Singh, Regional Officer, UPPCB, Sonbhadra has submitted report of the Joint Committee vide letter dated 17.12.2022 through email dated 18.12.2022.*
4. *In view of the averments in the application and observations in the report of the Joint Committee, we consider it appropriate to have response of the UPPCB, the District Magistrate, Sonbhadra and the Project Proponent M/s Northern Coal Fields Ltd. requiring them to file their reply/response within two months at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Supported PDF and not in the form of Image PDF.*



5. In its reply the UPPCB shall also specifically mention the status regarding compliance with environmental clearance and consent conditions by the Project Proponent-M/s Northern Coalfields Ltd
6. List the matter for further consideration on 14.03.2023.

## B. Action Taken

In compliance of order passed by Hon'ble NGT on dated 21.12.2022, the response of District Administration and U.P. Pollution Control Board is as given below:-

1. At the time of inspection, the work of construction of approx. 6.61 km. long and 10.5 meter wide cement concrete road (Pavement Quality Concrete) was found in progress. During inspection, General Manager, M/s NCL Khadia Project informed that cement concrete road is proposed to be completed by April, 2023.



2. The project proponent has furnished clarification regarding delay in construction of 6.61 km. cement concrete road, which are summarized as follows :-



- This work is voluminous work and is composed of 04 layer construction as per specification of Ministry of Road Transportation and Highways (MoRTH).
- Each layer construction requires compaction & testing before laying of subsequent layer as per criteria of MoRTH which is time consuming.
- Already three layers upto Dry Lean Concrete (DLC) have been constructed, which has considerably reduced dust generation.
- Only last layer i.e. Pavement Quality Concrete (PQC) is under construction phase which is expected to be completed by April 2023.

Copy of letter dt. 06.03.2023 of General Manager, NCL Khadia Project is annexed herewith and marked as **Annexure-1**.

3. At the time of inspection, it was found that water sprinkling through water tankers has been carried out for suppression of dust. Representative of NCL Khadia project has informed that water sprinkling is being done on haul road regularly in order to suppress the dust.
4. Shri Sanjay Kushwaha, Complainant was present during inspection at site. He has informed that the water sprinkling is being done regularly after order passed by Hon'ble NGT on dt. 21.12.2022.
5. At the time of inspection representative of NCL Khadia Project has informed that as a secondary measure a boundary wall about 1020 meter long and 2.40 meter high at the edge of the road in front of Village-Chilkadad is proposed to be constructed by August, 2023, in order to control the emission of particulate matters if any due to motor vehicles movements, for which tendering is under progress at NCL Head Quarter level. During inspection it was noticed that some plants are already developed besides the haul road in front of habitation. NCL representative told that gap plantation will be done shortly.





6. At the time of inspection, it was found that PTZ camera has not been installed, for monitoring regular water sprinkling and construction of Cement Concrete road of affected area.
7. At the time of inspection, complainant has reported that the coal is also being transported sometime through uncovered and overloaded heavy vehicles. Due to which coal dust is emitted and creates problem. He suggested that coal carrying vehicles must not be overloaded and should be covered with tarpaulin during movement.
8. Complainant Mr. Sanjay Kushwaha has verbally reported that he is satisfied with the progress of work by NCL Khadia with respect to his complaint and NCL should complete ongoing Cement Concrete road project within proposed timeframe along with green belt development towards habitation side at the earliest.
9. At the time of inspection, it was found that NCL, Khadia Project has developed Miyawaki forestation in the area of 0.5 hectare. The photographs are as below :



10. NCL Khadia has installed 01 no. of Continuous Ambient Air Quality Monitoring Station with data connectivity to SPCB/CPCB server.
11. NCL Khadia has submitted the compliance of Environmental Clearance conditions and CTO conditions, which are attached herewith and marked as **Annexure No.-2**

**C. Recommendations:-**

1. PTZ camera should be installed by NCL Khadia Project in the affected area Chilkadad habitation, to monitor Cement Concrete road construction and movement of vehicles carrying



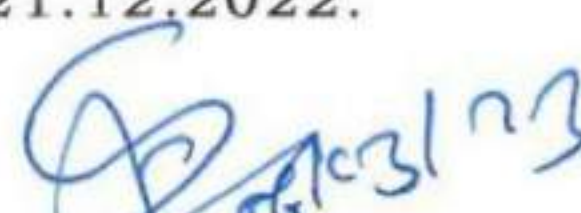
coal and it should be connected with CPCB and SPCB server for regular monitoring.

2. NCL Khadia Project must adopt continuous water sprinkling for dust suppression during movement of vehicles and it should be regularly monitored by Project Proponent.
3. NCL Khadia Project should develop 10 meter wide green belt with fast growing plants species along with 2.4 meter high boundary wall, towards Chilkadad habitation side, in time bound manner.
4. NCL Khadia Project should ensure completion of construction of 6.61 km. long cement concrete road by April, 2023 failing which appropriate Environmental Compensation need to be imposed as per CPCB guideline after timeline i.e. April, 2023.
5. NCL Khadia Project should ensure that movement of all vehicles carrying coal must be covered with tarpaulin and not overloaded.

Above response of District Administration, Sonbhadra and U.P. Pollution Control Board is submitted to Hon'ble NGT in compliance of order passed on dated 21.12.2022.



**(Dr. S. C. Shukla)**  
Regional Officer  
U.P. Pollution Control Board  
Sonbhadra



**(Sahdev Kumar Mishra)**  
ADM (F/R)  
Sonbhadra



## Annexure-1

नॉर्थवेन कोलफील्ड्स लिमिटेड  
खड़िया परियोजना  
(निमित्तक कंपनी)  
(कोल इण्डिया लिमिटेड की प्रत्यक्ष कनसी)



Northern Coalfields Limited  
Khadia Project  
(A Minurina Company)  
(A subsidiary of Coal India Limited)



Office of General Manager



CIN: U10102ML1905GDI000160

An ISO: 9001, ISO: 14001 & OHSAS: 18001 Certified Company

प्लॉट-शक्तिनगर, जिला-सोनभद्र (30180) पिन-231222/ Thana-Shaktinagar, Dist. Sonbhadra (U.P.) Pin- 231222

Phone: 05446- 232274, (FAX) 05446- 232274 Email: cgm.khd@gmail.com, website : www.ncil.in

Ref: KHD/Min/Env/OA no. 512 of 2022/2022-23/3799

Date:- 06/03/2023

To,  
Additional District Magistrate,  
Sonbhadra, UP

Subject: Regarding construction of CC road at Khadia Project, NCL

Dear Sir,

In pursuance with inspection done at Khadia Project, NCL on 04.03.2023 in connection with the OA no. 512/2022 (Sanjay kushwaha Vs State of UP & Ors), Khadia Project, NCL wishes to submit following points pertaining to construction of 6.61 Km Cement Concrete Road.

1. This work is voluminous work and is composed of 04 layer construction and has specification as that of Ministry of Road Transportation and Highways (MoRTH)
2. Each layer construction requires compaction & testing before laying of subsequent layer as per criteria of MoRTH which is time consuming.
3. Already three layers upto Dry Lean Concrete (DLC) have been constructed which considerably reduces dust generation.
4. Only last layer i.e. Pavement quality concrete (PQC) is under construction phase which is expected to be completed by April'2023.

Besides this, regular water sprinkling is being done and all due care is being ensured that no dust is generated during transportation of coal. Same was also recognized by the appellant, Sanjay Kushwaha, during the inspection held on 04.03.2023.

Yours Sincerely,

General Manager,  
Khadia Area, NCL

Copy to:-

- (1) Regional Officer, UP Pollution Control Board, Sonbhadra
- (2) General Manager (Civil), NCL Singrauli
- (3) General Manager (Environment), NCL Singrauli



नॉर्थर्न कोलफील्ड्स लिमिटेड  
खड़िया परियोजना  
(मिनिराज कंपनी)  
(सोन इण्डिया लिमिटेड की मनुष्यमयी कंपनी)



Northern Coalfields Limited  
Khadia Project  
(A Miniratna Company)  
(A subsidiary of Coal India Limited)

Office of the General Manager



CIN - U10102MP1905GOIN03160

An ISO: 9001, ISO: 14001 & OHSAS: 18001 Certified Company

थाना-शक्तिनगर, जिला-सोनभद्र (उ.प्र.) पिन-231222/ Thana-Shaktinagar, Dist. Sonabhadra (U.P.) Pin- 231222  
Phone: 05446- 232274, (FAX) 05446- 232274 Email: cgm.khd@gmail.com, website: www.nchl.in

No. KHD/GM/Min/Env/UPPCB/22-23/3459-1

Dated: 01/02/23

To,  
The Member Secretary,  
UP Pollution Control Board,  
Dr. Bhimrao Ambedkar Bhawan, T.C. 12 V,  
Vibhuti Khand, Gomati Nagar Lucknow, (U.P.) - 226010

**Sub: Compliance report of Consent to Operate**

Dear Sir,

Khadia Project, NCL expresses gratitude to UPPCB for granting the Consent to Operate (Air & Water) issued vide 166971 / UPPCB / Sonabhadra (UPPCBRO) / CTO / both/ SONBHADRA/2022 dated 12/16.12.2022, valid from 01.01.2023 to 31.12.2024.

For the above granted air and water consent, please find enclosed herewith compliance status of the above mentioned consent letter.

Encl : As above

Yours faithfully,

  
01/02/2023  
General Manager,  
Khadia Project

Copy to :

- 1) The Regional Officer, U.P. Pollution Control Board, H.No. 162, Uttar Mohal, Robertsganj (U.P.)
- 2) GM (Env), NCL HQ - Singrauli



**Northern Coalfields Limited**  
**Khadia Area**

**Compliance report of Consent to Operate (Air & Water) issued vide letter no. 166971/UPPCB/Sonebhadra(UPPCBRO)/CTO/both/SONBHADRA/2022 Dated : 12/16.12.2022 from UPPCB, Lucknow**

S.N.	General Condition	Compliance
1	The applicant shall get analyzed the samples of effluent /emission/hazardous wastes at least once in a three month from the laboratory recognized by the MoEF&CC and shall report to the UPPCB.	Project abides to comply the conditions.
2	The applicant shall however, not without the prior consent of the board bring into use any new or altered outlet for the discharge of effluent or gases emission or sewage waste from the unit.	Project abides by the condition.
3	Treated Industrial waste water and domestic waste water shall be disposed jointly at one disposal point. The applicant shall provide discharge measurement equipment at final disposal point.	Treated industrial Waste water is being reused in dust suppression, firefighting, green belt development etc. in mine premises.  Treated domestic waste water is being reused in horticulture and Miyawaki afforestation.
4	The applicant shall strictly comply with the conditions of this CCA and submit compliance report of stipulated conditions within 30 days of receipt of this CCA . If at any point of time, it is found that the industry is not complying with stipulated conditions or any further direction/instruction issued by the Board, legal action shall be initiated against the applicant.	Khadia Project will comply with the conditions of This consent order.
5	The applicant shall maintain good house keeping. All valves/pipes/sewer/drains,etc must be leak proof.	Agreed. Khadia Project is maintaining good housekeeping and valves / pipes/ sewer/drains are kept leak proof.
6	The industry shall provide uninterrupted entry to the STP/ETP inlet and outlet points, air pollution control equipment and stack for smooth sampling/monitoring of efficiency of pollution control systems.	Project abides by the condition.
7	The industry shall provide Inspection book at the time	Project abides by the condition.



	of inspection to the Board's officials.	
8	Whenever due to any accident or other foreseen act or event, such emission occurs or is apprehended to occur in excess of standards laid down, such information shall be reported to the Board's offices and all other concerned offices. In case of failure of pollution control equipment, the production process connected to it shall be stopped with immediate effect.	Project abides by the condition.
9	The industry shall operate in a manner so that all emissions be emitted through designed chimney/ stack only.	Khadia Project is an opencast mine and there is no chimney / stack at mine premises.
10	In case of any damage to the agricultural productivity, human habitation, etc. by the operation of industry, it shall be imperative to stop production in the industry with immediate effect and such information shall be reports to Board's offices. The industry shall be liable to pay compensation also in such cases as decided by the Competent Authority.	Project abides by the condition.
11	The applicant shall apply before the 60days of expiry of CCA or any change in production types/ production capacity / manufacturing process/ capacity enhancement, etc. or any change in effluent discharge point or emission point.	Project abides by the condition.
12	The board reserves the right to revoke/add/modify any stipulated condition issued along with CCA, as may be necessary.	Project abides by the condition.
<b>Specific Conditions:</b>		
1	This CTE is valid for 12.18 million ton coal production <i>per annum</i> in the 1332 ha. in Uttar Pradesh.	Project abides by this condition. Khadia Project will produce coal production within 12.18 million tonne per annum from 1332 Ha area falling in UP part of Khadia Area. The overall coal production of Khadia Project including UP and MP shall not exceed 15 MTPA.
2	Unit shall comply with the conditions of Environmental Clearance issued vide EC identification no. EC22A042UP184193, File no. J-11015/255/2006-IA-II(M) dated 27-07-2022 by MoEF&CC Govt of India and its compliance report shall be submitted to UPPCB.	Khadia Project is complying with the conditions of Environmental Clearance issued by MoEF&CC, Govt of India and its compliance reports will be submitted to MoEF&CC and UPPCB regularly

3	Industry shall comply with the conditions of CTE issued by UPPCB vide letter no. 162337/UPPCB/Sonebhadra(UPPCBRO)/CTE/SONEBHADRA/2022 dated 02.10.2022 and its compliance report shall be submitted to UPPCB.	Khadia Project is complying with the conditions of CTE issued by UPPCB vide letter no. 162337/UPPCB/Sonebhadra (UPPCBRO)/CTE/SONEBHADRA /2022 dated 02.10.2022. The compliance report has been submitted vide letter no. KHD/GM/Min/Env/UPPCB/22-23/3679 dated 19.11.2022
4	Unit shall operate and maintain installed APCS effectively to achieve the standards prescribed under E(P) Rules, 1986 as amended.	<p>The air pollution control measures are as below.:</p> <ul style="list-style-type: none"> <li>• Mobile water sprinklers are deployed on haul roads.</li> <li>• Majority of coal is being transported through MGR (Rail Transport).</li> <li>• Fixed sprinklers around coal yard – I</li> <li>• Drills are provided with dust extractors.</li> <li>• All service roads are metaled.</li> <li>• Approach road to mines are covered with black topping.</li> <li>• Wetting of ROM coal before crushing in CHP.</li> <li>• Fully enclosed coal handling plant in operation.</li> <li>• Automatic water sprinklers are installed at receiving pit.</li> <li>• Routine maintenance and periodic overhauling of HEMM.</li> <li>• Thick green belts along mine and colony are provided.</li> <li>• Vegetative covers are provided on non active O.B. Dump</li> <li>• Deployment of truck mounted fog cannon (02 nos.) and Road sweeping machines (02 nos.)</li> <li>• <i>Deployment of one no. of fixed fog cannon.</i></li> </ul> <p>Continuous monitoring through CAAQMS.</p>
5	Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers preferably mist type mobile sprayers/sprinklers.	<p>Khadia Project is equipped with two no. of truck mounted fog cannon and one fixed fog cannon through which spraying is being done for control of fugitive emissions.</p> <p>Besides this water sprinklers both mobile and fixed are also provide to avoid generation of fugitive emission from road side.</p>



6	Unit shall utilize the fly ash as much as possible in construction activities and in development of roads. The fly ash utilization detail shall be submitted quarterly	Only fly ash bricks are being used in construction activities in the project. The fly ash utilization detail shall be submitted regularly by the project.
7	Unit shall properly operate Online Ambient Air Quality Monitoring System with data connectivity with CPCB and UPPCB server and its progress shall be submitted on quarterly basis	Continuous Ambient Air Quality Monitoring System has been installed and data connectivity with CPCB server has been provided.
8	Transportation of coal should be done through belt type conveyer and covered railway wagons.	Majority of coal from Khadia Project is being dispatched through MGR (dedicated rail transport system). Khadia Project has CHP of 10 MTY (4+6) capacity from which coal is being dispatched to Lanco Anpara Power Limited. To further augment rail transport capacity, a wharfwall is being constructed within the premises of Khadia Project. Subsequently, Rapid loading system is also proposed to be constructed at the site which is even more eco-friendly technology.
9	Unit shall maintain effective dust separation /collection system at Coal Handling and Transportation point in such manner so that Ambient Air Quality is not affected at nearby places and Ambient air quality shall be monitored and its report shall be submitted on quarterly basis to the UPPCB.	Fixed water sprinklers are fitted at all transfer points of CHP. CHP phase -I (04 MTY capacity is also equipped with cyclone type dust extraction system and function properly. CHP phase-II (06 MTY capacity) is equipped with gyratory crusher, which is enclosed type crushing system. Further dry fog dust suppression system is also operation at transfer points of CHP.  Further augmentation in the dust separation /collection system has been done. Ambient Air Quality at nearby places and Ambient air quality are being monitored and its reports are being submitted on quarterly basis to the UPPCB.
10	Unit shall develop and maintain green belt as per the guidelines issued by the Board vide office order dated 16/02/2018, which is available on Board's Website- <a href="http://www.ujppcb.org">www.ujppcb.org</a>	Regular plantation is being done through U.P. Forest Deptt., Renukoot Division for dump reclamation and developing green belt. In the year 2022, 82500 saplings over an area of 33 Ha have been planted.
11	Proponent shall establishing Miyawaki forest as per the GO no. 1011/81-7-2021-09(rit)/2016 dated 13.10.2021 of Deptt. of Environment, forest and	A work order has been awarded to UP Forest Department for Miyawaki afforestation in 0.5 Ha area on 16.10.2022. Copy of the work order has

B

	climate change and shall submit time bound proposal for proposed plantation within 01 month	also been submitted to Regional Office, UPPCB, Sonbhadra.
12	Unit shall comply with the provisions of Hazardous and Other waste (Management & Transboundary Movement) Rule 2016	Rules under Hazardous & Other Waste (Management and Transboundary Movement) Rules, 2016 are being complied with. Hazardous waste authorization has been obtained with authorization no. 16980 dated 19.07.2022 and is valid upto 18.06.2027.
13	Industry shall treat industrial effluent through ETP in such a manner to achieve the standard prescribed under Environment (protection) Rules 1986 and treated effluent shall be reused in vehicle washing, water sprinkling for dust suppression and horticulture. Industry shall upgrade the ETP in time bound manner.	Upgradation work for inclusion of multi-grade filter, activated carbon filter and filter press shall be completed by April'2023. The treated water from ETP is being reused in dust suppression, fire-fighting, green belt development etc.
14	Domestic effluent shall be treated through STP as per the standard prescribed under Environment (protection) Rules 1986 and treated water shall be reused for horticulture within premises.	Domestic effluent is being treated through STP of 1.5 MLD capacity and treated water is being used for horticulture within premises. Upgradation work of STP has been completed.
15	Industry shall not discharge any kind of effluent outside the premises and shall ensure ZLD.	Agreed. Khadia Project is operational with the principal of zero liquid discharge.
16	Treated effluent shall not be discharged in Rihand Reservoir in any case.	Agreed. Treated effluent is not being discharged in Rihand Reservoir.
17	Industry shall operate Electro Magnetic Flow meter at water resources, inlet and outlets of ETP and STP and shall provide data connectivity to CPCB server. The records of flow meter readings shall be maintained.	Flow meters have been installed at water resources, ETP and STP and records of the same are being maintained.
18	Industry shall operate PTZ camera at ETP and STP for surveillance of proper operation and shall provide the URL and password to the board within 01 month.	PTZ cameras are installed at ETP and STP of Khadia Area, NCL.
19	Water sprinkling shall be carried out regularly to suppress the dust emission. A log book shall be	Water sprinkling is regularly being done and log book is being maintained. Report shall be





	maintained	submitted to UPPCB regularly.
20	Unit shall submit environmental statement in prescribed format as per rule 14 of Environment (Protection) Act, 1986.	Khadia Project is regularly submitting Environmental Statement. The Environmental statement for FY 2021-22 has been submitted on 24.09.2022.
21	Unit shall abide by directions given by Hon'ble Court, Hon'ble NGT, Central Pollution Control Board and UPPCB for protection of safe guard of environment from time to time	Project abides by the condition.
22	Unit shall submit ambient air quality monitoring report of approved laboratory with 01 months and thereafter on quarterly basis.	Project abides by the condition. Khadia Project is regularly submitting Ambient air quality monitoring report of CMPDIL, Jayant.
23	Unit shall comply with the directions issued under Singrauli Action Plan in time bound manner.	Khadia Project is complying with the directions issued under Singrauli Action Plan.
24	Industry shall comply with the directions passed by Hon'ble Supreme Court in Civil Appeal No 4251-4252/2019 on 08-11-2019	Project abides by the condition.
25	Unit shall comply with the recommendations of Core committed constituted by Hon'ble NGT and submit the compliance report to supervisory committee and to the Board	Khadia Project is complying with the recommendations of core committee constituted by Hon'ble National Green Tribunal. Compliance report is regularly being submitted to UPPCB.
26	Unit shall comply with the relevant provisions of Environmental Laws	Khadia Project abides by this condition.

*30/1/23*  
Staff Officer (Mining)  
Khadia Area

*B*

**COMPLIANCE AGAINST CONDITIONS MENTIONED IN LETTER NO.J-11015/ 255 / 2006 - I.A.II(M) FROM MOEF, NEW DELHI DTD.23.03.2016**

Sl. No	Conditions	Status																																			
4 A	<b>Specific Condition</b>																																				
i	The maximum production from mine at any given time shall not exceed the limit as prescribed in the EC.	<p>The maximum production from mine has never been exceeded and will never exceed 14 MTY i.e. the limit prescribed in the EC. Coal Production since grant of EC is as follows.</p> <table><tr><th rowspan="2">Year</th><th colspan="3">Coal Production (in Million T)</th></tr><tr><th>In UP</th><th>In MP</th><th>Total</th></tr><tr><td>2015-16</td><td>2.325</td><td>4.410</td><td>6.735</td></tr><tr><td>2016-17</td><td>3.453</td><td>2.553</td><td>6.006</td></tr><tr><td>2017-18</td><td>5.163</td><td>3.637</td><td>8.8</td></tr><tr><td>2018-19</td><td>6.958</td><td>4.442</td><td>11.4</td></tr><tr><td>2019-20</td><td>8.302</td><td>4.881</td><td>13.183</td></tr><tr><td>2020-21</td><td>7.8905</td><td>6.1095</td><td>14.00</td></tr><tr><td>2021-22</td><td>8.659</td><td>5.340</td><td>14.00</td></tr></table>	Year	Coal Production (in Million T)			In UP	In MP	Total	2015-16	2.325	4.410	6.735	2016-17	3.453	2.553	6.006	2017-18	5.163	3.637	8.8	2018-19	6.958	4.442	11.4	2019-20	8.302	4.881	13.183	2020-21	7.8905	6.1095	14.00	2021-22	8.659	5.340	14.00
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2020-21	7.8905	6.1095	14.00																																		
2021-22	8.659	5.340	14.00																																		
ii	The validity of the EC is for the life of the mine or as specified in the EIA Notification, 2006, whichever is earlier.	Validity of the EC shall be as specified in the EIA Notification, 2006.																																			
iii	All the measures detailed in Mining Plan and Mine Closure Plan shall be implemented.	All the measures detailed in Mining Plan and Mine Closure Plan are being implemented by Khadia Project.																																			
iv	OB from Dudhichua mine shall be used for backfilling of mine void. At the mine closure 39 ha of void will be filled to near ground level.	As per approved mining plan of 15 MTPA, water body of 39 Ha shall be left after closure of the mine.																																			
v	The CHP will be completed by October, 2016 which will meet the production of 10 MTPA plus some additional requirements.	The construction of additional CHP (6 MTY) has been completed. 10 MTPA plus some additional coal is being dispatched through CHP.																																			
vi	The additional production should be met after completion of CHP.	The additional production of coal is being done only after construction of additional CHP. New CHP was commissioned in March 2018 and Khadia Project crossed 10 MTPA mark in 2018-19.																																			
vii	Presently road transport of coal to Anpara TPP will be converted to rail dispatch after the completion of the Khadia new CHP and the railway siding at Anpara TPP.	The new CHP of 06 MTY capacity has been linked with MGR system and the majority of current transport is being done through MGR dispatch.																																			
viii	The proposal for road transport of the e-auction coal is up to 10 percent of the production is agreed	Project abides by this condition.																																			
ix	The production shall be within the same mining lease area	The production is being done within the same mining lease area.																																			
x	The OB shall be completely re-handled at the	Will be Complied at the end of mine life.																																			



	adequate retention period to allow proper settling of silt material.	<p>haul/approach road is made possible by implementing catch drains, which are surface drains to intercept, collect and lead the flow of water in order to prevent water inrush on road and other related infrastructure facilities and are designed as per the rainfall density and elevational gradient of the area. Catch drains of appropriate type, length and dimensions with a total length of 3.320 Km have been provided, which is regularly being desilted.</p> <ol style="list-style-type: none"> <li>4. Water so collected is being treated in ETP and reused in watering the mine area, roads, green belt development, etc</li> <li>5. There are three mine sumps viz., S-1 at eastern section as well as S- 2A and S-3 at western section. Both S-1 and S-3 sumps are being utilized as surface water source for mining related activities. The mine sump water after proper settlement of silt and sediments is being pumped to designated locations within mine lease to be used for dust suppression and other related uses.</li> <li>6. <b>Silt Settling Pond:-</b> Settling ponds are regarded as one of the key structures in the surface water management having the function of retaining the silt and sediments from contaminated water mainly emanating from infrastructure area such as CHP, OB dumps, railway sidings, stockyard, etc.</li> </ol>
xxv	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check runoff and siltation shall be based on the rainfall data.	Height of retaining wall varies from 2 m to 4m depending on the site conditions.
Xxv i	Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.	<p>Khadia Project is equipped with two CHPs (04 MTY and 06 MTY capacity)</p> <p>Coal Handling Plant of 04 MTY capacity is equipped with Cyclone type dust extractor, automatic water sprinklers at crusher point and fixed water sprinklers at transfer points of CHP.</p> <p>Coal Handling Plant of 06 MTY is equipped with gyratory crusher, which is fully enclosed system, automatic water sprinkler system at crusher</p>

		diversion of 180.0 ha Forest Land acquired for Khadia Project in the state of Madhya Pradesh has been complied by depositing an amount of Rs. 10.80 Crore vide SBI Morwa DD No. 210211 dated 06.10.2009 to the Madhya Pradesh State Forest Department.																							
Xxx iv	The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.	The mining is being done in sustainable manner as per approved mine plan. No extra over burden dumps will be created.																							
Xxx v	No groundwater shall be used for mining operations.	No ground water is being used for mining operations apart for mine seepage during the course of mining.																							
Xxx vi	Of the total quarry area of <b>1003</b> ha, the backfilled quarry area of <b>808</b> ha shall be reclaimed with plantation and a void of <b>39</b> ha which is proposed to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilised with plantation/afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.	Of the total quarry area of 1003 ha, the backfilled quarry area of 808 ha will be reclaimed with plantation and at the mine closure, 39 ha of void will be converted into water body.																							
Xxx vii	Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new pelzometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment, Forests & Climate Change and to the Central Pollution Control Board quarterly within one month of monitoring.	<p>Regular monitoring of ground water level and quality is carried out through dug wells and piezometers (6 nos.) four times a year. The variation during winter season for last three years in water level is as shown below.</p> <table><tr><th rowspan="2">Well</th><th colspan="3">Water level in m bgl (Winter Season)</th></tr><tr><th>Feb'20</th><th>Feb'21</th><th>Feb'22</th></tr><tr><td>Khadia Basti</td><td>3.10</td><td>3.20</td><td>3.10</td></tr><tr><td>Khadia DAV</td><td>2.75</td><td>2.25</td><td>2.10</td></tr><tr><td>Khadia</td><td>3.45</td><td>1.95</td><td>1.95</td></tr><tr><td>Chilkadand</td><td>3.60</td><td>4.70</td><td>4.30</td></tr></table> <p>Reports are being submitted to the regional offices of MoEF &amp; CPCB.</p>	Well	Water level in m bgl (Winter Season)			Feb'20	Feb'21	Feb'22	Khadia Basti	3.10	3.20	3.10	Khadia DAV	2.75	2.25	2.10	Khadia	3.45	1.95	1.95	Chilkadand	3.60	4.70	4.30
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Xxx viii	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	<p>The mine workings are on hilly terrain. Mine &amp; rain water is collected in sufficient capacity in mine sump and in one large size pond for ground water recharge. The rain water harvesting has been done at eight places including administrative building (GM office).</p> <p>The ground water level &amp; quality of nearby areas is regularly being monitored and report</p>																							



		submitted to MOEF regional offices at Bhopal & Lucknow. In case the village wells go dry, water requirement of nearby village(s) shall be taken care of.
Xxx ix	Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.	Sewage Treatment Plant (1.5 MLD) in colony and Effluent Treatment Plant (38 MLD) in mines are functioning efficiently. Workshop, Mine water and CHP waste water are being treated at ETP and the treated water is being reused in mine. The spillage/ discharge conforms to GSR 742(E) dtd. 25.09.2000 standards for Coal mines.
xi	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 specialised agency /institution within the District/State and the results reported to this Ministry and to DGMS.	The occupational health check of 20% mine workers is being done annually at company hospital in compliance of the provisions of Coal Mine Rules.
Xli	Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever is higher.	The rehabilitation & resettlement of families/persons displaced due to acquisition of land for coal mining has been completed as per the R&R policy of CIL.
Xlii	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 MOEFCC and its concerned Regional office	Digital processing of the entire lease area using remote sensing technique is done regularly by CMPDIL Ranchi & its report are regularly sent to MOEF, New Delhi, Regional office at Bhopal & Lucknow. Latest report for the year 2021, published in March 2022 has also been uploaded on website of NCL, <a href="http://www.nclcil.in">www.nclcil.in</a> .
Xliii	A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forests & Climate Change within 6 months of grant of Environmental Clearance.	Approved mining and mine closure plan (15 MTPA) duly approved by NCL Board is enclosed herewith.
Xliv	The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.	Project authorities remain in consultation with the Panchayats of local villages and administration to identify socio economic and welfare measures for CSR activities.
Xlv	Corporate Environment Responsibility:	
	a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.	The company has an approved Corporate Environmental Policy.
	b) The Environment Policy shall prescribe for standard operating	The objective of approved Corporate

	process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.	Environment Policy states for compliance of conditions stipulated in Environmental Clearance / Forest Clearance/ or any other statutory conditions issued by regulatory agencies.																																				
	c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.	At Area level, the Environment Cell is headed by the Staff Officer (Mining) who is directly reporting to the General Manager, Khadia Project. At Northern Coalfields Limited H.Qtrs. a full fledged Environment Management Deptt. is headed by the General Manager (Environment) under the control of the Director (Tech. / P&P) who directly reports to the CMD, NCL.																																				
	d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.	The company has a proper management system to report the noncompliance /violation to the top management and stakeholders at the large. Northern Coalfields Limited is an ISO 14001:2015 certified company which automatically provides platform for management review.																																				
4 B	<b>B. General Conditions:</b>																																					
i	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forest & Climate Change.	No change in mining technology and scope of working will be made without prior approval of the Ministry of environment and Forests.																																				
ii	No change in the calendar plan of production for quantum of mineral coal shall be made.	No change in the calendar plan including excavation & quantum of mineral coal will be made. <table><tr><td>Year</td><td colspan="3">Coal Production (in Million T)</td></tr><tr><td></td><td>In UP</td><td>In MP</td><td>Total</td></tr><tr><td>2015-16</td><td>2.325</td><td>4.410</td><td>6.735</td></tr><tr><td>2016-17</td><td>3.453</td><td>2.553</td><td>6.006</td></tr><tr><td>2017-18</td><td>5.163</td><td>3.637</td><td>8.8</td></tr><tr><td>2018-19</td><td>6.958</td><td>4.442</td><td>11.4</td></tr><tr><td>2019-20</td><td>8.302</td><td>4.881</td><td>13.183</td></tr><tr><td>2020-21</td><td>7.8905</td><td>6.1095</td><td>14.00</td></tr><tr><td>2021-22</td><td>8.659</td><td>5.340</td><td>14.00</td></tr></table>	Year	Coal Production (in Million T)				In UP	In MP	Total	2015-16	2.325	4.410	6.735	2016-17	3.453	2.553	6.006	2017-18	5.163	3.637	8.8	2018-19	6.958	4.442	11.4	2019-20	8.302	4.881	13.183	2020-21	7.8905	6.1095	14.00	2021-22	8.659	5.340	14.00
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iii	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni,	8 Nos of air quality monitoring stations (4 in core and 4 in buffer zone) have been established • Monitoring is done as per Gazette Notification No. G.S.R. 742(E) dated 25.09.2000 and as per NAAQS, 2009. Core zone results are compared with G.S.R 742(E) and buffer zone with NAAQS, 2009. • A Continuous Ambient Air Quality Monitoring																																				



	Cd, Cr, etc carried out at least once in six months.	Station (CAAQMS) has been installed for real time monitoring of the ambient air quality. Monitoring of Heavy Metals is being regularly done through CMPDIL.
iv	Data on ambient air quality (PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub> ) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognised under the EPA rules, 1986 shall be furnished as part of compliance report.	Ambient air quality data (SPM, RPM, SO <sub>2</sub> , NO <sub>x</sub> , heavy metals) is being regularly submitted to the MOEF/SPCB/CPCB once in six months.
v	Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.	Noise pressure level is maintained below 85 dB(A) in the work environment. The variation in noise level for the Qtr. Ending September'22 are as follows: M. Station      Day dB(A)   Night dB(A) Mine Site(KHN1) 62.8-66.2   54.6-56.8 O/B W/S(KHN2) 67.2-69.5   50.7-56.8 Coal W/S(KHN3) 60.3-70.2   49.6-60.4 Colony(KHN4)   45.0-47.2   40.3-43.7 Ear plugs / muffs are regularly being distributed among employees engaged in comparatively high noise areas.
vi	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 19 <sup>th</sup> May 1993 and 31 <sup>st</sup> December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	Industrial waste water (workshop, CHP and waste water from the mine) is properly collected and treated at ETP (38 MLD capacity) and the treated water conform to the prescribed standards.
vii	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	Vehicular emissions are kept under control by regular maintenance of vehicles. Major coal transport is made through MGR railway system. Sometimes vehicles are also used for transporting the mineral and are optimally loaded and kept covered.
viii	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognised under EPA Rules, 1986.	Monitoring is being done through laboratory at CMPDIL. Environment Laboratory, CMPDIL, Ranchi is NABL accredited (certificate no.TC-7470 issue date 07/09/2020) and CPCB recognized laboratory (vide F. No. LB/99/7/2021-INST LAB-HO-CPCB-HO/Govt-84/1036 dated 10.05.2022). The environment monitoring samples collected by its field lab at CMPDI, RI-6, Singrauli are sent to CMPDIL, Ranchi laboratory for analysis.
ix	Personnel working in dusty areas shall wear	Personnel working in core mining area are

	false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	
9	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 amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter. The proponent shall ensure to undertake and 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.	The project proponent is committed to enforce the provisions of Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law. The project is committed to provide the cost 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.
10	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	The project abides by this condition.
11	This EC is in supersession to the earlier EC granted to the project vide letter No.J-11015/255/2006-IA.II (M) dated 10 <sup>th</sup> April, 2007 for 10 MTPA in an area of 1640 ha.	The project abides by this condition.

**COMPLIANCE AGAINST CONDITIONS MENTIONED IN LETTER NO.J-11015/ 255 / 2006 - IA.II(M) FROM MOEF, NEW DELHI DTD.10.04.2007**

S.N.	Conditions	Compliance Status
2 A	Specific Conditions	
(i)	No mining shall be carried out in the forest land for which forestry clearance has not been obtained.	The required total forest land clearances has been granted for 664 Ha in UP state (8-298/87-FC dated 30.07.1990) and for 180 Ha in MP state (8-85/2005-FC dtd. 14.09.2010). Project is committed to carry out mining in the forest land only for which forestry clearance has been obtained.
(ii)	Mining shall be carried out as per statute at a safe distance from the Ballia Nallah.	Mining is being carried out as per statute at a safe distance from the Ballia Nallah.
(iii)	Top soil of 2.56 M M3 shall 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.	Top soil is regularly being used for spreading on finalised overburden dumps. In FY 2022-23 (upto sept 2022), a total of 29400.05 cum of top soil has been utilised for reclamation purpose.
(iv)	OB generated shall be stored in two external waste dump of 258 ha, and a	The height and width of benches in OB dumps are maintained within permissible limits and



	<p>maximum height of 90m, consisting of 3 benches of 30 m each, which will be stabilised with plantation and 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 &amp; Forest and its Regional office located at Lucknow on an yearly basis. The entire OB will be rehandled at the time of mine closure, into the decoaled void.</p>	<p>wherever possible stabilised with plantation. The external as well as internal dumps have not achieved its projected height (500m above MSL). Back filling and concurrent reclamation is a continuous process. Approx. 194.5 Ha OB dump area has been reclaimed upto 30.09.2022 by plantation through UP Forest deptt. The ultimate slope of the dump will not exceed 28°. Monitoring and management of reclaimed dump site is continued. The compliance status is being regularly submitted to the Ministry of Environment &amp; Forest, Regional office located at Lucknow &amp; Bhopal.</p>
(v)	<p>This (v) point is not mentioned in the MOEF letter.</p>	<p>Not applicable.</p>
(vi)	<p>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.</p>	<p>Catch drains / Siltation ponds / retaining wall / Gabions are constructed to arrest silt / sediment flows from soil, OB and mineral dumps. The water so collected is treated in ETP and utilised for watering the mine area, roads, green belt development, etc. The drains are regularly desilted and maintained properly. Garland drains and sump capacity provides safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump provides adequate retention period to allow proper settling of silt material.</p>
(vii)	<p>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.</p>	<p>Dimension of the retaining wall are based on the rainfall data. Height of retaining wall varies from 2 m to 4m and width varies from 2.5 to 3m depending on the site conditions.</p>
(viii)	<p>Crushers ( present and additional ) at the CHP should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points etc.</p>	<p>Khadia Project is equipped with two CHPs (04 MTY and 06 MTY capacity)</p> <p>Coal Handling Plant of 04 MTY capacity is equipped with Cyclone type dust extractor, automatic water sprinklers at crusher point and fixed water sprinklers at transfer points of CHP.</p> <p>Coal Handling Plant of 06 MTY is equipped with gyratory crusher, which is fully enclosed system, automatic water sprinkler system at crusher unloading point and Dry Fog Dust Suppression System at transfer points.</p> <p>Coal is being transported from crusher to Silo through enclosed conveyor belts.</p> <p>For water sprinklers at haulage road, mobile water sprinkling is being done. Fixed Water Sprinklers are also provided near coal yard no.1.</p>

		In addition to this, one no. of fixed fog cannon is also deployed at coal yard no. 1.
(ix)	Drills should be wet operated only.	Drills are either wet operated and/or are provided with highly effective dust extractors, guards & dust collectors.
(x)	Controlled blasting should be practiced with use of delay detonators and only during day time. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.	Controlled blasting is practiced with use of delay detonators in between 1:00 pm to 2:00 pm. The ground vibrations are regularly monitored and kept controlled. Fly rocks are checked and blasting shelters are used.
(xi)	A progressive afforestation plan shall be implemented covering a total area of not less than 1222 ha, which includes reclaimed external OB dump (258 ha), backfilled area (808 ha) along ML boundary, along roads and infrastructure green belt (156 ha), along vacant land and in colony by planting native species in consultation with the local DFO / Agriculture department. The density of the trees should be around 2500 plants per ha.	As per mine plan of 15 MTPA, out of total 1640 Ha lease hold area, planation will be done in around 1378 Ha. Plantation is continuously being done through UP forest department. In FY 2022-23, plantation is being done on 33 Ha of overburden dump area and 0.5 Ha of Miyawaki afforestation on plain area.
(xii)	Of the excavated area an area of 808 ha shall be backfilled and reclaimed with plantation and the balance 39 ha of the decoaled void shall be converted into a water reservoir, the higher benches of which shall be gently sloped and stabilised by plantation / afforestation 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.	Back filling and concurrent reclamation is a continuous process. Approx. 194.5 Ha OB Dump area has been reclaimed upto 30.09.2022 by plantation through UP Forest deptt. The density of the plants is kept around 2500 plants/ha. Formation of water reservoir will be taken care at the time of mine closure.
(xiii)	The company shall obtain approval of CGWA/ CGWB Regional Office for use of ground water if any, for mining operations, Sanction of the competent authority shall be obtained for use of water from the integrated water supply Scheme of the G.B. Pant Sagar.	Application for NOC has already been made through application no. 21-4/1269/MP/MIN/2022 dated 24.03.2022. The water supplying unit IWSS has obtained permission letter no. 649-Cu-11 / NTPC / 79 dated 13.03.1979 from Rihand reservoir of the G.B.Pant Sagar to draw raw water.
(xiv)	Regular monitoring of ground water 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	Regular monitoring of ground water level and quality is carried out piezometers and observation wells. Reports are regularly being submitted to the regional offices of MoEF & CPCB. Construction of 6 piezometers at Khadia Project has been completed in Feb.'2016.

	to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.	
(xv)	The company shall put up artificial ground water recharge measures for augmentation of ground water resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	The mine workings are on hilly terrain. Mine & rain water is collected in sufficient capacity in mine sump for ground water recharge. The rain water harvesting is being done at 07 places including administrative building (GM office). Sufficient numbers of hand pumps in nearby villages (Ambedkar Nagar, Sabji Market, Khadia village etc) have been provided. The ground water level & quality of nearby areas is regularly being monitored and report submitted to MOEF regional offices at Bhopal & Lucknow. In case the village wells go dry, water requirement of nearby village(s) shall be taken care of.
(xvi)	Sewage treatment plant should be installed in the existing colony. ETP should also be provided for workshop and CHP wastewater to ensure that the total waste water of 3190 cum/d being discharged from the mine conforms to prescribed standards for discharge.	Sewage Treatment Plant (1.5 MLD) in colony and Effluent Treatment Plant (38 MLD) in mines are functioning efficiently. Mine water, Workshop and CHP waste water are being treated at ETP and the treated water is being reused in mine. The spillage/ discharge conforms to MOEF gazette Notification No. GSR 742(E) dtd. 25.09.2000 standards for Coal mines.
(xvii)	The project authorities shall carry out a study for zero discharge from NCL mines by considering various options for using excess treated effluents including artificial recharge and the report on the same shall be submitted to this ministry within six months of issue of this clearance letter.	Mine effluent is being treated in Effluent Treatment Plant (ETP) and reused in dust suppression, haul road sprinkling, green belt development, firefighting, machinery washing etc. In this regard, a study has also been conducted through IIT-BHU.
(xviii)	Besides carrying out regular periodic health check-up of their workers, 10% of the workers identified from work force 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 two years and the results reported to this Ministry and to DGMS.	The periodical health checkup of more than 20% mine workers is being done annually at company hospital for compliance of the provisions of The Mines Rules, 1955.
(xix)	Digital processing of the entire lease area using remote sensing technique should be done regularly once in 3 years for monitoring land use pattern and report submitted to MOEF and its Regional Office at Bhopal.	Digital processing of the entire lease area using remote sensing technique is done regularly by CMPDIL Ranchi & its report are regularly sent to MOEF, New Delhi, Regional office at Bhopal & Lucknow. Latest report for the year 2021, published in March 2022 has also been uploaded on website of NCL, <a href="http://www.nclil.in">www.nclil.in</a> .

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(xx)	A final mine closure plan along with details of corpus fund should be submitted to the Ministry of Environment & Forest within one year for approval.	A mine closure plan for 15 MTPA capacity has been prepared and approved by NCL board. Copy of the mine plan has been uploaded on website of MoEF&CC <a href="https://parivesh.nic.in/">https://parivesh.nic.in/</a> during application for EC.
(xxi)	Consent of operate shall be obtained before expanding mining operations.	Project abides by this condition.
<b>B) General Conditions</b>		
(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of environment and Forests.	Env. Clearance letter no. J-11015/255/2006-IA.II(M) dtd. 27.07.2022 has been issued from MOEF for Khadia Expansion Project (15MTY). No change in mining technology and scope of working will 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 should be made.	Env. Clearance letter no. J-11015/255/2006-IA.II(M) dtd. 27.07.2022 has been issued from MOEF for Khadia Expansion Project (15MTY). No change in mining technology and scope of working will be made without prior approval of the Ministry of environment and Forests.
	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO <sub>2</sub> and NO <sub>x</sub> monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	Four ambient air quality monitoring stations are established in core zone, and four ambient air quality monitoring stations are established in buffer zone for SPM, RPM, SO <sub>2</sub> and NO <sub>x</sub> monitoring as per GSR 742(E) dt. 25.09.2000 and parameters are within permissible limit.
(iv)	Fugitive dust emissions (SPM and RPM) from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained.	Water spraying on haul roads is being done through dept. and outsourcing water sprinklers. Water sprinkling on transfer points is done by fixed water sprinklers. Besides this, currently two nos. of truck mounted fog cannon and two nos. of road sweeping machines are deployed at Khadia Area. Additionally, one no. of fixed fog cannon is also operational at Khadia Area, NCL and Air quality of area is regularly being measured by CMPDIL.
(v)	Data on ambient air quality (SPM, RPM, SO <sub>2</sub> and NO <sub>x</sub> ) should be regularly submitted to the Ministry including its Regional office Bhopal and to the State Pollution Control Board and the Central Pollution Control Board once in six months.	Ambient air quality data (SPM, RPM, SO <sub>2</sub> , NO <sub>x</sub> , heavy metals) is being regularly submitted to the MOEF/SPCB/CPCB once in six months.
(vi)	Adequate measures should 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. should be provided with ear plugs / muffs.	Noise pressure level is maintained below 85 dB(A) in the work environment. Ear plugs / muffs are regularly being distributed among employees engaged in comparatively high noise areas.

Photographs pertaining to Air Pollution Control Measures at Khadia Project, NCL



Fixed fogging machine at Coal Yard



Fixed Sprinklers at coal Yard



Mobile Water Sprinkling on Haul Road



Truck Mounted Mist Spray Machine



Plantation on Overburden Dumps



Plantation on Overburden Dumps



Plantation between Mine and Colony Area



Plantation along mine area





Repairing of HEMM (Dragline repairing in the picture)



Washing of HEMM



Use of Detonator in Blasting



Dust Extractor attached in drills



Water Sprinkling at Unloading Point at CHP (04 MTY)



Dust Extractor at CHP



Water Sprinkling at Unloading Point at CHP (06 MTY)



Loading of coal into wagons through Silo



Photographs pertaining to Water Pollution Control Measures at Khadia Project, NCL



Effluent Treatment Plant (38 MLD capacity)



Sewage Treatment Plant (1.5 MLD capacity)

Photographs pertaining to Overburden Management at Khadia Project, NCL

**Overburden Management at Khadia Area (Technical reclamation)**



Overall slope  $<28^{\circ}$



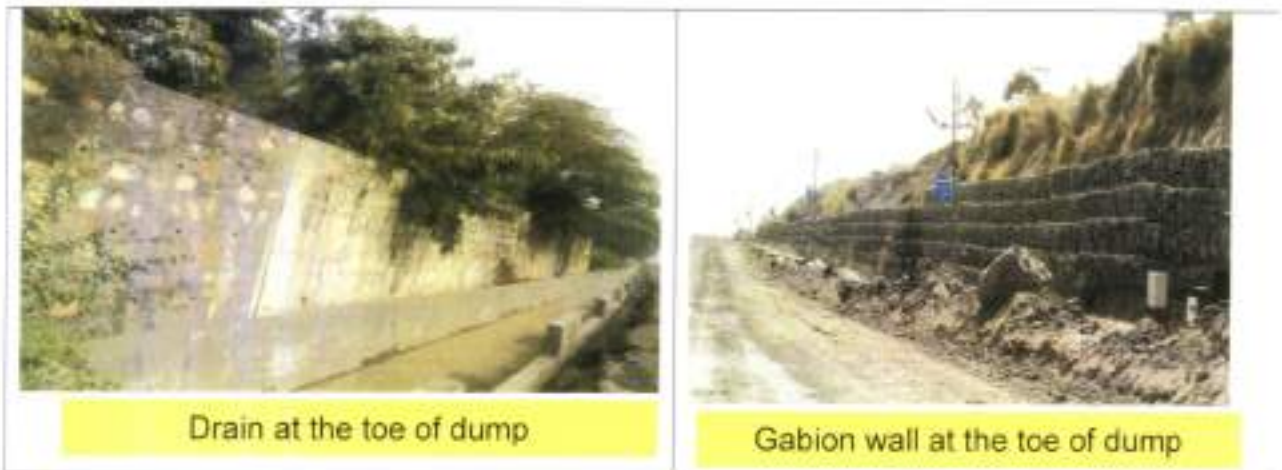
Inward slope of the bench



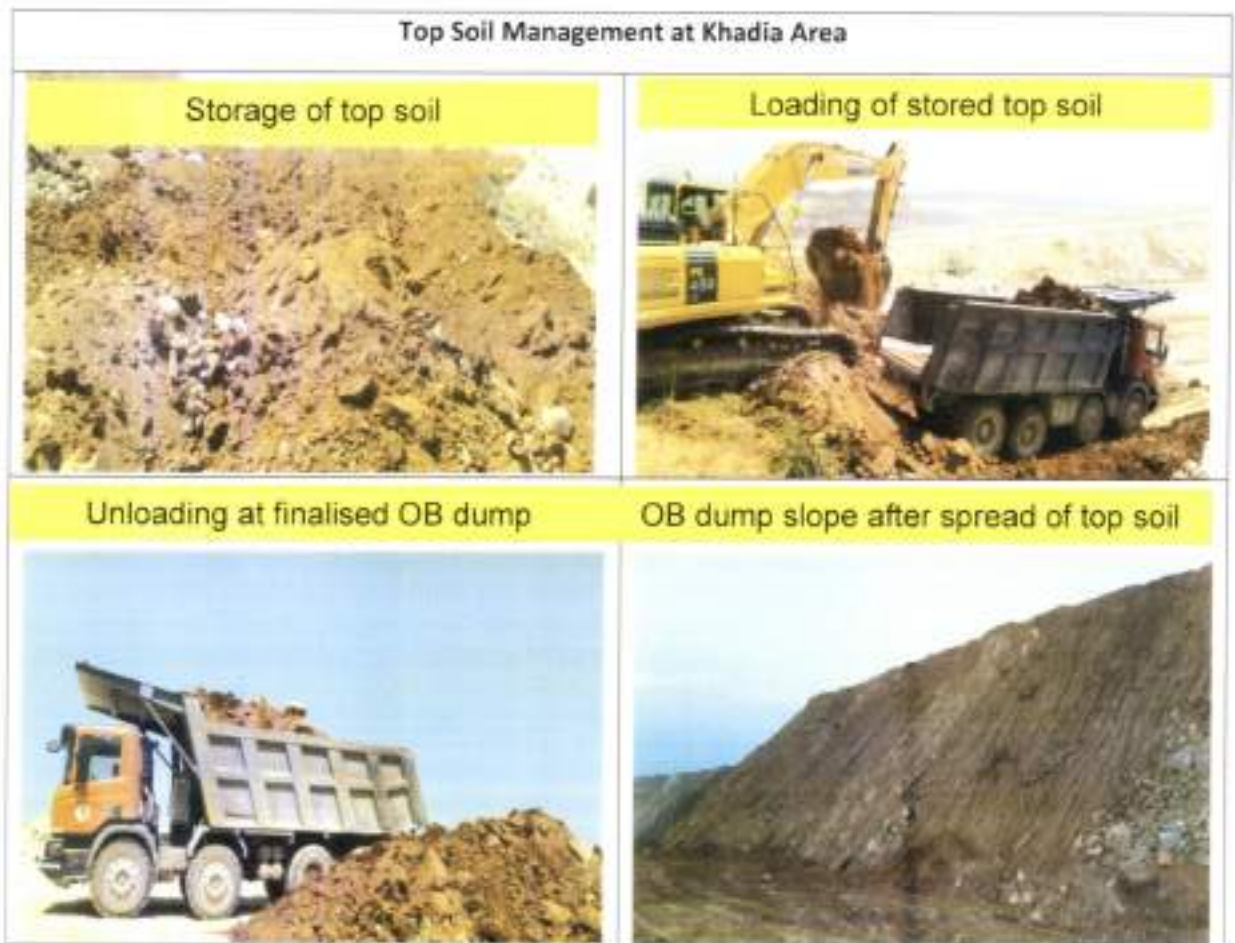
Retaining wall at the toe of dump



Retaining wall at the toe of dump

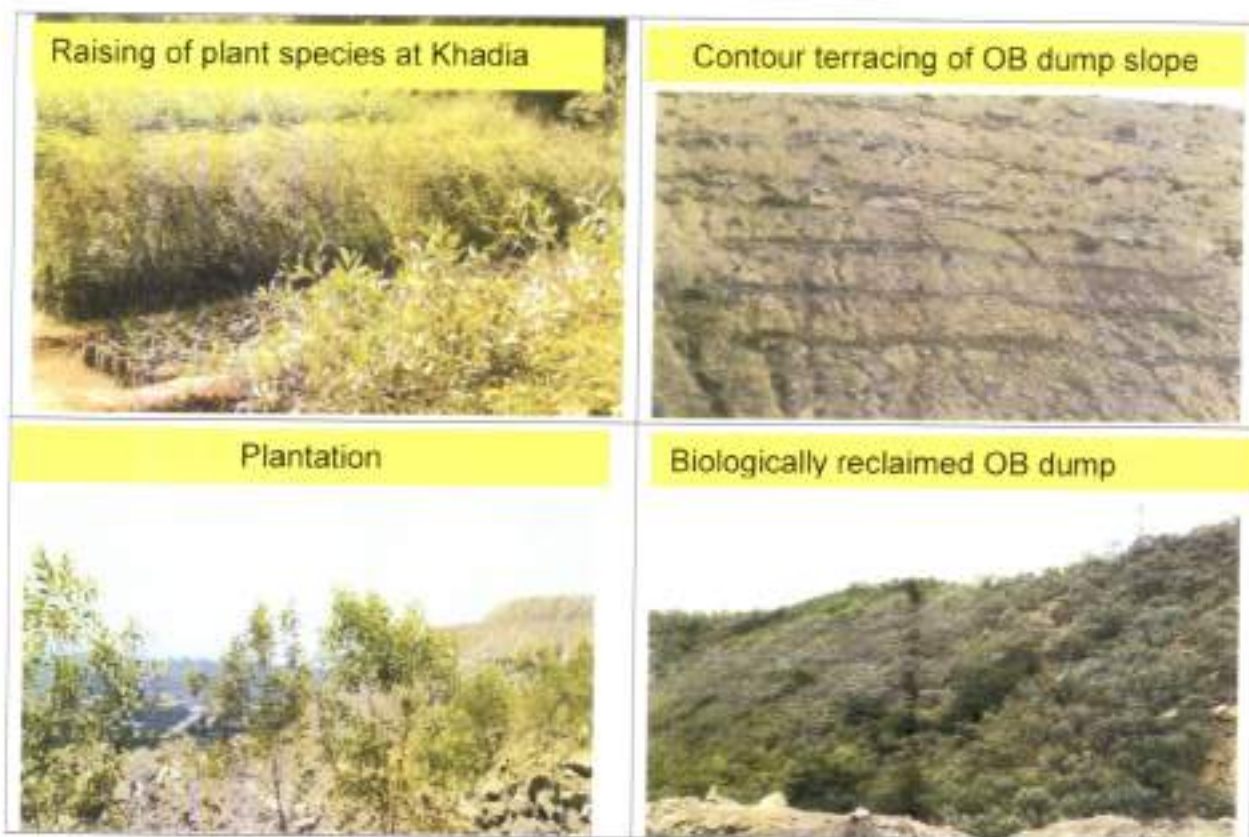


Photographs pertaining to Top Soil Management at Khadia Project, NCL





Photographs pertaining to Biological reclamation at Khadia Project, NCL



Photographs pertaining to CSR Works being done by Khadia Project, NCL

