



File No.: J-11015-31-2007-IA-II-M
Government of India
Ministry of Environment, Forest and Climate
Change
IA Division



Dated 07/12/2024



To,

Sh. Anil Kumar Panda
M/s National Aluminium Company Limited (NALCO)
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Subject: **Modification of existing Environment Clearances (ECs) of Utkal D Coal Block (ML Area 301.28 ha with Granted production capacity 2.0 MTPA) and Utkal E Coal Block (ML Area 523.036 ha with Granted production capacity 2.0 MTPA) by amalgamating the D & E block with total coal production capacity of 4 MTPA and total lease area of 824.316 ha by M/s. National Aluminium Company Limited (NALCO) located at Village: Nandichhod (Gopiballavpur), Gopinathpur Jungle, Kosala, Kundajhari Jungle, Korada, Rajjharan, Similisahi, Tehsil: Chhendipada District: Angul, Odisha – Grant of Environment Clearance under Para 7 (ii) of EIA Notification, 2006-Regarding.**

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/OR/CMIN/500323/2024 dated 11/10/2024 for grant of prior Environmental Clearance (EC) to the project under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24A0101OR5612898N
(ii) File No.	J-11015-31-2007-IA-II-M
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vi) Sector	Coal Mining
(vii) Name of Project	Modification in existing ECs of Utkal D Coal Block (ML Area 301.28 ha with Granted production capacity 2.0 MTPA) and Utkal E Coal Block (ML Area 523.036 ha with Granted

production capacity 2.0 MTPA) by amalgamating the D & E block with total coal production capacity of 4 MTPA and total lease area of 824.316 ha Revenue villages of Tehsil: Chhendipada District: Angul, Odisha - Environment Clearance under Para 7 (ii) of EIA Notification, 2006

- (ix) Location of Project (District, State)
(x) Issuing Authority
(xii) Applicability of General Conditions

ANUGUL, ODISHA
MoEF&CC
No

3. M/s. National Aluminium Company Limited (NALCO) has made an online application vide proposal No-IA/OR/CMIN/500323/2024 dated 10.10.2024 along with copy of EIA/EMP Report (based on standard ToR), certified compliance report and Common Application Form (CAF) for the amalgamated Utkal D&E block and sought for Environment Clearance (EC) under the provisions of the para 7(ii) of EIA Notification, 2006 for the project mentioned above.

4. The proposed project activity is listed at schedule no **1 (a) 'Mining of Minerals' under Category "A"** of the EIA Notification, 2006. Hence, the project is being appraised at Central Level.

5. The instant Proposal was considered by the EAC (Coal) in its 17th meeting held during 21-22nd Oct. 2024. The PP has uploaded the written information on 04.11.2024. The PP has uploaded the written information on 04.11.2024. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed at <https://parivesh.nic.in>.

Details submitted by the project proponent

6. The project of M/s. NALCO is located in Nandichhod (Gopiballavpur), Gopinathpur Jungle, Kosala, Kundajhari Jungle, Korada, Rajjharan, Similisahi, Tehsil: Chhendipada District: Angul, Odisha is for modification of existing Environment Clearances (ECs) of Utkal D Coal Block (ML Area 301.28 ha with Granted production capacity 2.0 MTPA) and Utkal E Coal Block (ML Area 523.036 ha with Granted production capacity 2.0 MTPA) by amalgamating the D & E block with total coal production capacity of 4 MTPA and total lease area of 824.316 ha.

7. Details of existing ECs, FCs, implementation and its compliance status

A. Status of ECs obtained for Utkal D & E block and its present status

S. No	Details of letter No	EC/Amendment EC/Validity Extension /Transfer EC	Capacity (MTPA) & Life of the mine	Area (Ha)	Date of Issuance	Status of implementation
Utkal D Block – Public hearing held on 24/01/2006						
1.	J-11015/203/2006-IA. II (M) EC in the name of M/s Orissa Mining Corporation Limited transferred OMC to NALCO (Utkal-D Coal Block)	EC	2.0 & 52 years	301.28	29.01.2007	Implemented (CTO obtained under Air and water act for 2.0 MTPA capacity vide letter no. 4328/IND-I- CON-6762 dated 28.03.2024 valid up to 31.03.2025)
2.	J-11015/203/2006-IA. II (M) EC transferred from M/s OMC to M/s NALCO	EC transfer	2.0	301.28	11.08.2020	
Utkal E Block – Public Hearing held on 30/05/2008						

S. No	Details of letter No	EC/Amendment EC/Validity Extension /Transfer EC	Capacity (MTPA) & Life of the mine	Area (Ha)	Date of Issuance	Status of implementation
3.	J-11015/31/2007-IA. II (M) Corrigendum dtd. 26.12.2013 (Utkal E Coal Mine)	EC	2.0 & 36 years	729.49	10.12.2009	Yet to be implemented (CTO obtained under Air Act and Water Act for 2.0 MTPA vide letter no. 13906 IND-I- CON-6791 dated 31.08.2024 valid up to 31.03.2025).
4.	J-11015/31/2007-IA. II (M) Corrigendum dtd. 26.12.2013 (EC transferred from NALCO to NALCO) Proposal No: IA/OR/CMIN/495414/2024	EC	2.0	523.036 (Area reduced from 729.48 Ha to 523.036 Ha)	To be accorded by the Ministry	

B. Status of FCs obtained for Utkal D& E block

S. No	Obtained Vide Letter No	Area (ha)	Stage-1 /II	Validity
A. Utkal D (total area – 143.42 Ha)				
1.	8-99/2006/FC dated 20.10.2006	137.02	Stage-I clearance	Co-terminus with the Mining Lease period
2.	8-99/2006/FC dated 05.01.2017		Transfer of Stage-I clearance from M/s. Orissa Mining Corporation to M/s. National Aluminium Company Limited	
3.	8-99/2006/FC dated 02.09.2020		Stage II clearance	
4.	8-99/2006/FC dated 20.04.2020	6.5	Stage I clearance	
5.	8-99/2006/FC dated 06.01.2021		Stage II clearance	
B. Utkal E (total area – 169.1779 Ha)				
1.	8-07/2020-FC dated 12.03.2021	156.1779	Stage I clearance	Co-terminus with the Mining Lease period
2.	8-07/2020-FC dated 27.10.2022	169.1779	Stage II clearance	
3.	8-07/2020-FC dated 09.11.2022	156.1779	Corrigendum in Stage II Forest clearance	
4.	20.08.2024	13	Stage I clearance	

PP submitted that the total broken forest area is 312.6979 Ha and there is no violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

C. Production details of Utkal D block

Proponent submitted that Utkal D Block became operational from 2023 - 2024 onwards. Details of the same are as follows:

YEAR	EC sanctioned Capacity (MTPA)	Actual production (MTPA)	Excess production beyond the EC sanctioned capacity
2022-2023	2.0 MTPA	Nil	Nil
2023-2024	2.0MTPA	0.9 MTPA	Nil

D. Status of compliance to the existing EC conditions

The Status of compliance of earlier EC of Utkal D Coal Block was obtained from Regional Office, vide Letter No. 101-198/05/EPE dated 07.10.2024 in the name of M/s. National Aluminium Company Limited (NALCO). The Action taken

report regarding the partially/non-complied condition was submitted to Regional officer MoEF&CC by NALCO/Coal Mines Division / 487/2024 dated 08.10.2024.

Utkal D Coal Block – EC dated 29.01.2007			
S. No	Non-compliance/ Partially compliance details	Observation of RO	Action Taken Report on Partially complied/ Non – complied condition
1.	Specific condition no. vii: Top soil 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 greenbelt	One top soil dump has been observed. PP reported that "the top soil has been stacked with terracing method and proper slope and height is being maintained at earmarked site as per approved Mining Plan". PP submitted that grass seed has been sprayed on the top soil dump. Leguminous Grasses yet to be developed on the top soil dump.	The grass seeds have been sprayed on the top soil dump before monsoon season. Grasses are already started developing in patches at various locations of top soil dump.
2.	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 provide for adequate retention period to allow proper settling of silt material	During visit garland drain has been observed at the top soil dump. Garland drain has also been provided in part of the OB dump. The drain found to be full of silt in part which needs to be cleaned regularly. Garland drain along the coal dump not observed. PP reported garland drain width of 2.5 m with 60:1 gradient and 2.3 km length. Capacity of sump reportedly designed for 24500 KL. It was also informed that the collected water is being utilized for sprinkling on haul road and green belt development.	Garland drains are already constructed around top soil and OB dump area. Periodic cleaning of garland drain are carried out for free water flow. Last cleaning was done before monsoon season. PP will ensure periodic cleaning of garland drain. Undertaking for completion of ETP, garland drain and retention wall by 15 Nov 2024 has been submitted.
3.	Specific condition no. x: 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	During visit retaining wall at the toe of the OB dump has been observed. Retaining wall constructed in part of the dump not in all along.	Construction of retaining wall is currently under progress. Retaining wall of balance area will complete in another six months. Undertaking for completion of ETP, garland drain and retention wall by 15 Nov 2024 has been submitted.
4.	Specific condition no. xviii: ETP also be provided for workshop and CHP waste water	CHP has not been observed at the site. surface miner is being used. During visit an ETP has been observed. PP submitted that ETP is on trial run stage.	Construction of ETP is in final stage. Commissioning and trial run of ETP is currently under progress by the supplier. Undertaking for completion of ETP, garland drain and retention wall by 15 Nov 2024 has been submitted.
5.	General condition no. vii: Industrial waste water (workshop and waste water from mine) should be properly collected, treated so as to conform to the standard prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 as amended from time to time before	Runoff water from mine collected in mine sump. However, proper collection arrangement for vehicle washing water yet to be provided. Oil and grease trap yet to be installed. SMC-48 mine discharge water monitoring data furnished along with	Construction of ETP is in final stage. Commissioning and trial run of ETP is currently under progress by the supplier. Undertaking for completion of ETP, garland drain and

Utkal D Coal Block – EC dated 29.01.2007

S. No	Non-compliance/ Partially compliance details	Observation of RO	Action Taken Report on Partially complied/ Non – complied condition
	discharge of workshop effluents	the submitted six monthly compliances. Data reported was with the norms of consent order.	retention wall by 15 Nov 2024 has been submitted.

The Status of compliance of earlier EC of Utkal E Coal Block was obtained from Regional Office, vide Letter No. 101-373/08/EPE dated 07.10.2024 in the name of M/s. National Aluminium Company Limited (NALCO). The Action taken report regarding the partially/non-complied condition was submitted to Regional officer MoEF&CC by NALCO/Coal Mines Division / 488/2024 dated 08.10.2024.

Utkal E Coal Block – EC dated 10.12.2009

S. No	Non-compliance/ Partially compliance details	Observation of RO	Action Taken Report on Partially complied/ Non – complied condition
1.	Specific condition no. V: An integrated plan for Coal Transportation involving conveyor (for a total length of 5.8 km)-cum-rail thereafter to the main railway corridor shall be formulated in consultation with the neighbouring mines and the state Government keeping in mind the conservation of the local habitat and fauna such as Indian elephant using the habitat.	Mining activities have not yet started. Integrated Plan for Coal Transportation involving conveyor (for a total length of 5.8.km)-cum-rail thereafter to the main railway corridor has not been furnished.	Mining activities are yet to be started. The details of pre-mining survey on the Social-economic status of the local communities based on the UNHDR report will be submitted before commissioning of mines.
2.	Specific condition no. xxii: R&R for 417 PAF's from 2 villages Nandichhod (405) and Gopinathpur (12) and land outsees involving 311 PAFs from 2 villages Kosala (150) and Korada (161) shall be prepared and implemented within a specified time frame of Dec, 2020. R&R norms shall be not less than that of the National R&R Policy. R&R shall include annuities for the vulnerable population aged, homeless, differentially abled etc and also training programmes and skill development schemes for alternate livelihood for those not being given employment. A corpus fund shall be created for the general maintenance for the R&R policy. The status of R&R shall be regularly uploaded on the company's website.	PP submitted that the compensation package offered per family is Rs. 35 lakhs and total outlays reported to be Rs. 7.1452 crore. However, the rehabilitation of 400 no families yet to be completed.	Mining activities are yet to be started. Plan for coal transportation through railway siding will be implemented.
3.	Specific Condition No xiii: The project proponent shall undertake a pre-mining survey on the socio-economic status of the local communities based on the UNHDR and shall monitor the impact of CSR activities over the life of the project. Project specific CSR activities for the neighbouring villages being covered under CSR shall be provide for capital costs for CSR activities and a minimum Rs 1 crore annual revenue expenditure of Rs 5/tonne of coal whichever is	The details of pre-mining survey on the Socio-economic status of the local communities based on the UNHDR has not been furnished. Details of implementation of CSR activity has not been furnished. Details of improvement of road connectivity of the village	Mining is yet to be started. Out of 400 families, 229 are already being disbursed and remaining 171 PDF's R&R is under process at Kosala Village.

Utkal E Coal Block – EC dated 10.12.2009

S. No	Non-compliance/ Partially compliance details	Observation of RO	Action Taken Report on Partially complied/ Non – complied condition
	higher (after adjusting for depreciation in value of Ruppee) towards various CSR activities undertaken over the life of the project. In addition, an amount of Rs 225 Lakh shall be used for improvement of road connectivity to villages the project site. The status of each of the activities for each of the villages shall be regularly uploaded at least twice in a year) on the company's website.	near the project has not been furnished.	
4.	General condition no. xii: The project authorities should advertise at least in two local newspaper widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the 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 MoEFCC at http://envfor.nic.in	PP reported in the submitted monthly compliance as "complied". Details of advertisement regarding accord of Environmental Clearance has not been furnished	The EC letter was advertised in two local newspapers, i.e. The India Express and the Samaj on 21.06.2009. Copy of publication was sent to MoEF&CC vide NALCO letter dated 22.06.2009.

8. Reasons for amalgamation of Utkal D & E Block: It has been decided to combine Utkal – D and Utkal E Coal Mines for conserving of about 20 million tonnes of Coal getting locked up in the common barrier. Grant order for Mining Lease for Utkal D & E Combined has been issued by the State Govt vide letter dated 18.11.2023 over an area of 824.316 ha for the lease period up to 24.03.2051. Mining Plan and Mine Closure Plan for Combined Utkal D and Utkal E coal mines has been approved by Ministry of Coal on 15.05.2024.

9. Salient features of proposed amalgamation:

S. No	Description		Utkal- D	Utkal- E	D & E combined	Remarks
A.	Total Lease Area	Govt Land	27.48	130.4103	157.8903	
		Private	130.28	223.4475	353.7275	
		Forest	143.52	169.1779	312.6979	
		Total	301.28	523.036	824.316	No Change
B.	Production Capacity (MTPA)		2.0	2.0	4.0	No Change
C.	Details of Mining					
1.	Technology		Opencast Mining – Fully Mechanized	Opencast Mining – Fully Mechanized		No Change
2.	Reserves (Million Tonnes)		101.68	67.49	170.87	(+1.7)
3.	Life of Project (Yrs)		52	36	44	
4.	OB Generation (Mm3)		200.52	205.96	382.853	(-) 23.627
5.	Ultimate working depth		251 m bgl	227.5 m bgl	242 m bgl	-
6.	Means of Transportation		Road/Rail	Conveyor covering a distance of 5.8 km to nearest railway siding and then transported by rail to existing project.	Road/Conveyor covering a distance of 5.8 km to nearest railway siding and then transported by rail to existing project.	-

			MGR to the linked project.		
D.	Project requirements				
1.	Water Requirement (KLD)	GW: 770 KLD	GW: 10 KLD	1450	-
2.	Man Power requirement	Mine Pit: 760 KLD	Mine Pit: 690 KLD	878	(-237)
3.	Power requirement (MW)	540	575	7.0	(-0.4)
E.	Post mine land use				
1.	Total excavated Area	166.420	211.18	381.070	(+3.47)
2.	Area under Waste dump	106.570	252.84	305.990	(-53.42)
3.	Area under greenbelt and plantation	6.0	25.17	376.666	(+345.496)
F.	Cost				
1.	Project Cost (Rs. In Crore)	196.33	378.96	2478.82	(+1903.53)

Environmental Site Settings:

10. The project area is covered under Survey of India Toposheet No. 73D/13 and is bounded by the geographical coordinates ranging from Latitude: 20°53'00" N to 21°12'00" N and longitudes 84°20'00" E to 85°23'00" E. Project fall/does not fall in the Critically Polluted Area (CPA)/ Severely Polluted Area (SPA), as per CEPI Assessment 2018.

Forest Area: The project involves total 312.6979 Ha of forest land the details of the approval already obtained as given below:

S. No	Obtained Vide Letter No	Area (ha)	Stage-1 /II	Validity
A.	Utkal D (total area – 143.42 Ha)			
1.	8-99/2006/FC dated 20.10.2006	137.02	Stage-I clearance	Co-terminus with the Mining Lease period
2.	8-99/2006/FC dated 05.01.2017		Transfer of Stage-I clearance from M/s. Orissa Mining Corporation to M/s. National Aluminium Company Limited	
3.	8-99/2006/FC dated 02.09.2020		Stage II clearance	
4.	8-99/2006/FC dated 20.04.2020	6.5	Stage I clearance	
5.	8-99/2006/FC dated 06.01.2021		Stage II clearance	
B.	Utkal E (total area – 169.1779 Ha)			
1.	8-07/2020-FC dated 12.03.2021	156.1779	Stage I clearance	Co-terminus with the Mining Lease period
2.	8-07/2020-FC dated 27.10.2022	169.1779	Stage II clearance	
3.	8-07/2020-FC dated 09.11.2022	156.1779	Corrigendum in Stage II Forest clearance	
4.	20.08.2024	13	Stage I clearance	

Protected Area: The project is not located within 10 KM of any ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve/tiger corridor/elephant corridor etc. There is no violation of WLP, Act. Site-Specific Wildlife conservation plan has been prepared and approved for Utkal E mine with an amount of Rs. 543.92 Lakhs from Chief Wildlife Warden vide Memo No 10381 dated 26.10.2021 and for Utkal D mine with an amount of Rs 130 Lakhs from Chief Wildlife Warden for schedule I species [Sloth Bear (*Melurus Ursinus*), Barking Deer (*Muntiacus muntjak*), Mouse Deer (*Tragulus meminna*), Ratel (*Mellivora capensis*), Hare (*Lepus nigricollis*), Hyena (*Hyaena hyaena*), Jackal (*Canis aureus*), Langur (*Presbytis entellus*), Rhesus monkey (*Macaca radiata*), Mongoose (*Herpestes edwardi*), Common Myna (*Acridotheres tristis*), Black drongo (*Dicrurus adsimillus*), Wood pecker (*Picoides maharashtra*), Red-necked parakeet (*Dinopium benghaensis*), Dove (*Streptopelia Chinensis*), Koel (*Eudymyscolopacea*), Barn Owl (*Buba buba*), Partridge (*Francolinus pondicerianus*), Quail (*Perdica asiatica*), Yellow monitor lizard (*Varanus bengalensis*), Bino-cled cobra (*Naja naja naja*)].

11. **Mine Lease details:** PP submitted the following details of mine lease for both the blocks:

S. No.	Govt. Order/Notifications as the case maybe	Area (ha)
1	Nalco having two Coal Mines named Utkal D and E. It was earlier allotted to two different allottees. Central Government has decided to merge the Utkal D and E coal block and allot the mines together to M/s. National Aluminium Company Limited (NALCO) vide order no. F. No. 103/34/2015/NA dated 2 nd May 2016	824.316
2	Grant order for Mining Lease for Utkal D & E Combined has been issued from State Govt vide Letter No. 11615/SM/Bhubaneswar dated 18.11.2023 over an area of 824.316 ha for the lease period up to 24.03.2051	824.316

12. Method of Mining and Mine Plan:

- Mining Plan and Mine Closure Plan (Second Modification) for Utkal D and Utkal E coal mines with 4.5 million TPA targeted capacity of coal Production has been approved by Ministry of Coal vide letter No. ORAN/APP00291/2021 dated 15.05.2024. In this regard, PP informed that targeted capacity of coal production will be maintained at 4 MTPA.
- The total geographical reserves reported in the mine lease area of 824.316 Ha is 303.71 MTPA, out of which mineable reserves are 174.785 MTPA and extractable reserves are 170.876 MTPA. Percentage of extraction is 57.42%.
- There are total 20 seams, out of which working seams are 17.

iv. The method of mining to be adopted will be Fully Mechanized Opencast Mining Method. No underground mining is envisaged as submitted by the proponent.

v. Stripping ratio is 1: 3.4.

vi. Life of mine is 44 years.

vii. Land use details:

A. Pre-Mining

S. No.	Land Type	Particular	Area (Ha)
1.	Tenancy (Private)	Agricultural	351.819
		Township	11.998
		Barren	10.461
		Community /Other use	9.400
2.	Govt non-Forest	Agricultural	22.002
		Township	1.798
		Grazing	2.405
		Water Bodies	18.268
		Barren/Other use	83.468
3.	Forest	Reserve	312.698
Total			824.316

B. Post Mining

S. No.	Particular	Total area (Ha)	Reclaimed Area (Ha)	Un-reclaimed area (Ha)
1.	Excavation /Quarry Area	381.070	381.070	-
a)	Backfilled Area	118.70	118.70	-
b)	Excavated Void	262.370	262.370	-
2.	External Dump	305.990	305.990	-
3.	Safety Zone	48.670	48.670	-
4.	Diversion/ below river/ nala/ Canal	27.390	-	27.390
5.	Settling Pond	1.0	1.0	-
6.	Road & Infrastructure Area	26.900	12.370	14.530
7.	Rationalization Area	11.656	11.656	-
8.	Garland Drains	0.680	0.680	-

9.	Embankment	12.290	-	12.290
10.	Greenbelt	8.670	8.670	-
	Total	824.316	770.106	54.21 Ha

viii. **Details of transportation:** The coal produced from the Utkal D & E block will be transported as given below:

- Coal is primarily planned to be evacuated from the south-eastern boundary of the block through conveyors from the Coal Stockyard through Coal Handling Plant and Rapid Loading Silo (of 4000 t capacity) through a series of conveyors of 2000 tonnes per hour rated capacity for loading of Coal into wagons at proposed Railway Siding platforms planned for Utkal group of blocks. Distance from block boundary to rail line is about 1.4 km. From there onwards through Coal Wagons through the Inner Rail corridor being developed by East Coast Rly. After development of rail corridor, coal from Mine site (Utkal D&E Coal block) will be transported to Utkal loading yard by Conveyor belt, thereafter it will be transported to NALCO CPP by railway only.

- As a Stopgap arrangement and till the commissioning of the Inner Rail Corridor, the Coal produced from the Mine shall be transported to Kerjanga Railway Siding by road over a distance of 19 km. Thereafter, the coal will be transported to the NALCO CPP by railway only. All the clearances / permissions has been obtained and work is going on in full swing. Work is being executed by M/s RITES. It is expected that the Kerejanga Rly siding will be commissioned by July 2025. – After the commissioning of the Rly siding, 50% load on Road Transport will be decreased.

- Alternatively, Permission has been obtained by Collector Angul to transport the Coal through Road mode till the above two modes are operational. Distance of Mines pit head to CPP is 40 Kms.

- Transportation time : Night 10:00 PM to Morning 6 AM

ix. Coal produced from Utkal D & E will be used as raw material for Captive Power Plant of NALCO. The distance of the power plant from Utkal D & E Coal block is 40 Kms.

x. **Reclamation:** Afforestation shall be done covering an area of 376.666 ha at the end of mining. This will include 305.990 Ha of reclaimed external OB dump and 48.670 ha of greenbelt. Density of plantation is proposed to be 2000 trees per Ha. At Conceptual Stage, Greenbelt/Plantation will be covered over an area of 63.968 ha (Greenbelt: 8.670 ha, Safety Zone: 41.962 ha, Settling Pond 1.00 ha, Rationalization Area: 11.656 ha, Garland Drains: 0.680 ha).

13. **Details of ToR accorded and EIA/EMP report:** ToR has not been accorded for the instant proposal under consideration since it is an amalgamation proposal for existing EC's. However, PP has submitted the EIA/EMP report for the amalgamated D&E block as per the standard ToR available on Parivesh portal.

14. **Baseline Data:** The baseline data has been collected in the summer season from March 2024 to May 2024. Details of the same are as mentioned below:

S. No.	Parameter	Description
1	Period	Summer Season (March to May, 2024)
2.	AAQ parameters at 10 Locations (min and max)	PM10: 39.1 to 86.8 mg/m3 PM2.5: 20.5 to 51.5 mg/m3 SO2: 4.6 to 19.4 mg/m3 NO2: 10.6 to 31.2 mg/m3 CO: 0.54 to 0.98 mg/m3
3.	Incremental GLC Level	PM10 = 3.17 µg/m3 SO2 = 1.38 µg/m3 Nox = 1.18 µg/m3
4.	Ground water quality at 9 Locations	pH: 6.12 to 8.41, Total Hardness: 103.9 to 178.2 mg/l, Chlorides: 49.1 to 419.7 mg/l, Fluoride: 0.48 to 0.85 mg/l. Heavy metals were analysed and not detected.
5.	Surface water quality at 8 Locations	pH: 7.5 to 7.54; DO: 6.6 to 7.1 mg/l and BOD: 3.8 to 15.6 mg/l. COD from 12 to 49 mg/l
6.	Noise levels Leq (Day and	49.2 to 59.8 dBA for the day time and 38.5 to 50.2 dBA for the Night time

S. No.	Parameter	Description
	Night)	
7.	Soil quality at 9 locations	pH: 5.62 to 6.84 Organic Matter: 0.52% to 0.91% Nitrogen: 86.80 to 212.60 kg/ha Potassium: 239.40 kg/ha to 592.40 kg/ha Texture: Sandy loam
8.	Flora and Fauna	Site-Specific Wildlife conservation plan has been prepared and approved for Utkal E mine with an amount of Rs. 543.92 Lakhs for schedule I Species from Chief Wildlife Warden vide Memo No 10381 dated 26.10.2021. Site specific wildlife conservation plan has been prepared and approved for Utkal D mine with an amount of Rs 130 Lakhs for schedule I species from Chief Wildlife Warden.

15. Details of water requirement: Total water requirement is estimated as 1450 KLD, same will be sourced from Ground water as well as Mine Sump water. NOC for 1922 KLD dewatering and 10 KLD fresh water from CGWA for Utkal E vide NOC dated 14.06.2023 which will be Valid up to 13.06.2025. NOC for 3682 KLD dewatering and 770 KLD fresh water for Utkal D Coal block has been obtained from CGWA vide Noc No. CGWA/NOC/MIN/ORIG/2021/13398 dated 20.10.2021 which was valid till 19.10.2023. Application for renewal of ground water NOC for 3015.8 KLD (Domestic use 770 KLD + Dewatering /Mine Seepage 2245.8 KLD) has been submitted on 11.10.2024. Payment of water abstraction charges of Rs. 68, 13, 657/- has been submitted and also informed to CGWA vide letter dated 26.09.2024. The renewal of the NOC from the Central Ground Water Authority (CGWA) for the Utkal-D block is in its final stages.

Three seasonal streams are traversing the area proposed to be diverted are as follows:

a) **Bedasara Nallah (Length 1600 m & Width 15 m)** - This nallah flows from SW to NE direction and passes through the North Western Portion of the Project Area. It is proposed to be diverted along the western boundary towards north side till it merges with the Singhada Jhor. This nala also shares the Gundeijeri diverted nala.

b) **Gundeijeri Nallah (Length 4000 m & Width 15 m)** - This nallah flows from SW to NE and passes through the central portion of the Project Area. It is proposed to be diverted along northern boundary of the Durgapur Reserve Forest towards west direction till it meets the western boundary of Project Area after which it will be aligned along the western boundary towards north side till it merges with the Singhada Jhor.

c) **Kathuamod Nallah (Length 4120 m & Width 20 m)** - This nallah flows roughly from SW to NE and passes through the South Eastern portion of the project area. This nala is under diversion first toward east along the southern boundary of the mine (along the northern boundary of Durgapur Reserve Forest) and then, after SE corner of mine, towards north along the eastern boundary upto the Singhada Jhor.

d) NOC for diversion of above three nallahs has been obtained by the PP from Department of Water Resources, Government of Odisha, vide letter no. 26553/WR, dated 12.10.2022. Provisional permission for the diversion of the same has also been obtained vide letter dated 03.03.2023. Nallah diversion study has been carried out by Water Power Consultant, BBSR in April, 2023.

16. Details of power requirement and diversion of Hi-tension Line: Total 7.0 MW power requirement is there which is being/will be sourced from state grid.

17. Public Hearing: Public hearing for the Utkal D and Utkal E block was held on 24/1/2006 and 30/05/2008 respectively. Major issues raised during public hearing were about forest and details about fauna, clarification with regard to the presence of animals like elephant in the project site, employment details, Impact of the project in the forest area (Durgapur R.F), compensatory afforestation, Drinking water facility/water scarcity, Compensatory procedure and facilities in the rehabilitation colony, proper assessment of land, peripheral development, Environment Management. Public hearing action plan not implemented as only Utkal D mine is in operation since year 2023. However, Company has proposed an amount of Rs. 27.45 Crore to implement the issues raised during public hearing. The action plan for the same is as below:

S. No	Activities	Budget (Rs. In lakh)	Year wise budget (Rs. In lakh)		
			Year -1	Year -2	Year -3
A.	Skill Development Center				

S. No	Activities	Budget (Rs. In lakh)	Year wise budget (Rs. In lakh)		
			Year -1	Year -2	Year -3
1.	Skill Development Centre and Employment based training like Electrician, AC Mechanic, Plumber, tailoring, Driving training, Electric Motor Binding, motor welding in Village Nandichhod (Gopiballavpur), etc.	150	100	50	-
2.	Women empowerment programme for making them self-sustainable in field of dairy development, nurseries, Achar & Papad Making, vegetable farming, stitching, tailoring, grocery shops and others and marketing programme for their products	100	50	25	25
3.	Support groups for craft/ traditional development in villages of Dhobamalia, Kosala, Gopinathpur	20	-	10	10
	Sub total	270	150	85	35
A. Infrastructure Development					
1.	Kalyan Mandap at Village Nandichhod, Dhobamalia, Kosala, Gopinathpur, Korada	75	25	25	25
2.	Construction of concrete road at village Nandichhod and Kosala	80	40	20	20
4.	Construction of community hall at Dhobamalia, Korada, Gopinathpur and Korada	80	35	30	15
5.	5 nos Cold Drinking water facility project at village Nandichhod, Dhobamalia, Kosala, Gopinathpur, Korada	50	25	15	10
6.	Development of a new playground in Gopinathpur with facilities	120	60	30	30
7.	Construction of funeral pyre building and boundary wall of village Gopinathpur	30	10	10	10
8.	Construction of drain at Dhobamalia, Kosala, Gopinathpur	80	20	20	40
9.	Development of GOSALA in village Kosala and Gopinathpur	40	10	10	20
10.	Construction and renovation of cremation ground	40	20	20	-
11.	Construction of bathing ghat in ponds, beautification of pond, crematorium, sitting place, village entrance gate, etc.	95	40	40	15
12.	Installation of solar lights (street) in villages of Nandichhod, Dhobamalia, Kosala, Gopinathpur and Korada	100	30	30	40
	Sub total	790	315	250	225
B. Education facility					
1.	Construction of new rooms, Smart Classes with internet and Wi-fi facility and computer labs, separate modern toilet for girls, library with modern facilities and Arrangements of different sports facilities for children in Govt Upper Primary school of Villages Nandichhod, Dhobamalia, Kosala, Gopinathpur, Korada	300	100	100	100
2.	Arrangements of school bus for children in Villages of Nandichhod, Dhobamalia, Kosala, Gopinathpur, Korada	125	50	50	25
3.	Library set up with wi-fi facility in Villages Nandichhod and Kosala	100	30	40	30
	Sub total	525	180	190	155
C. Animal Husbandry and Agriculture development					
1.	Formation of Farmers Producer Organization & initiation of Farm Based enterprises on Dairy and other related business	200	100	50	50
2.	Distribution of good quality seeds to farmers, encouragement for organic farming, linkage of farmers to the source to get Organic materials and fertilizers	30	10	10	10
3.	Training for new modern technology of agriculture practices to villagers	30	10	10	10
4.	Vaccination to cattle Including De-worming	20	10	5	5
5.	5 no of Mobile Van for cattle in 5 no of villages of Nandichhod,	75	25	25	25

S. No	Activities	Budget (Rs. In lakh)	Year wise budget (Rs. In lakh)		
			Year -1	Year -2	Year -3
	Dhobamalia, Kosala, Gopinathpur, Korada				
	Sub total	355	155	100	100
D.	Health facility				
1.	Health infrastructure development in Villages Nandichhod, Dhobamalia, Kosala, Gopinathpur, Korada	100	50	25	25
2.	Health camps in Village Villages Nandichhod, Dhobamalia, Kosala, Gopinathpur, Korada	50	20	20	10
3.	Operation of Medical Health Units (MHUs) at periphery villages of Nandichhod, Dhobamalia, Kosala, Gopinathpur, Korada	80	40	20	20
4.	Distribution of sanitary napkin vending machine in peripheral villages	100	25	25	50
	Sub total	330	135	90	105
D.	Water resource management and Sanitation				
1.	Pond and Naadi deepening and conservation (Pond in peripheral villages)	80	40	20	20
2.	Roof top RWH structures in Govt schools and Anganwadi center in peripheral Villages	30	10	10	10
3.	Village Sanitation work	50	20	15	15
4.	Household water supply to peripheral villages	50	20	20	10
5.	Bio Toilet (Community) in peripheral Villages	50	15	15	20
	Sub total	260	105	80	75
F.	Environment/Plantation in study area				
1.	plantation development in Nearby school, Govt building, along both side of the village road in peripheral Villages	150	50	50	50
2.	Waste management (Processing unit) in peripheral Villages	65	25	25	15
	Sub total	215	75	75	65
	Total	2745	1115	870	760

18. Details of Solid and Hazardous Waste: The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

S. No	Type of Waste	Source	Quantity (TPA)	Mode of Treatment	Disposal
1.	Solid Waste (Domestic waste)	Residential	10		Garbage Composting
2.	Plastic Waste (Packing material)	Equipment/components/spare parts packing	0.5	-	Through registered agencies - By Road
4.	E-waste IT equipment, electronic parts, cartridges of printer)	Office & Residential Quarters.	0.5	-	Through registered vendors -By Road
5.	Batteries Waste	From LMV and HEMV	5	-	Hand over to battery supplier or authorized recycling agency.
6.	Hazardous Waste (Sludge and filter contaminated with oil, Used or Spent Oil, Empty Barrels/container, Waste / Residue containing oil)	Workshop	248	-	By Registered Vehicle as OSPCB Guidelines
7.	C & D Waste (Houses, Shelter of Village Habitants)	Mine Site	10	-	Will be utilized in road levelling and construction work

19. Plantation: At Conceptual Stage, Greenbelt/Plantation will be covered over an area of 63.968 ha (Greenbelt: 8.670 ha,

Safety Zone: 41.962 ha, Settling Pond 1.00 ha, Rationalization Area: 11.656 ha, Garland Drains: 0.680 ha). Local and fruit bearing species are being/ will be planted in consultation with local forest officer and density of 2500 tress per Ha is proposed.

20. **R&R Issues:** R&R for 417 PAF's from 2 villages Nandichhod (405) and Gopinathpur (12) and land outsees involving 311 PAFs from 2 villages Kosala (150) and Korada (161) is proposed. Compensation package offered per family is Rs. 35 lakhs and total outlay reported to be Rs. 7.1452 crore. However, the rehabilitation of 400 no families yet to be completed.

21. **Project Cost:** Total capital cost of the project is 2478.82 Crores and the capital cost for EMP is Rs. 231.16 crores. Recurring cost for EMP is Rs. 102.22 crores.

22. Environment Management plan

- Wet drilling with sharp drill bits will be carried out along with dust collection system.
- Drilling & blasting is limited to overburden only.
- Coal excavation are/will be carried out by Surface Miner process including water sprinkling arrangements at cutting & over discharge belt.
- Controlled blasting is being/will be carried out by use of NONEL so the impacts of noise generated due to blasting is momentary only.
- Explosives charge per hole and per delay will be maintained as per DGMS guidelines.
- Blast study has been done by National Institute of Rock Mechanics (Under the Ministry of Mines, Govt of India) in May, 2024 to find the impact of blasting, noise and vibration:
- After amalgamation of EC for Utkal D & E coal block, domestic wastewater generation will be 240 KLD which will be treated in STP of 250 KLD.
- After amalgamation of EC for Utkal D & E coal block, wastewater from the HEMM washing/ workshop will be treated in ETP of 10 KLD.
- Permanent water sprinklers have been installed along main haul roads.
- Use of wetting agents will be used to reduce water consumption

23. EMP cost:

S. No	Particular	Capital cost(Rs. Crores)	Recurring Cost(Rs.Crores)
A. Mitigative Measures			
1.	Water Tanker (28 KL) & Permanent water sprinkling arrangements for main haulage road	90.5	61.87
2.	Greenbelt Development , Maintenance and Plantation , Manpower, Supervision	12.00	1.0
3.	Nala Diversion etc	17.71	1.0
4.	Maintenance and Watering of Plantation	0	5.0
5.	Check Dam, Garland Drain, Retaining Wall , Barbed wire fencing ,etc.	3.0	1.0
6.	Env. Lab Construction, Establishment , Equipment , Manpower cost	10.23	0
7.	Wind Barriers etc	5.0	1.00
8.	Water Mist arrangement fog Cannon , Sprinkler	5.0	0.25
9.	Statutory Fee (Air ,Water Consent Forest Clearance etc)	35.0	20.0
10.	Installation of belt curtains	4.20	0.5
11.	Stone Pitching of Garland Drain, Road Construction, Road Sweepers, Manpower etc	12.62	0.5
12.	Construction of Retaining Wall at dump (2.5m (H) x 1.5m (W))	1.50	0.5
13.	Bio Digester Installation at Mine Office	2.4	0.3
14.	STP. ETP Equipment, Installation , Manpower cost	4.5	

B. Monitoring			
1.	AAQ Station ,Equipment's & Installation , Spares , Maintenance	12.25	5.0
2.	Drilling of Piezometer in & around ML area & Monitoring	4.0	1.5
3.	Ground Water Quality, Level , Digital Study report,	1.0	0.20
4.	Workshop Waste Water Quality Analysis (monthly) as well as maintenance of oil-water separators	2.0	0.30
5.	Blast Vibration Monitoring Equipment- Micromate,EIA study	3.75	1.5
6.	Work Place Noise Monitoring	2.0	0.50
7.	Providing Safety kits (Soes, Ear muffs/plus etc)	2.5	0.30
	Grand Total	231.16	102.22

24. Justification for considering the proposal under para 7(ii) of EIA, 2006

- No change in Mining lease area ($301.28 + 523.036 = 824.316$) after amalgamation of Mining lease.
- No increase in production capacity (4.0 MTPA) after amalgamation of Mining Lease.
- No change in the mining technology after amalgamation of Mining Lease.
- No increase in waste generation after amalgamation of Mining Lease.
- Grant order for the amalgamation of the Mining Lease have been obtained from State Government, Odisha on 18.11.2023
- Mining Plan and Mine Closure Plan for combined Utkal D and Utkal E coal mines has been approved by MoC 15.05.2024.

25. Undertaking/ Affidavit: PP has submitted an undertaking that the information provided in Form 1 in PARIVESH, to Ministry/ EAC members and PPT presentation during the EAC meeting have no deviation in respect of proposal for EC for modification in existing ECs of Utkal D Coal Block and Utkal E Coal Block by amalgamating the Utkal E & D blocks. There are no data entry errors in the information uploaded in PARIVESH system and supporting documents uploaded on PARIVESH portal are correct and duly authenticated by the Authorized Signatory. In case any deviation is found in any of the documents, the authorized shall be held responsible and furthermore, the above said project shall be rejected.

26. Legal Issues/ Violation: PP reported that there is no legal issue/violation wr.t i) Environment (Protection) Act, ii) Air(P&CP) Act, Water (P&CP), Act, Van (Sanrakshan Evam Samvardhan) Adhiniyam 1980, Wildlife Protection Act 1972, MMDR Act, Factories Act. Further, there is no court case on the project.

27. Written Submissions: Written submission made by PP are summarized as below:

S. No.	Points	Written submissions made
1.	Geo-tagged photographs of greenbelt and plantation	PP submitted the geo-tagged photographs of greenbelt and plantation.
2.	Plan for utilization of water post mining	PP submitted the following: <ul style="list-style-type: none"> • At conceptual stage; out of total excavated area, 172.630 ha area will be converted into water reservoir. • In Utkal E, Seepage water will be 2246 KLD and in Utkal D, it will be 1932 KLD. • Total requirement for the mining project is 1450 KLD which will be fulfilled from Mine seepage. • Excess water available in mine pit will be given to nearby villagers, if required. • Post mine, water reservoir will also be used as water pond and for pisciculture purpose.
3.	Con-current plantation plan	PP submitted the following:

S. No.	Points	Written submissions made				
		· At Conceptual Stage, Greenbelt/Plantation will be covered over an area of 63.968 ha (Greenbelt: 8.670 ha, Safety Zone: 41.962 ha, Settling Pond 1.00 ha, Rationalization Area: 11.656 ha, Garland Drains: 0.680 ha).				
		· In addition to this, an area of 305.990 ha of waste dump and 6.708 ha safety zone to be covered with plantation which will be developed as forest land.				
		Year	Area			No. of Plants
			Waste Dump	Safety Zone	Others (rationalization area, garland drains, settling ponds etc)	
		1 st Year	-	20	-	50,000
		2 nd Year	-	20	-	50,000
		3 rd Year	-	17.34	-	43,350
		4 th Year onwards	305.990		13.336	7,98,315
		Total	305.990	57.34	13.336	9,41,665
		Species proposed to be planted are Neem, Shisham, Arjun, Karanja, Sisso, Mango, Jamun, Jack Fruit, Ghambhari etc.				
Budget: Rs 14.29 crore has been earmarked for greenbelt and plantation (Rs 12 Crore under EMP and Rs. 2.29 crore under Mine Closure Plan) Plant Species: Local species like Neem, Shisham, Arjun, Karanja, Sisso, Mango, Jamun, Jack fruit (Panasha), Ghambhari etc.						
4.	Undertaking for not doing mining without Nala diversion study in Utkal E Coal Block	Mining in Utkal Coal E block will be started after completion of Nala diversion study covering the impact on biodiversity within 6 months and submission of same to RO, Bhubaneswar, MoEFCC and MoEFCC, New Delhi. Undertaking for the same is submitted.				
5.	Air Control Measures to be submitted	<ul style="list-style-type: none">· Wet drilling with sharp drill bits is being carried out along with dust collection system.· Regular Water Sprinkling will be done by 8 nos of 28 KL Capacity Water Spray Tanker in round the clock· Use of permanent water sprinkler in Mine approach road to control fugitive emission.· Use of fixed water sprinkler (Rain gun) beside coal stock yards to control airborne fugitive dust· Plantation will be done on both sides of coal transportation roads· Coal will be transported with tarpaulin covered vehicles.· Coal transportation roads will be asphalted/concreated.· If feasible, Pollution Control Equipment's such as Bag Filters/Fabric filters will be installed in Coal Conveying Belts.· Drilling & blasting is limited to overburden only.· Coal excavation are/will be carried out by Surface Miner fitted with water sprinkling arrangements.· Controlled Blasting is being/will be carried out with optimal quantity of explosives and with technically established blast design.· All loading and transfer points are being provided with water sprinklers & dust suppression system.· Regular maintenance of HEMMs & transportation vehicles are being/will be carried out.· Truck mounted water sprinklers for road dust suppression.· Use of truck mounted Mist Cannon for fugitive dust control.· Installation of 10 m height wind barrier along coal stock yard for fugitive				

S. No.	Points	Written submissions made			
		dust control. · Development of green belt/plantation is being/will be carried out. · Ambient Air Quality is being/will be monitored regularly and maintained in prescribed norms. Proposed water spraying at Coal Stock Yard			
		S. No.	Particulars	Existing	Proposed
		Coal Stock Yard			
		1	Length of Yard	250 Mtrs	250 Mtrs
		2	Breadth of Yard	90 Mtrs	90 Mtrs
		3	Proposed No. of Nozzles	20 Nos	20 Nos
		Details of Nozzle			
		1	Working Pressure	20-50 kgf/ cm ³	20-50 kgf/ cm ³
		2	Coverage Radius	20-40 Mtr	20-40 Mtr
		3	Water consumption per minute for full circle	324 LPM	324 LPM
		4	Trajectory Angle	24 deg	24 deg
		5	Inlet	6.0 Inch	6.0 Inch
		6	Water consumption from 20 nos nozzles and operational time 2.0 hr/ day	324 Ltrs 778 m ³	324 Ltrs 778 m ³
		Proposed water spraying at Haul Road			
		S. No.	Particulars	Existing	Proposed
		Details of Haul Road			
		1	Length of Road	5000 Mtr	10000 Mtr
		2	Width of Road	30 Mtr	30 Mtr
		3	Proposed no. of Nozzles	-	100 Nos
		Details of Nozzle			
		1	Working Pressure	-	5.0 kgf/ C2
		2	Coverage Radius	-	10.20 sq mtr
		3	Water consumption per minute for full circle	-	76.50 LPM
		4	Trajectory Angle	-	12 degree
		5	Inlet	-	1.5 Inch
		6	Part Circle Mechanism	-	918000 Ltr.
		7	Total Water consumption for 20 nozzles and operational time 3 hr/ day (by 28 KL, 09 nos tanker)	760 m ³	918 m ³
6.	Surrender letter of 2.33 Ha of Durgapur Reserved Forest	PP submitted that, since with the amalgamation of both Utkal-D & Utkal-E Coal Blocks, separate Coal Evacuation Route for Utkal-E Coal mine which were earlier envisaged in the Mining Plan of Utkal-E Coal Mine was no more required. Hence after reassessment, NALCO has decided to exclude the 2.33 hectares of Durgapur Reserve Forest land from the forest diversion proposal. Chronology with supporting for surrender of 2.33 ha of Durgapur Reserved Forest is given below: · Letter was submitted to APPCF on 28.07.2014 for excluding this 2.33 ha of forest land. Copy of same is submitted.			

S. No.	Points	Written submissions made
		<ul style="list-style-type: none"> · Accordingly the matter was referred by State Govt to MoI, GoI vide letter dated 03.10.2019. the letter is submitted. · MoC, GoI vide letter no. 103/34/2015/NA dated 15.01.2021 have conveyed the previous approval for the grant of ML U/S S(1) the MMDI Act 1957 over the reduced area of 523.73. Letter is submitted. · Confirmation for the reduction for the ML area from 526.06 ha to 523.136 ha after reduction of 2.33 ha of Durgapor Reserved Forest was received in form of Lease deed agreement between GoO and NALCO vide dated 20.01.2023. Copy of same is submitted. Undertaking for no use of 2.33 Ha of forest land has been submitted.
7.	Transportation details w.r.t timeline for railway siding	<p>PP submitted the following:</p> <ul style="list-style-type: none"> · Coal is primarily planned to be evacuated from the south-eastern boundary of the block through conveyors from the Coal Stockyard through Coal Handling Plant and Rapid Loading Silo (of 4000 t capacity) through a series of conveyors of 2000 tonnes per hour rated capacity for loading of Coal into wagons at proposed Railway Siding platforms planned for Utkal group of blocks. · Distance from block boundary to rail line is about 1.4 km. From there onwards, coal will be transported via coal wagons through the Inner Rail corridor (MCRL) being developed by East Coast Rly. · As a stopgap arrangement and till the commissioning of the Inner Rail Corridor (MCRL), the Coal produced from the Mine shall be transported through San-Kerejanga Railway Siding, being developed by NALCO. · Land development work is under progress at San-Kerejanga Railway Siding. · Work is being executed by M/s RITES. · It is expected that the Kerejanga Rly siding will be commissioned by July 2025. After the commissioning of the Rly siding, 50% load on Road Transport will be decreased. · Alternatively, permission has been obtained from Collector Angul to transport the Coal through Road mode till the above two modes are operational. Distance of Mines pit head to CPP is 40 Kms. · Transportation time: Night 10:00 PM to Morning 6:00 AM · NALCO has also paid Rs 18 Crores for strengthening of SH-63 which is used for coal transportation. · Transportation route map is submitted.
8.	Undertaking for completion of partially complied condition (retaining wall and garland drain) till 15 th November.	Undertaking for completion of work as per partially complied condition is submitted.
9.	Details of sustainable development w.r.t linking with skill development programmes	<p>PP submitted the following:</p> <p>Skill Development Training Courses such as Tailoring, Weaving, ITI training, Maintenance Kit will be given to selected Persons/Students of nearby villagers as per their qualification. We will tie-up with Govt. approved training Institution and its expenses funding will be done by proponent under CSR guidelines.</p> <p>NALCO in collaboration with IIS SSC would facilitate the enhancing of the competency level of its workforce against the set industry standards. Memorandum of Understanding (MoU) has been signed on 26th Aug 2024 between IIS SSC and NALCO to enable both entities to contribute towards the Skill India mission as well as sustain growth in their areas.</p> <p>Indian Iron and Steel Sector Skill Council (IIS SSC) was constituted as mandated by GOI in the National Skill Development Policy 2009 in order to</p>

S. No.	Points	Written submissions made
		bridge the skill gap by complementing the vocational educational system through conducting research, improving the delivery mechanism, assuring quality etc. to identify skill development needs, maintain skill inventory, planning and execution of training of trainers through development of IT enabled Labour Management Information System (LMIS). The job for undertaking these skill certification programmes will be done by Biju Pattnaik National Skill institute.
10.	As per the plan, OB dumping is shown on the forestland. Alternate plan for handling of waste to avoid dumping in forest land need to be submitted.	Requirement of the forest land for the External OB Dump has been re-examined & PP submitted the following:
11.	Details and documents of PH already conducted for both the blocks earlier along with the action plan for issues raised	Details have been submitted and the same is furnished at point no D of para 17.4.4.
12	Safety precautions proposed for merging the safety zone of the mines.	

Observations and deliberations of the EAC:

28. The Committee noted the following:

i. The instant proposal is for modification of existing Environment Clearances (ECs) of Utkal D Coal Block (Area 301.28 ha with Granted production capacity 2.0 MTPA) and Utkal E Coal Block (ML Area 523.036 ha with Granted production capacity 2.0 MTPA) by amalgamating the D & E block with total coal production capacity of 4 MTPA and total lease area of 824.316 ha by M/s. National Aluminium Company Limited (NALCO) located at Village: Nandichhod (Gopiballavpur), Gopinathpur Jungle, Kosala, Kundajhari Jungle, Korada, Raijharan, Similisahi, Tehsil: Chhendipada District: Angul, Odisha.

ii. Terms of Reference for the instant proposal was not granted, as it is being applied under Para 7 (ii) of EIA Notification, 2006. EAC noted that as per EIA 2006, proposal under para 7(ii) shall be considered by the concerned EAC who will decide on the due diligence necessary including preparation of Environment Impact Assessment and public consultations and the application shall be appraised accordingly for grant of environmental clearance. In the instant proposal under consideration, PP is amalgamating the existing two ECs with no increase in lease area and targeted production capacity. EIA/EMP report based on the standard ToR along with the certified compliance report has been submitted by the proponent. Public hearing for the Utkal D and Utkal E block was held on 24/1/2006 and 30/05/2008 respectively.

iii. The project area is covered under Survey of India Topo Sheet No 73D/13 and is bounded by the geographical coordinates ranging from 20o53'00" N to 21o12'00" N and longitudes 84o20'00" E to 85o23'00" E. Project fall/does not fall in the Critically Polluted Area (CPA)/ Severely Polluted Area (SPA), as per CEPI Assessment 2018.

iv. The project involves 312.6979 Ha (Utkal – D: 143.42 Ha & Utkal – E: 169.1779 Ha) of forestland. For which PP has accorded stage – II forest clearance on 299.6979 Ha (Utkal – D: 143.42 Ha & Utkal – E: 156.1779 Ha) of forestland and stage – I forest clearance on 13 Ha of forestland. 13 Ha of forestland forms part of Utkal – E coal block and is not broken up. It is to be noted that, as per the EC dated 10.12.2009, Utkal – E involved 171.51 Ha of forestland, out of which 2.33 Ha or land was part of Durgapur Reserved Forest. NALCO applied to State Govt regarding deletion of 2.33 ha Durgapur Reserved Forest land. The same was approved by MoC, GOI. In view of this, the forest land was revised to 169.18 Ha. Further, PP submitted that 2.33 Ha of forestland will not be used for any purpose neither by Utkal D coal block nor by Utkal E coal block and submitted an undertaking in this behalf to the EAC.

v. The project is not located within 10 KM of any ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve/tiger corridor/elephant corridor etc. There is no violation of WLP, Act. Site-Specific Wildlife Conservation Plan has been prepared and approved for Utkal E mine with an amount of Rs. 543.92 Lakhs and for Utkal D

mine with an amount of Rs 130 Lakhs from Chief Wildlife Warden for schedule I species.

vi. MoEF&CC accorded Environment Clearance to M/s. National Aluminium Company Limited (NALCO) under the provisions of EIA Notification, 2006 for their Utkal-E Coal Block (2 Million TPA over 729.48 Ha) vide letter no. IA-J-11015/31/2007-IA-II-(M) dated 10.12.2007. Subsequently, MoEF&CC issued corrigendum to M/s. NALCO on 26.12.2013 stating that date of grant of EC shall be read as 10.12.2009 instead of 10.12.2007. The Hon'ble Supreme Court vide its judgement dated 25.08.2014 read with the order dated 24.09.2014 in P (CRL) No 120/2012 has cancelled the allocation of 204 coal blocks and issued directions with regard to allocation of such coal blocks. Further, as per Ministry of Coal notification – The Coal Mines (Special Provisions) Ordinance 2014, the above coal block got cancelled. Thereafter, Ministry of Coal vide allotment order dated 02.05.2016 allotted the Utkal-E Coal Block to NALCO under Coal Mines (Special Provisions) Act, 2015. Mine lease deed was signed between NALCO and Government of Odisha on 20.01.2023. As per the said mine lease deed, the lease area was reduced to 523.036 Ha from 729.48 Ha. Further, the area of 203.42 Ha outside ML area for infrastructure was not re-allocated to NALCO by the State Government.

vii. Proposal for transfer of Utkal-E was placed as an additional agenda in 15th EAC Meeting held on 18th – 19th September 2024, as the proposal involved change in area. The Committee after due consideration recommended the proposal for transfer of EC with reduced area of 523.036 Ha.

viii. Earlier EC for Utkal-D was granted for the 2.0 MTPA production in favour of M/s. Orissa Mining Corporation Ltd. Utkal-D Coal block was allocated to NALCO on 02.05.2016 by the Ministry of Coal (MoC), GOI as per Coal Mines (Special Provision) Act, 2015. After grant of lease in favor of M/s. NALCO, EC was also transferred from M/s. Odisha Mining Corporation Ltd to M/s. NALCO.

ix. It has been decided to combine Utkal D and Utkal E Coal Mines for conserving of about 20 million tonnes of Coal getting locked up in the common barrier. Grant order for Mining Lease for Utkal D & E Combined has been issued by the State Govt vide letter dated 18.11.2023 over an area of 824.316 Ha for the lease period up to 24.03.2051.

x. Mining Plan and Mine Closure Plan (Second Modification) for Utkal D and Utkal E coal mines with 4.5 million TPA targeted capacity of coal Production has been approved by Ministry of Coal vide letter No. ORAN/APP00291/2021 dated 15.05.2024.

xi. The total geographical reserves reported in the mine lease area of 824.316 Ha is 303.71 MTPA, out of which mineable reserves are 174.785 MTPA and extractable reserves are 170.876 MTPA. Percentage of extraction is 57.42%.

xii. 20 seams with thickness ranging from 0.05 m to 34.52 m are workable. Grade of coal is G 11 to G 15, stripping ratio is 1: 2.2627 while gradient is 1 in 9.2. Life of mine as per the approved Mine Plan is 44 years.

xiii. The Committee deliberated on the Certified Compliance Report of both the mines and deliberated on the partially – complied/ non- complied conditions of the same. However, Utkal – E is yet to be operationalised, Utkal – D is already under operation. Regarding the incomplete construction of ETP, garland drain and retaining wall, PP submitted an undertaking that the same shall be completed by 15th November 2024. The committee satisfied with the action taken report of the proponent.

xiv. Committee deliberated on the plantation activities been carried out by the PP till date. PP presented the photos of plantation carried out till date. Area proposed for plantation is 63.968 Ha. The Committee is of the opinion that plantation needs to be improved and the area of plantation should be increased. For which PP submitted that an area of 305.990 Ha of waste dump and 6.708 Ha of safety zone will also be covered with plantation, which will be developed as forest land. The budget allocated for the same is Rs. 14.29 crore (Rs. 12 crore under EMP and Rs. 2.29 crore under Mine Closure Plan). PP submitted the following concurrent plan for plantation with native species:

Year	Area (Ha)			No. of Plants
	Waste Dump	Safety Zone	Others (rationalization area, garland drains, settling ponds etc)	
1 st Year	-	20	-	50,000

Year	Area (Ha)			No. of Plants
	Waste Dump	Safety Zone	Others (rationalization area, garland drains, settling ponds etc)	
2 nd Year	-	20	-	50,000
3 rd Year	-	17.34	-	43,350
4 th Year onwards	305.990		13.336	7,98,315
Total	305.990	57.34	13.336	9,41,665
Species proposed to be planted are Neem, Shisham, Arjun, Karanja, Sisso, Mango, Jamun, Jack Fruit, Ghambhari etc.				

xv. Committee deliberated on the method of mining proposed for operations as in the approved Mine Plan and Mine Closure Plan, it is stated that, in 9th, 10th and 11th year, underground mining will be done. The PP submitted that no underground mining is proposed for the instant proposal and High wall mining along with opencast mechanized method of mining will only be used.

xvi. The Committee observed that the dumping of OB is being done on the forest land. Committee took a view of it through DSS KML. While deliberation, PP submitted that this aspect has been taken into cognizance while according the Forest Clearance and it was observed that the entire area is coal bearing and no land for dumping is available and the dumping is being done in degraded forest area. PP further submitted that for the first 9 years external dumping is proposed and from 10th year onwards simultaneous dumping is planned in both external and internal dump. After final mine closure, 355.394 million cum OB out of the total 385.11 million cum OB is planned to be backfilled and after re-handling OB from external dump area it is planned the area will reach up to its original level.

xvii. The Committee deliberated on the post mining void area. PP submitted that the total excavation area will be 381.070 Ha out of which 118.70 Ha, will be backfilled and rehabilitated by the agriculture and remaining 262.370 Ha will be reclaimed as 89.470 Ha to be rehabilitated by agriculture and 172.630 Ha as under water reservoir. The Committee is of the opinion that post mining void area to be used as water reservoir must be reduced.

xviii. Committee deliberated on the Nallah diversion proposed by the PP in order to start the mining operations of Utkal – E Block. Committee is of the view that no mining activity in Utkal – E should be started till the nallah diversion study covering the impact on biodiversity including aquatic flora and fauna is completed and submitted to concerned RO and MoEF&CC Delhi. The PP submitted an undertaking in this regard that the study in this regard as suggested will be completed within 6 months and will be submitted to RO Bhubaneswar, MoEFCC and MoEFCC New Delhi.

xix. Committee deliberated on the EMP proposed by the PP and is of the opinion that cost of EMP needs to be enhanced taking into consideration the skill development programme. PP submitted that in collaboration with Indian Iron and Steel Sector Skill Council (IIS SSC) would facilitate the enhancing of the competency level of the workforce against the set industry standards. MoU for the same has been signed between both the entities to contribute towards the Skill India Mission as well as sustain the growth in their areas. At the same time skill development training courses will be given to the selected persons/ students of nearby villagers as per their qualifications.

xx. Committee deliberated on the plan for utilization of water post mining. PP submitted that at the conceptual stage, out of total excavated area, 172.630 Ha area will be converted into water reservoir. Mine seepage water from Utkal – E and Utkal – D will be 2246 KLD and 1932 KLD respectively. PP submitted that the total water requirement for the mining project is 1450 KLD which will be fulfilled from Mine Seepage and the excess water available in the mine pit will be given to the nearby villagers, if required. PP further submitted that, post mining water reservoir will also be used as water pond and for pisciculture purpose.

xxi. Committee deliberated on the air pollution control measures proposed by the PP. PP submitted the following measures in this regard:

- Wet drilling with sharp drill bits is being carried out along with dust collection system.
- Regular Water Sprinkling will be done by 8 nos of 28 KL. Capacity Water Spray Tanker in round the clock.
- Use of permanent water sprinkler in Mine approach road to control fugitive emission.
- Use of fixed water sprinkler (Rain gun) beside coal stock yards to control airborne fugitive dust.
- Plantation will be done on both sides of coal transportation roads.

- Coal will be transported with tarpaulin covered vehicles.
- Coal transportation roads will be asphalted/concreted.
- If feasible, Pollution Control Equipment's such as Bag Filters/Fabric filters will be installed in Coal Conveying Belts.
- Drilling & blasting is limited to overburden only.
- Coal excavation are/will be carried out by Surface Miner fitted with water sprinkling arrangements.
- Controlled Blasting is being/will be carried out with optimal quantity of explosives and with technically established blast design.
- All loading and transfer points are being provided with water sprinklers & dust suppression system.
- Regular maintenance of HEMMs & transportation vehicles are being/will be carried out.
- Truck mounted water sprinklers for road dust suppression.
- Use of truck mounted Mist Cannon for fugitive dust control.
- Installation of 10 m height wind barrier along coal stock yard for fugitive dust control Development of green belt/plantation is being/will be carried out.
- Ambient Air Quality is being/will be monitored regularly and maintained in prescribed norms.

Along with this PP also submitted the proposed water spraying at Coal Stock Yard and proposed water spraying at Coal Stock Yard.

xxii. Committee also deliberated on the transportation proposed from both the blocks. PP submitted that coal is primarily planned to be evacuated from south-eastern boundary of the block through conveyors from coal stock yard to CHP and to Rapid Loading Silo through a series of conveyors of 2000 tonnes per hour rated capacity for loading coal into wagons at proposed railway siding platforms planned for Utkal group of blocks. PP will use the railway siding of Inner Rail Corridor (MCRL) being developed by East Coast Railway, which is at the distance of 1.4 km from the block boundary. As a stopgap arrangement till the Inner Rail Corridor is commissioned, the coal will be transported through San-Kerejanga Railway Siding, which is being developed by NALCO only, which is expected to be completed by July 2025. However, till the above two modes operational, the coal is proposed to be transported through road and distance from mine pit head to CHP is 40 km. Coal is only proposed to be transported through road at night from 10 PM to 6 AM. Committee is of the opinion that the 2.33 Ha of forest land which was earlier part of Utkal – E block should not be used for any purpose, including transportation as assured by the PP.

xxiii. The Committee noted that the EIA/EMP report is in compliance of the standard ToR for the project, reflecting the present environmental status and the projected scenario for all the environmental components.

xxiv. The committee deliberated on the written submission and found it satisfactory.

xxv. EAC considered the instant proposal under para 7(ii) of EIA, 2006 for grant of EC and opined that no fresh public hearing is required due to the following:

- Proposal involves amalgamation of two existing valid ECs with no change in Mining lease area ($301.28 + 523.036 = 824.316$).
- No increase in production capacity (4.0 MTPA) after amalgamation of Mining Lease.
- No change in the mining technology after amalgamation of Mining Lease.
- No increase in waste generation after amalgamation of Mining Lease.
- Public hearing for the Utkal D and Utkal E block was held on 24/1/2006 and 30/05/2008 respectively
- Grant order for the amalgamation of the Mining Lease have been obtained from State Government, Odisha on 18.11.2023
- Mining Plan and Mine Closure Plan for combined Utkal D and Utkal E coal mines has been approved by MoC 15.05.2024.

Recommendations of the Committee

29. Based on the discussions held and the documents submitted, the EAC **recommended** the proposal for Environment Clearance of Utkal D Coal Block (ML Area 301.28 ha with Granted production capacity 2.0 MTPA) and Utkal E Coal Block (ML Area 523.036 ha with Granted production capacity 2.0 MTPA) by amalgamating the D & E block with total coal production capacity of 4 MTPA and total lease area of 824.316 ha by **M/s. National Aluminium Company Limited (NALCO)** located at Village: Nandichhod (Gopiballavpur), Gopinathpur Jungle, Kosala, Kundajhari Jungle, Korada, Rajjharan, Similisahi, Tehsil: Chhendipada District: Angul, Odisha under the provisions of para 7(ii) of EIA Notification, 2006 (as amended), subject to the compliance of the following specific conditions in addition to the general/Standard EC

conditions (**Annexure-I**).

30. The MoEF&CC has examined the proposal in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the EAC hereby accords Environmental Clearance to **M/s. National Aluminium Company Limited (NALCO)** for Utkal D Coal Block (ML Area 301.28 ha with Granted production capacity 2.0 MTPA) and Utkal E Coal Block (ML Area 523.036 ha with Granted production capacity 2.0 MTPA) by amalgamating the D & E block with total coal production capacity of 4 MTPA and total lease area of 824.316 ha, located at Village: Nandichhod (Gopiballavpur), Gopinathpur Jungle, Kosala, Kundajhari Jungle, Korada, Raijharan, Similisahi, Tehsil: Chhendipada District: Angul, Odisha subject to compliance of the additional Specific Environmental safeguard Conditions in addition to the standard EC conditions (**Annexure-I**).

31. The proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

32. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

33. The PP is under obligation to implement commitments made in the Environment Management Plan, which forms part of this EC.

34. 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.

35. General Instructions:

(i) The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC website where it is displayed.

(ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn must display the same for 30 days from the date of receipt.

(iii) The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions.

(iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Six monthly progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

(v) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(vi) The Regional Office of this MoEF&CC shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(vii) Validity of EC is as per the provision of EIA Notification, 2006 and its subsequent amendment.

36. This issue with an approval of the Competent Authority

Yours faithfully,

(Sundar Ramanathan)
Scientist 'E'/Additonal Director
Tel: 011- 20819378
Email- r.sundar@nic.in

Copy To

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. The Deputy Director General of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandrasekharpur, Bhubaneswar- 751023 (Odisha).
3. The Secretary, Department of Environment & Forests, Government of Orissa, Secretariat, Bhubaneswar (Odisha).
4. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
5. The Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/118, Nilkanthanagar, Unit VIII, Bhubaneswar - 751012 (Odisha).
6. District Collector, Jharsuguda, Government of Odisha.
7. PARIVESH Portal

Annexure 1

Specific EC Conditions for (Mining Of Minerals)

1. Specific Conditions:

S. No	EC Conditions
1.1	No mining operations shall be undertaken in Forest land, until Stage – II forestry clearance for 13 Ha has been obtained under the provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, Act 1980.
1.2	Mining in Utkal E block may be started after grant of EC in a way that the nallah is diverted only after completion of Nallah diversion study covering the impact on biodiversity by the proponent and PP shall ensure the submission of same to RO, Bhubaneswar, and MoEFCC, New Delhi. Compliance to the recommendation of the study report shall be submitted to the concerned Regional Office along with the six monthly compliance report and also be uploaded on the web portal of the company.
1.3	Project proponent shall complete the commissioning of ETP, construction of garland drain and retention wall in Utkal D block by 15 Nov 2024. Compliance status in this regard shall be submitted to the concerned Regional Office along with the six monthly compliance report and also be uploaded on the web portal of the company.
1.4	Pre-mining survey on the Social-economic status of the local communities based on the UNHDR report shall be submitted to the concerned Regional Office of the Ministry before commissioning of mines. Compliance status in this regard shall be submitted to the concerned Regional Office along with the six monthly compliance report and also be uploaded on the web portal of the company.

S. No	EC Conditions
1.5	No underground mining is permitted as committed.
1.6	Project proponent shall ensure that operationalization of Kerjanga Railway Siding by July, 2025 to reduce the coal transportation by road (19 km distance).
1.7	PP shall carry out concurrent plantation in 376.666 Ha (305.990 Ha of waste dump; 57.34 Ha of safety zone and 13.336 Ha other area). The green belt and plantation plan submitted in the EIA/EMP shall be implemented in a time-bound manner. A survival rate of at least 80% shall be maintained by carrying out gap plantation in case of mortality. Native species should be planted. The budget earmarked for the plantation shall be kept in a separate account. PP should annually submit the audited statement of expenditure along with proof of activities viz. photographs (before & after with geolocation date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC and on PARIVESH Portal as the case may be for the activities carried out during previous year.
1.8	The plantations done by the PP need to be adequately densified and audited by a third party preferably a forestry institution of MoEFCC (e.g. ICFRE) to assess their efficacy.
1.9	The budget proposed to address the issues raised during PH is Rs. 27.45 crores for 3 years. Compliance status in this regard shall be submitted to the concerned Regional Office along with the six monthly compliance report and also be uploaded on the web portal of the company.
1.10	PP shall provide regular health monitoring services and health services free of cost to people living in 10 km radius.
1.11	PP shall implement the protective measures proposed in EMP in a time-bound manner. The budget earmarked for the same is Rs 231.16 crores (Capital) and Rs 102.22 crores (recurring) and should be kept in separate accounts and audited annually. The implementation status along with the amount spent with documentary proof shall be submitted to the concerned Regional Office for the activities carried out during the previous year.
1.12	PP shall implement the recommendation of the Wildlife Conservation Plan and also during mining ensure to protect the wildlife. Necessary training/awareness program shall be conducted for the same from time to time.
1.13	PP shall strengthen in house environment management unit.
1.14	PP shall ensure that No OB dumping is done outside the mine lease area.
1.15	PP shall submit an action plan for using and developing Renewable Energy for its consumption in its utilities/machinery/equipment instead of using electricity from Grid/generated from Thermal Power Plants. PP shall install solar power generation units. Compliance status in this regard shall be submitted to the concerned Regional Office along with the six monthly compliance report and also be uploaded on the web portal of the company.
1.16	PP shall minimize mine voids in the post mining phase so that maximum area postmining is under green belt or agriculture/ grazing land.

S. No	EC Conditions
1.17	PP shall obtain a 5-star rating in terms of Environment Compliance from the Ministry of Coal as per the rating system implemented by the Ministry of Coal.
1.18	PP shall ensure that all types of plastic waste generated from the mines shall be stored separately in isolated areas and disposed of strictly adhering to the Plastic Waste Management Rules 2016. In pursuant to the Ministry's OM dated 18/07/2022, PP shall also create awareness among the people working in the project area as well as in its surrounding area on the ban on Single Use Plastic(SUP) in order to ensure compliance of the Ministry's Notification published by the Ministry on 12/08/2021. A report along with the photographs of the measures taken shall also be included in the six monthly compliance reports being submitted by PP.
1.19	NoC from Central Ground Water Authority (CGWA)/ concerned local authority, as the case may be, shall be obtained before drawing the groundwater for the project activities, state pollution control board/pollution control committees shall not issue the consent to operate (CTO) under Air (prevention and control of Pollution) Act and Water (Air (prevention and control of Pollution) Act till the project proponent shall obtain such permission.
1.20	PP shall expedite the process of settlements and provide compensation to project affected families.
1.21	PP shall review the outcome of the skill development programs whether it is providing any benefit or not, and whether it helps the community in getting job/livelihood opportunities. PP shall align the activities as per the present-day needs. A report in this regard shall be submitted to the concerned RO within 6 months.
1.22	PP shall install water meters at all intake points and take specific measures for reduction in water consumption and generation of alternative source of water through rainwater harvesting measures. Water audit needs to be done every year by a reputed institute for further reduction of water consumption and PP shall implement its recommendations and submit a report to RO annually.
1.23	Project proponent shall follow all necessary precautions to be adopted as suggested in approved Mining Plan of Utkal D&E Coal Mine while mining in common safety zone area.
1.24	Four numbers of Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as PM10, PM2.5, SO2, NOX within the lease area in consultation with OSPCB. The monitoring of other locations (at least three locations outside the lease area covering upwind and downwind directions at an angle of 120° each) shall be carried out manually.
1.25	PP shall ensure that diesel operated vehicles will be switched over to E-Vehicles in a time bound manner, replace the passenger vehicles to E-vehicle in phased manner. Further, for local movement of officials Contract of Vehicles deployment shall be awarded to Project affected people and all efforts for adopting heavy E-vehicles like Bulkiers for ash transportation for short distance subject to availability of such E-vehicle and adequate charging infrastructure in the surrounding area shall be provided. PP shall submit the action taken report to concerned RO with amount spent, photographs (before & after), number of e-vehicles deployed etc. in six monthly compliance report.
1.26	Digital processing of the entire lease shall be through remote sensing techniques should be done regularly once in 3 years for monitoring land use pattern and report submitted to MOEF and its Regional Office at Bhubaneswar.

S. No	EC Conditions
1.27	R&R shall be not less than the norms prescribed in National R&R Policy 2007/State R&R Policy/NALCO Policy whichever is higher.
1.28	PP is advised to implement the 'Ek Ped Maa Ke Naam' Campaign which was launched on 5th June 2024 on the occasion of the World Environment Day to increase the forest cover across the Country. This plantation drive is other than Green belt development. The action in this regard shall be submitted concerned RO in six monthly report.
1.29	Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC.

Standard EC Conditions for (Mining of minerals)

1. Statutory Compliance

S. No	EC Conditions
1.1	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
1.2	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
1.3	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area).
1.4	The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
1.5	The project proponent shall obtain the necessary permission from the Central Ground Water Authority
1.6	Solid/hazardous waste generated in the mines needs to addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.

2. Air Quality Monitoring And Mitigation Measure

S. No	EC Conditions
2.1	Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM10, PM2.5, SO2 and NOx. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
2.2	The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.
2.3	Transportation of coal, to the extent, if permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun/Fog cannon etc shall be carried out in critical areas prone to air pollution (with higher values of PM10/PM2.5) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
2.4	The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.
2.5	Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
2.6	Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.
2.7	Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.

3. Water Quality Monitoring And Mitigation Measures

S. No	EC Conditions
3.1	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.
3.2	The monitoring data shall be uploaded on the company's website and displayed at the project site at

S. No	EC Conditions
	a suitable location. The circular No.J-20012/1/2006-IA.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
3.3	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
3.4	Monitoring of water quality upstream and downstream of river including ponds, lakes, tanks shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
3.5	Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.
3.6	Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.
3.7	Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).
3.8	Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.
3.9	The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
3.10	The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.

S. No	EC Conditions
3.11	The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

4. Noise And Vibration Monitoring And Prevention

S. No	EC Conditions
4.1	Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.
4.2	Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.
4.3	The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

5. Mining Plan

S. No	EC Conditions
5.1	Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
5.2	Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).
5.3	No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.
5.4	Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

6. Land Recalculation

S. No	EC Conditions
6.1	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change(MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).

S. No	EC Conditions
6.2	The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
6.3	The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the “during mining”/“post mining” land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.
6.4	Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.
6.5	Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.
6.6	The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

7. Green Belt

S. No	EC Conditions
7.1	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.
7.2	Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads. And Plantation should also be carried out in nearby area with consent of forest department and gram panchayat within 10 km radius with its proper maintenance

8. Public Hearing And Human Health Issues

S. No	EC Conditions
8.1	Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six-monthly basis.
8.2	The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.
8.3	Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
8.4	Implementation of the time bound action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the time bound action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.
8.5	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

9. Corporate Environment Responsibility

S. No	EC Conditions
9.1	The project proponent shall comply with the provisions contained in this Ministry's OM dated 30/09/2020, as applicable, regarding Corporate Environment Responsibility.
9.2	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholder's/stake holders.
9.3	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
9.4	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

S. No	EC Conditions
9.5	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

10. Miscellaneous

S. No	EC Conditions
10.1	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
10.2	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
10.3	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
10.4	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
10.5	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
10.6	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
10.7	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
10.8	The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
10.9	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
10.10	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
10.11	No further expansion or modifications in the plant shall be carried out without prior approval of the

S. No	EC Conditions
	Ministry of Environment, Forests and Climate Change.
10.12	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
10.13	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
10.14	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
10.15	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
10.16	The above conditions shall 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, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 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.

