BEFORE THE NATIONAL GREEN TRIBUNAL

EASTERN ZONE BENCH, KOLKATA

ORIGINAL APPLICATION NO.201 OF 2025

PRADEEP KUMAR BISWAL & ORS. ... **APPLICANTS**

-VERSUS-

STATE OF ODISHA & ORS. ... **RESPONDENTS**

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Kolkata;

Date:20/03/2026

By Respondent No.5

B. Behera

Through Advocate

(BIDESH RANJAN BEHERA)
En. No.O-111/2004
(M) 9937292768
bidesh.behera@gmail.com

BEFORE THE NATIONAL GREEN TRIBUNAL

EASTERN ZONE BENCH, KOLKATA

ORIGINAL APPLICATION NO.201/2025/EZ

IN THE MATTER OF:

PRADEEP KUMAR BISWAL & ORS.

... APPLICANTS

-VERSUS-

STATE OF ODISHA & ORS.

...RESPONDENTS

REPLY AFFIDAVIT FILED ON BEHALF OF RESPONDENT NO.5 (NALCO)

1. That the Applicants are residents of Golabandha village and have filed the instant application before this Hon'ble Tribunal being aggrieved by the construction of the 'Sankerjang Railway Siding' by Respondent No.5 as well as the inaction of various forums including the State Pollution Control Board (Respondent No.2) in addressing their concerns regarding the construction of the aforesaid project. The Applicants have, therefore, sought for the closure of the Railway Siding Project, computation of environmental compensation towards illegal extraction of soil/morrum used in construction of the aforesaid Railway Siding and fixing of liability upon erring officers of the

Krishna Rakesh Kumar
कृष्ण राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(पर्यावरण) / AGM(ENV.)
Coal Mines Division
Nalco,Angul

Pollution Control Board and District Collector, Angul (Respondent No.3) for failing to discharge their duties and allowing/facilitating the operation of Railway Siding despite violation of environmental norms.

2. At the outset, the Respondent No.5 begs to state that the present OA is wholly misconceived, devoid of merit, misleading and deserves to be dismissed in limine. The answering Respondent before delving the para to para reply craves leave to submit the following facts pertaining to the instant matter briefly:

i. That Respondent No.5 is a Navratna Central Public Sector Enterprise (CPSE) under the Ministry of Mines, Government of India and is committed to upholding the highest standards of environmental compliance and corporate social responsibility.

ii. That the Utkal-D Coal Mines was initially allocated to Odisha Mining Corporation (OMC) who formed joint venture in the name of M/s Kalinga Coal Mines Private Limited (KCMPL) for coal mining and acquired the Land through IDCO. The said allotment was cancelled by the order of Hon'ble Supreme Court. Subsequently the Government of

Krishna Rakesh Kumar
कृष्णा राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(पर्यावरण) / AGM(ENV.)
Coal Mines Division
Nalco,Angul

B. Behera
Adv.

NOTARY CUTTACK
N.S. GHOSE
Advocate
CUTTACK
GOVT. OF ORISSA

India (GoI) allocated Utkal-D Coal Mines in favour of NALCO vide Order No.F.No.103/34/2015/NA dated 02.05.2016 under the Coal Mines (Special Provisions) Act, 2015 and with that allocation vested all the rights, title and interest of the prior allottee, Odisha Mining Corporation (OMC) in and over the land and mine infrastructure, free from all encumbrances in respect of Utkal-D Coal Mine stood fully and absolutely transferred and vested in the name of NALCO.

iii. That the Utkal-E Coal Mines is allocated to NALCO by the Government of India.

iv. That the transportation of Coal from Utkal-D & E Coal Mines to the Captive Power Plant at Angul of the answering Respondent by Rail, construction of Sankerjang Railway Siding is presently under progress after issuance of Consent to Establish (CTE) dated 05.11.2024 by the Respondent No.2 i.e. Odisha State Pollution Control Board (OSPCB). It is relevant to mention here that as per the CTE, construction of Railway Siding is to be completed by December, 2026.

Krishna Rakesh Kumar
कृष्ण राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(खनन)/ AGM(EM)
Coal Mines Division
Nalco,Angul

B. Behera

NOTARY CUTTACK
N.S. GHOSE
Advocate
CUTTACK (ORISSA)
GOVT. OF ORISSA

v. That the construction for the Railway Siding in the name of M/s Sankerjang Railway Siding is being undertaken at Sankerjang, Tahasil – Banarpal, Dist. – Angul. The total acquired area for said railway siding in respect of which CTE has been applied is about 16.23 acres comprising 31 plots under Sankerjang and Golabandha Gram Panchayat.

vi. That the construction of 'Sankerjang Railway Siding' is in strict compliance of the 'Special Conditions enlisted under the Consent To Establish Order dated 09.12.2024 and the Consent To Operate order dated 29.07.2025 issued by the Respondent No.2 as well as the Specific Conditions enlisted in the Environmental Clearance (EC) dated 07.12.2024 amended vide EC dated 23.07.2025 issued by the MoEF & CC in favor of Utkal D & E Coal Mines allotted in favour of NALCO (Respondent No.5). Moreover, the very purpose of construction of the Railway Siding is to facilitate coal transport from the coal mines to the Captive Power Plant of Respondent No.5 so as to minimize the risk of environmental pollution. It is further stated that at present, transportation of coal from the

कृष्ण राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(पर्यावरण) / AGM(ENV.)
Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
GOVT. OF ORISSA

said mines to Captive Power Plant is being done via road through trucks/dumpers over a distance of 40 km, however post commissioning of the Railway Siding, the transportation of coal from the mines to the Captive Power Plant via road will be reduced to 21 km and the remaining 19 km shall be covered via railway, which will ensure to substantially minimize the level of environmental pollution in the industrial hub at Angul. It is, therefore, humbly submitted that the construction of the proposed Railway Siding before December, 2026 is a condition precedent to the issuance of Consent To Operate order as well as the EC issued in favour of Utkal D & E Coal Mines for ensuring minimum threat of environmental pollution.

B. Behera Adv

Krishna Rakesh Kumar
कृष्णा राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(पर्यावरण) / AGM(ENV.)
Coal Mines Division
Natco,Angul

True copy of the Consent To Establish Order bearing order No.20216 dated 09.12.2024 issued by Respondent No.2 in favor of Utkal D & E Coal Mines is annexed hereunto and marked as **ANNEXURE – A/5.**

True copy of the Consent To Operate Order bearing order No.14291 dated 29.07.2025 issued by Respondent No.2 in favor of Utkal D & E Coal

NOTARY CUTTACK
N.S. GHOSE
GOVT. OF ODISHA

Mines is annexed hereunto and marked as **ANNEXURE – B/5.**

True copy of the Environmental Clearance Certificate dated 07.12.2024 issued by the Ministry of Environment, Forest and Climate Change issued in favor of Utkal D & E Coal Mines is annexed hereunto and marked as **ANNEXURE – C/5.**

vii. That the Respondent No.5 had therefore initially applied for Consent to Establish (CTE) from the Respondent No.2 on 20.12.2023 for the Railway Sliding over a total area of Ac.30.12 decimals; however, the same was rejected by the Respondent No.2 on the ground that human habitation is in close proximity to the proposed railway siding. Accordingly, the Respondent No.5 substantially reduced its proposed area of operation from Ac.30.12 decimals to Ac.16.23 decimals and applied afresh for the CTE before Respondent No.2 vide Application No.5876765 on 17.10.2024 which was granted vide Order No.3637 dated 05.11.2024. The aforesaid CTE under Annexure – 1 of the O.A. entails several general and special conditions to be fulfilled by Respondent No.5 for minimizing

B. Behera
Adv

Krishna Rakesh Kumar
Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
N.S. GHOSE
GOVT. OF ORISSA

environmental pollution and restoration of environment, which is being strictly complied by the Respondent No.5.

Prior to grant of the CTE by the Respondent No.2, field inspection was conducted on 01.11.2024 to verify the suitability of the new site for establishment of Railway Siding at Sankerjang. The inspection report submitted by the Asst. Environmental Scientist, State Pollution Control Board, Regional Office, Angul, included the location of the proposed site from nearest human habitation, Health Care and Educational Institutions, National and State Highways, and Local Temple; proposed measures to be undertaken by Respondent No.5 for mitigating pollution and restoration of environment.

B. Behera Adv

Krishna Rakesh Kumar
कृष्णा राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबन्धक(पर्यावरण)/ AGM(ENV.)
Coal Mines Division
Nalco,Angul

True copy of the CTE application dated 17.10.2024 of Respondent No.5 is annexed hereunto and marked as **ANNEXURE - D/5.**

True copy of the Inspection Report submitted by the Regional Officer, Angul is annexed hereunto and marked as **ANNEXURE - E/5.**

NOTARY CUTTACK
N.S. GHOSE
GOVT. OF ORISSA

viii. That it is also pertinent to mention here that the Respondent No.5 as an abundant precaution also obtained No Objection Certificates (NOCs) from Sankerjang and Golabandha Gram Panchayats following Gram Sabha for establishment of its aforesaid unit.

ix. That it may not be out of place to mention here that the work of Sankerjang Railway Siding has been awarded to M/s RITES, who in turn have sublet civil engineering works to M/s Hardev Construction Pvt. Ltd. Said Hardev Construction has been procuring minor minerals like soil, morrum and sand from different agencies and discharging the government dues towards royalty on utilization of said minor minerals and has obtained No Dues certificates in this regard from the Mining Officer-cum-Competent Authority, Minor Mineral, Angul.

Krishna Rakesh Kumar
ADM(CW)
Coal Mines Division
Nalco,Angul

D. Behera
Adv

x. That it is further stated that 'Railway Siding' was classified under RED Category as per Respondent No.2 Board's Resolution No.3369 dated 16.02.2008 and Guidelines were issued in April, 2008 to regulate Railway Siding. To further streamline it

NOTARY CUTTACK
N.S. GHOSE
GOVT. OF ORISSA

and in supersession of earlier guidelines in this regard, the Respondent No.2 on 16.04.2010 issued 'Guidelines for Environmental Management in Mineral Stack Yards and Railway Sidings'. Further, Railway Siding which was classified under RED category in the year 2008, was reclassified under GREEN Category by the CPCB (Respondent No.4) on 07.03.2016 followed by Office Order dated 11.07.2018 of the SPCB (Respondent No.2) issued in supersession of all earlier Orders issued relating to categorization of industrial units/project. Such classification of industries under different categories like Red, Orange, Green and White was made based on 'Range of Pollution Index' on a score of 0 to 100. While industrial sectors having Pollution Index (PI) score of 60 and above were classified under Red Category, same for PI score of 41 to 59 was classified as Orange Category, PI score of 21 to 40 was classified as Green Category and PI score upto 20 classified as White Category. In view of considerable drop in the PI score in respect of Railway Siding, the 2010 guidelines requiring stricter parameters in respect of Red category industries has lost its significance. The said 2010

B. Behera
Adv

Krishna Rakesh Kumar
Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
N.S. ...
GOVT. OF ORISSA

guidelines (Annexure-4 of the OA) in Paragraph-4 thereof though provided for 'Siting Considerations' exclusively for Mineral Stack-Yard, no such Siting Criteria has been provided for Railway Siding. As such, the Consent To Establish (CTE) has been issued in respect of the Sankerjang Railway Siding considering it under Green Category. The Applicant's apprehension of severe environmental degradation and pollution that may be caused due to operation of the Railway Siding is completely unfounded inasmuch as the very purpose of the said railway siding is to mitigate the potential risks of environmental pollution due to transport of coal by road for a long distance. The aforesaid Office Order supersedes all earlier orders issued.

B. Behera Adv

Krishna Rakesh Kumar
कृष्ण राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(खनन)/ AGM(EM)
Coal Mines Division
Nalco,Angul

True copy of the directions issued by Respondent No.4 vide Letter dated 07.03.2016 and Office Order No.8333 dated 11.07.2018 issued by the Respondent No.2 is annexed hereunto and marked as **ANNEXURE – F/5 & G/5** respectively.

xi. That Respondent No.5 is fully aware of its obligations of preserving the environment and has

NOTARY CUTTACK
N.S. CHOSE
Advocate
CUTTACK
GOVT. OF ORISSA

been taking all necessary precautions for minimizing environmental pollution and implementing safety mechanisms for restoration of the environment. As a matter of fact, the proposed Sankerjang Railway Sliding is one such measure taken by Respondent No.5 for minimizing environmental pollution caused due to plying of trucks/dumpers transporting coal from the mines to the Captive Power Plant of Respondent No.5.

xii. That as per the Detailed Project Report (DPR) prepared by RITES for development of the proposed Railway Siding at Sankerjang, the project cost for Phase–1 is calculated to the tune of Rs.77.24 Crores (exclusive of Rs.5.59 Crores incurred by the Company towards acquisition of land for the project). The Respondent No.5 has also made huge investments towards implementation of pollution mitigation mechanisms and environment restoration activities.

B. Behera Adv

Krishna Rakesh Kumar
कृष्ण राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(परियोजना)/ AGM(P&M)
Coal Mines Division
Nalco,Angul

PARAWISE REPLY:

3. That the averments made in Para-1 of the O.A. that the construction of Railway Siding is in close proximity to

NOTARY CUTTACK
N.S. GHOSE
Advocate
GOVT. OF ORISSA

human habitation and the same will lead to plying of hundreds of vehicles engaged in transportation of minerals/coal from the railway siding to different plants are exaggerations, baseless and thus denied. As stated in Para-2.(vii) above, the Respondent No.5 has been granted with the Consent to Establish for the aforesaid project by the Respondent No.2 vide Order No.3637 dated 05.11.2024 pursuant to the field inspection report submitted by the Asst. Environmental Scientist, State Pollution Control Board, Regional Office, Angul under Annexure –E/5. The aforesaid report indicates the distance of the proposed Railway Siding from nearest human habitation, Health Care and Educational Institutions, National and State Highways, and Local Temple; potential of Air and Water Pollution due to the Railway Siding alongwith the proposed remedial measures for mitigating pollution and restoration of environment. The Respondent No.2 upon satisfaction that safe distance from the nearest human habitation/dwelling house has been maintained for the proposed Railway Siding, which is classified under 'Green Category', has granted the Consent to Establish vide its order dated 05.11.2024 under Annexure-1. The said CTE also entails several general and special conditions to be fulfilled by Respondent No.5 for minimizing environmental pollution

D. Behera Adv

Krishna Rakesh Kumar
कृष्ण राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(पर्यावरण)/ AGM(ENV.)
Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
W.S. GHOSE
ADVOCATE
CUTTACK TOWN
GOVT. OF ORISSA

and restoration of environment, which is being strictly complied by the Respondent No.5. Initially the Respondent No.5 has applied for CTE for the said project over a total area of Ac.30.12 decimals, which was rejected by the Respondent No.2 for the reason that human habitation is in close proximity to the proposed railway siding. Accordingly, the Respondent No.5 substantially reduced its proposed area of operation from Ac.30.12 decimals to Ac.16.23 decimals and applied afresh for the CTE before Respondent No.2 in 2024, which was granted vide Annexure-1 of the O.A.

It is further submitted that the very purpose of the construction of the Railway Siding is to reduce the distance of coal and mineral transportation by road via trucks/dumpers and to facilitate such transfer via railway. The distance of coal transportation via road will be significantly reduced from 40 km to 21 km (almost 50%) after commissioning of the Sankerjang Railway Siding thereby minimizing potential risks of environmental pollution. Also, the transportation of coal via tarpaulin covered trucks/dumpers shall only be done as per the permission of District Administration from the mine to the proposed railway siding only from where the transportation shall be done via railway to the CPP of Respondent No.5.

B. Behera Adv

Krishna Rakesh Kumar

कृष्णा राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(पर्यावरण) / AGM(ENV)
Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
N.S. CHOSE
Advocate
CUTTACK
GOVT. OF ORISSA

So the apprehension of the Applicants that the project in question shall lead to plying of hundreds of vehicles from the railway siding to different plants is wholly baseless.

4. That the averments made in Para-2 of the O.A. relating to CTE issued vide Annexure-1 of O.A. form matters of record and thus need no reply from the answering Respondent.

5. That the averments made in Para-4 at Page-5 of the O.A. that Respondent No.2 is though obligated to examine the infirmities and environmental hazards before issuing the Consent To Establish to Respondent No.5, it has failed to discharge its obligations, and has granted Consent to Establish in gross violation of Siting Criteria and the 'Guideline for Environmental Management in Mineral Stackyards and Railway Sidings' dated 16.04.2010; are totally misconceived in fact and law. The "**Siting Criteria for Railway Siding**" published on 16th April, 2010 as quoted under said Para-4 of the O.A. is completely misleading and has been deliberately and wrongly quoted as such, whereas the said Guidelines annexed as Annexure-4 to the O.A. under Para-4 thereof reads it as "**SITING CONSIDERATIONS (MINERAL STACK YARD)**".

B. Behera Adv

Krishna Rakesh Kumar
कृष्णा राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(पर्यावरण) / AGM(EM)
Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
N.S. GHOSE
Advocate
CUTTACK
GOVT. OF ORISSA

It may be stated here that said 2010 Guidelines do not prescribe for any Siting Criteria for Railway Siding and also the said Guidelines were issued when the Railway Siding was classified under 'RED' Category. However, from 2016 onwards Railway Siding has been classified under 'GREEN' Category. As would be evident from Annexure-F/5 that while industries with PI score of 60% and above are classified under 'Red' category, PI score of 21 to 40 are classified under 'Green' category. In view of substantial fall in the PI score in respect of 'Railway Sidings', the 2010 Guidelines are not applicable. It is submitted that the Consent to Establish in favour of Respondent No.5 sufficiently guards against environmental pollution, solid waste management and restoration. Furthermore, while ensuring safe distance from nearest human habitation, several precautionary measures to be undertaken by Respondent No.5 have been enlisted in the CTE. Such measures include, but are not limited to, construction of garland drain around the coal stock area for avoiding mixing of water to nearby water-bodies used by local people and agricultural lands; installation of Automatic Water Sprinkling/Dry fog systems of throw-put 100 m with 180 rotational axis at mineral storage areas for

Krishna Rakesh Kumar
कृष्णा राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबन्धक(पर्यावरण)/ AGM(ENV)
Coal Mines Division
Nalco,Angul

B. Behera
Adv

NOTARY CUTTACK
N.S. GHOSE
GOVT. OF ORISSA

containment of fine or dusty materials as well as dust sprinklers/ rain guns and stationing of mobile fog cannons on-site for suppressing dust emissions at siding areas during loading and unloading activities; construction of reinforced concrete boundary around the stockyard particularly on the side facing human habitation for ensuring containment and safety; Multi-tier (2-3 tier) greenbelt plantation around the boundary for improving air quality and reducing noise; installation of metallic wind barrier of designated height for containing dust dispersal beyond the stockyard; during loading and unloading operations.

The decision of Respondent No.2 in granting the Consent To Establish Order under Annexure–1 suffers from no infirmity and the said order has been issued after thorough examination of potential environmental risks and preventive and remedial measures to be taken by Respondent No.5 and in strict obedience of all statutory obligations, and thus, the allegation of the Applicants regarding violation of the 2010 Guidelines is completely unfounded.

6. That the averments made in Para–3 at Page-6 of the O.A. that Respondent No.5 has failed to meet the pre-requisites/

Krishna Rakesh Kumar
Krishna Rakesh Kumar / AGM(EMD)
Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
N.S. GHOSE
ADVOCATE
CUTTACK TOWN
GOVT. OF ORISSA

guidelines enlisted under the 2010 guidelines are not correct and hereby denied for the reasons already stated in Para-5 above.

7. That the averments made in Para-4 at Page-7 of the O.A. that the operation of the proposed Railway Siding will directly affect the nearby habitants are based on unfounded apprehensions and mere conjectures, and thus disputed and denied. It is, however, submitted that as per the latest categorization of industrial units issued by Respondent No.2 under Annexure–G/5 in compliance with the criteria prescribed by Respondent No.4, 'Mineral Stackyards and Railway Sidings' have been reclassified under 'Green Category' considering the minimal threat they pose towards environmental pollution. It is further evident from the Field Inspection Report under Annexure–E/5 that at the time of acquisition of land by IDCO in 2006 in favour of M/s KCMPL and that point of time no permanent or temporary civil structures were present near the vicinity of 300m from the proposed Railway Siding project and all constructions near the proposed area have been constructed after the allotment of land in favour of Respondent No.5 for the Railway Siding project. It is relevant to mention here that the CTE has been issued by the Respondent No.2 following

B. Behera
Adv

Krishna Rakesh Kumar

कृष्ण राकेश कुमार / Krishna Rakesh Kumar
ADM(EM)
Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
N.S. GHOSE
Advocate
CUTTACK TOWN
GOVT. OF ORISSA

the proper procedure, ensuring safe distance from the nearest human habitation and imposing other several conditions to guard against possible environmental pollution. As such, strict compliance of 500 meter distance from human habitation applicable to the industries classified under Red Category, may not be made applicable to those under Green Category which includes 'Railway Siding'.

8. That the averments made in Para – 5 of the O.A. do not pertain to the answering Respondent and thus, need no reply.

9. That the averments made in Para–6 and 7 of the O.A. pertaining to the Siting Criteria prescribed under 2010 Guidelines have been so made by the Applicants upon erroneous reading of the said guidelines, which are otherwise misleading and misstatement of facts as explained earlier under Para-5 hereinabove.

10. That from the averments made in Para – 8 of the O.A. that the overloaded heavy vehicles **from the Railway Siding** will ply through Panchayat Road, RD Road and densely populated areas creating traffic congestion, dust and air

B. Behera Adv

Krishna Rakesh Kumar
कृष्णा राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(खनिकर्म)/ AGM(M)
Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
N.S. GHOSE
Advocate
CUTTACK
GOVT. OF ORISSA

pollution is baseless and denied. It seems that the Applicants have filed this OA upon misconception of facts and upon erroneous assumption that as if the Respondent No.5 will be transporting coal from the Railway Siding to its plant by road. It is hereby clarified that and as stated earlier, coal will be transported through road from Utkal-D & Utkal-E Coal Mine of NALCO located in Chhendipada area of Angul district to the proposed Railway Siding from where it will be loaded to wagons for further transportation through rail to CPP of NALCO. As such, the further contention of the Applicants regarding any non-compliance of the 2010 guidelines is to be rejected for the said reasons also.

11. That the averments made in Para–9 of the O.A. regarding illegal extraction of morrum and earth from the adjoining areas of Krushnachandrapur, Golabandha and Sankerjang for construction of the proposed Railway Siding at Sankerjang without environment clearance, is completely false and are thus denied. It is stated here that the Respondent No.5 is not engaged in any sort of extraction of morrum and earth from the adjoining areas as alleged by the Applicants and as explained under Para-2(ix) hereinbefore, the civil work of the project has been

Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
N.S. GHOSE
Advocate
GOVT. OF ORISSA

awarded to Contractor who is procuring such minor minerals from different agencies and discharging the government dues as per applicable rules.

12. That as regards the averments made in Para-10 and 11 of the OA in reference to directions issued by this Hon'ble NGT in Jakhpura Railway Siding case and directions issued by the Hon'ble Supreme Court in Paryavaran Surakhsya Samiti case, it is stated that said directions were issued on different set of facts and not applicable in the present case. The issue for determination before Hon'ble NGT in Jakhpura Railway Siding case as indicated in Para-11 of the judgment dated 25.05.2016 was that 'Whether Jakhpura Railway Station, East Coast Railway would fall in the purview of consent domain under the Air (Prevention and Control of Pollution) Act, 1981, Water (Prevention and Control of Pollution) Act, 1974 and the Environment Protection Act, 1986'. In the said case, the Railway Siding was being operated in absence of a Consent to Operate. However, in the instant case, the Consent to Operate is yet to be issued, which can only be issued upon satisfaction of the conditions stipulated under the Consent to Establish issued in favour of the Respondent No.5. There is no allegation that any such condition of the CTE in Annexure-

B. Behera
Adv

Krishna Rakesh Kumar
Krishna Rakesh Kumar / AGM(EM)
Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
N.S. GHOSE
Advocate
CUTTACK TOWN
Regd. No.-28/93
GOVT. OF ORISSA

1 has been violated. As such, the decisions relied on by the Applicants are distinguishable on facts and the Respondent No.5 shall deal with the same at the time of hearing.

13. That in view of the submissions made hereinabove, the grounds of challenge to the Consent to Establish merits no consideration being baseless and misconceived in fact and law.

14. That the averments/allegations made in the O.A., which have not been specifically admitted, may be deemed to have been denied by the Respondent No.5.

15. That the Respondent No.5 craves the leave of this Hon'ble Tribunal to add, alter and/or make any further submissions to file additional documents for proper adjudication of the case.

16. That in the facts and circumstances stated above, the instant application merits no consideration and may be dismissed.

Kolkata

By Respondent No.5

Date:20/03/2026

Through Advocate

Krishna Rakesh Kumar
कृष्ण राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबंधक(पर्यावरण)/ AGM(EN)
Coal Mines Division
Nalco,Angul

NOTARY CUTTACK
N.S. GHOSE
Advocate
CUTTACK TOWN
GOVT. OF ORISSA

AFFIDAVIT

I, Sri Krishna Rakesh Kumar, aged about 45 years, S/o Durga Sharan Shah, presently working as Assistant General Manager, Environment, Coal Mine Division, At/P.O.-Raijharan, Tahsil-Chhendipada, Dist.-Angul, Pin Code-759130l, do hereby solemnly affirm and state as follows;

1. That I am presently serving as the Assistant General Manager, Environment, Coal Mine Division, of the Respondent No.5 and I am well acquainted with the facts of the case and by virtue of Resolution of Board dated 20.03.2013 (Copy of the Board Resolution dated 20.03.2013 enclosed herewith) competent to swear the present Reply Affidavit on behalf of the Respondent No.5, being duly authorized for the said purpose.

2. That the facts stated in this affidavit are true to best of my knowledge and belief based on records and instructions.

Identified By

B. Behera

Advocate

Krishna Rakesh Kumar

कृष्णा राकेश कुमार / Krishna Rakesh Kumar
सहायक महाप्रबन्धक(पर्यावरण)/ AGM(ENV)
Coal Mines Division
Nalco,Angul

DEPONENT

The above named deponent being identified by Mr./Ms. B. Behera Advocate appears before me at 4 P.M. AM/PM. on this the 20 day of 3 20 solemnly affirms that the facts stated are true to his/her knowledge and belief

NOTARY
CUTTACK TOWN

20/3/26

- 23 - ANNEXURE - A/5

E-mail: paribesh1@ospcboard.org
Website: www.ospcboard.org

STATE POLLUTION CONTROL BOARD, ODISHA

[DEPARTMENT OF FOREST, ENVIRONMENT & CLIMATE CHANGE, GOVERNMENT OF ODISHA]
Paribesh Bhawan, A/118, Nilakantha Nagar, Unit – VIII
Bhubaneswar – 751012

No. 20216 / IND-II-CTE-7356 Date: 09.12.2021/
Through online/
By speed post

AMALGAMATION OF CONSENT TO ESTABLISH ORDER

In consideration of the online application no **5890205** for obtaining Consent to Establish for **Utkal- D and Utkal-E Coal Mines of M/s National Aluminium Company Limited (NALCO)**, the State Pollution Control Board is pleased to convey its Consent to Establish under Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 for **amalgamation with modification for existing Consent to Establish Utkal D Coal Block (ML Area 301.28 ha with granted production capacity 2.0 MTPA** Vide Letter no. 11898 (27.11.2020) Subsequent corrigendum vide letter no. 2204 dt.15.02.2021 for mining lease area of 301.28 ha and subsequent CTE amendment vide letter no. 84 dated 11.01.2023 for coal transportation) **and Utkal E Cola Block (ML area 523.036 ha with granted production capacity 2.0 MTPA** vide Letter no. 12001 dated 13.08.2021**) by modifying and amalgamating the Utkal- D & Utkal- E block with total coal production capacity of 4 MTPA and total lease area of 824.316** ha located at Villages- Raijharan, Nandicchor, Kosal and Similisahi and At- Utkal- Coal Bloack, Chendipada, Tehsil- Chhendipada in the District of **Angul** with the following conditions:

GENERAL CONDITIONS:

1. This Consent to Establish is valid for the product, method of mining and capacity mentioned in the application form. This order is valid for **five** years from the date of issue of first CTE Order Dt. 27.11.2020. The proponent shall do substantial mining activities for the proposal within a period of validity period of five years from the date of issue of first Consent to Establish order Dt. 27.11.2020. If the proponent fails to do substantial mining activities for the proposal within five years then a renewal of this Consent to Establish shall be sought by the proponent.
2. The mine shall apply for grant of Consent to Operate under Section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of Air (Prevention & Control of Pollution) Act, 1981 at least 3 (three) months before the commencement of production and obtain Consent to Operate from this Board.
3. No change in mining technology and scope of work shall be made without prior approval of the Board.
4. This Consent to Establish is subject to statutory and other clearances from Govt. of Odisha and/or Govt. of India, as and when applicable.

SPECIAL CONDITIONS:

A. GENERAL:

1. The proponent shall carry out mining activity as per Environmental Clearance issued vide EC Identification No- EC24A0101OR5612898N Dt 7-12-2024 by MoEF&CC, Govt. of India modification of existing Environmental Clearance (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 Utkal- D & Utkal- 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.

2. The proponent shall mix the fly ash generated by thermal power plant with OB for back filling of the mine as per Fly Ash Notification of MoEF&CC, Govt. of India Dt. 31-12-2021 and amendments made thereafter.

3. The mine shall obtain Forest Clearance under Van (Sanrakshan Evam Samvardhan) Adhiniyam Act 1980 for the forest land involved in the mining lease.

4. Any Nalla passing through Utkal-E Coal block shall not be diverted without the prior permission from the Department of Water Resources (DoWR), Govt. of Odisha. Further, all protection measures as suggested by DoWR shall be implemented at site to protect the nallas.

5. The mine shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of Environment Impact Assessment (EIA) report.

6. The proponent shall submit six monthly progress report every year (i.e. June and December) of mining activity of the project to the Board (at Head Office and Regional Office) for record and verification.

7. The mine shall follow the Rules and Guidelines of Steel and Mines Department, Govt. of Odisha on stacking of mineral and OB.

8. The mine shall not store for more than seven days of coal production to avoid coal fire in stock yards as well as coal seam. The mine shall take adequate preventive measures for spontaneous fire in the coal seam as well as stock yard and an action plan regarding this shall be submitted at the time of consent to operate application.

9. The method of mining shall be opencast mining by shovel-dumper in overburden and surface miner, loader and tipper in coal. No change in mining technology and scope of working shall be made without prior approval of the Board.

10. Coal transportation from the Coal Stockyard of mine to the CPP NALCO through roads (including forest road, state highway SH-63 and NH-55 approx. 40 km) is allowed till Rail transport infrastructure at San-Kerjang is developed and made operational. The project proponent shall ensure that the operationalization of San-Kerjang Railway siding by July, 2025 after which the road transport of coal shall be reduced by 50%. The mine shall submit definite proposal for complete coal transportation through railway.

11. A green belt of adequate width and density preferably with local species along the periphery of the mine, inactive dumps, backfilled area, vacant area and any other vacant area shall be raised so as to provide protection against particulates and noise to ameliorate the

environment. A detailed plantation programme in conformity with approved Mining Plan shall be prepared and submitted at the time of making application for consent to operate for assessment.

12. Adequate measures shall be taken for control of noise levels below 85 dB (A) in the work environment.

13. Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.

14. A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the Organization.

15. The mine shall obtain NOC from CGWA for using and dewatering of mine pit water for the amalgamated lease.

16. The mine shall take permission from Department of Water Resources, Govt. of Odisha for use/ withdrawal of ground water and surface water.

17. The construction shall be carried out with the fly ash bricks. If the fly ash bricks are not available locally the construction may carried out with other bricks with prior intimation to the concerned Regional Office of SPC Board. A statement indicating use of fly ash bricks during construction period shall be submitted to the Board quarterly for record.

18. The construction and demolition waste to be generated from the proposed project shall be disposed of in accordance with the provision under "Construction & Demolition Wastes Management Rules 2016".

19. The proponent shall comply to the provisions of E-Waste (Management) Rules, 2022 and amendments made thereafter and shall handover e-waste to registered producers/ recyclers/ re-furbishers for proper disposal of E-Waste.

20. Adequate measures shall be taken for control of noise levels to meet the standards as per the Rule 2(1) of the Environmental (Protection) Amendment Rules, 2000 notified vide notification G.S.R. 742 (E), dated 25.09.2000 and Noise Pollution Rule, 2016.

21. The conditions as stipulated in this consent to establish order 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 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

22. The Board may impose further condition or modify the conditions stipulated in this order during installation, and / or at the time of obtaining consent to operate and may revoke this clearance in case the stipulated conditions are not implemented and / or any information suppressed in the application form.

23. The unit shall abide by the provision of Environment (Protection) Act, 1986 and rules framed thereafter.

B. <u>WATER POLLUTION:</u>

24. The mine shall construct settling tanks in series/ sedimentation pond to settle the suspended solids in the surface run-off water and seepage water.

25. Under no circumstances shall there be discharge of mine wastewater outside the ML area except during monsoon.

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

27. Dimension of the retaining wall at the toe of dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data. The detail specification shall be worked out and submitted to the Board.

28. Catch drains of appropriate size should be constructed to divert the run off from the OB dump to the siltation pond of appropriate size to arrest silt and sediment flows from soil, OB and mineral dumps. Similar arrangement shall be done around the coal stack pile area. The drains should be regularly desilted and maintained properly. Surface run-off from OB dump area, coal pile area, top soil storage area shall be routed through adequate settling pond (designed maximum hourly rain fall basis) to meet prescribed standard of SS-100 mg/l and Oil & Grease-10 mg/l before discharge into natural stream/water courses during monsoon.

29. Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells. The monitoring should be done four times a year in pre-monsoon (April/May), monsoon (August), Post - monsoon (November) and winter (January) seasons. Data thus collected should be submitted to the Board quarterly.

30. The domestic wastewater generated from the mine shall be treated in sewage treatment plant to meet the following standards as notified by the MoEF & CC, Govt. of India vide G.S.R. 1265 (E), dated 13.10.2017. The treated water shall be reused for gardening and plantation. Under no circumstances there shall be any discharge of untreated wastewater to outside the premises.

Sl. No.	Parameters	Standards
1	pH	6.5-9.0
2	BOD (mg/l)	30
3	TSS (mg/l)	<100
4	Fecal Coliform (MPN/100 ml)	<1000

31. ETP Comprising of Oil and grease trap shall be installed before discharge of effluent from workshop. Wastewater from the mine pit, check dams or any other discharge leaving lease boundary of the mine should be properly collected, treated in ETP so as to conform the following standard.

i.e. pH = 5.5 - 9.0, SS = 100 mg/l, COD = 250 mg/l & Oil & Grease = 10 mg/l.

32. The proponent shall ensure installation of ETP of adequate capacity for treatment of wastewater to be generated from the mining and other activities.

33. Rainwater harvesting practice shall be followed by utilizing the rain water collected from the roof of the buildings for recharging of ground water within the premises and other large structures as per the concept and practices prescribed by CPCB, New Delhi and details of which is available in the web site. The management of mine drainage water shall be efficiently done as per the directive of the Central Ground Water Board, New Delhi.

34. The Mine shall provide mechanized wheel washing system along with effluent treatment and recycling facilities at the exit point of the mine. Wheel wash facilities shall be provided to minimize transfer of mud from unpaved approach roads to main paved and/or public roads.

C. AIR POLLUTION:

35. Transportation road shall be black topped / concreted and sustainable coal transport measures shall be adopted to minimize air pollution.

36. No village road shall be used for transportation of coal and no road transport route shall be adopted, which is passing through any sensitive location such as schools, hospitals etc.

37. High efficiency bag filters shall be installed at crushers of the Coal Handling Plants if any. Water sprinkling systems shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points etc. Provision of movable chutes shall be made during loading at CHP to avoid free fall of coal.

38. Drilling shall be avoided to the maximum possible extent. However, drills should be wet operated or with dust extractors and controlled blasting should be practiced.

39. The mine shall develop wind barrier wall of 10 meters height all around the coal stack yard to control fugitive coal dust emission.

40. The mine shall provide adequate number of trolley mounted and mobile Fog Cannons for dust suppression.

41. Water sprinkling shall be carried out on unplanted surface of OB dump to control fugitive emission.

42. The mine shall provide water or water mixed chemicals for dust suppression at all strategic points such as coal stack yards, loading and unloading points, all transfer points, conveyors etc. to suppress dust fine atomizer nozzles arrangement shall be provided on the coal heaps and on land around the crusher / pulverizes. As far as possible conveyors and transfer points etc. shall be provided with enclosures.

43. Four (4) ambient air quality monitoring stations for 24 hours operation should be established in the core zone as well as in the buffer zone for PM_{10}, $PM_{2.5}$, SO_2 and NOx monitoring. Location of the stations shall be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Data on ambient air quality (PM_{10}, $PM_{2.5}$, SO_2 and NOx) shall be regularly submitted to the State Pollution Control Board once in six months.

44. The mine shall comply the following standard at the loading or unloading, haul road, coal transportation road, coal handling plant (CHP), blasting, drilling, overburden dumps or any other dust generating external sources as per the Rule 2(1) of the Environmental Amendment Rules, 2000 notified vide notification G.S.R. 742 (E), dated 25.09.2000.

Pollutant	Time weighted average	Concentration in Ambient Air	Method of Measurement
1	2	3	4
SPM	Annual Average* 24 hours**	360µg/m^3 500µg/m^3	High volume sampling (Average flow rate not less than 1.1m^3/min)
RPM (size less	Annual Average*	180µg/m^3	Respirable Particulate matter

Pollutant	Time weighted average	Concentration in Ambient Air	Method of Measurement
1	2	3	4
than 10 µm)	24 hours**	250µg/m^3	sampling and analysis
SO_2	Annual Average*	80µg/m^3	Improved west and Gaeke method
	24 hours**	120µg/m^3	Ultraviolet fluorescence
NO_2	Annual Average*	80µg/m^3	Jacob & Hochheiser Modified (Na-Arsenic) Method Gas phase Chemiluminescence
	24 hours**	120µg/m^3	

(*Annual Arithmetic mean for the measurements taken in a year, following the guidelines for frequency of sampling laid down in clause-2.
**24 hourly/ 8 hourly values shall be met 92% of the time in a year. However, 8% of the time may exceed but not on two consecutive days.)

45. The haul roads and arterial roads shall be made black topped / concrete with avenue plantation.

46. The unit shall strictly comply with the consent conditions and adequate air pollution control measures shall be installed in different potential dust emission points for control of the air pollution.

47. Coal stockpile/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 shall be made to avoid air borne dust.

48. Water sprinkling shall be carried out on unplanted surface of OB dump to control fugitive emission.

49. Continuous ambient air quality monitoring stations (CAAQMS) with data transfer facility shall be established in the core zone as well as in the buffer zone for PM_{10}, $PM_{2.5}$, SO_2 and NO_x monitoring. Location of the stations shall be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.

D. <u>SOLID & HAZARDOUS WASTE:</u>

50. The Hazardous Wastes generated from the mine shall be stored on concrete floor under covered shed and disposed of as per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as amended from time to time.

51. Top soil of mining area shall be stacked separately with proper slope at earmarked site (s) with adequate measures and shall be used for reclamation and rehabilitation of mined out areas.

52. Back filling of abandoned pit shall be carried out as per approved mining plan. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status in this regard shall be submitted to the Board on yearly basis. The mine shall explore the possibility for back filling of mine voids by fly ash generation from nearby thermal power plant.

53. The management practices for Over Burden shall be carried out as per the approved Mining Plan and subsequent amendments. The Mine shall submit compliances in this regard for any change in Mine Plan.

54. Municipal solid waste generated from the township shall be disposed-off as per Solid Waste Management Rules, 2016.

55. The proponent shall segregate organic waste segregated organic waste shall be converted to manure through organic waste converter. The proponent shall store the organic waste in closed shed inside the proposed township, if any, before use of the same in organic waste converter.

56. All required sanitary and hygienic measures shall be in place before starting construction activities of township and to be maintained throughout the construction phase.

Encl.: As above

07/12

MEMBER SECRETARY

To

The GGM Smelter and Power,
M/s Utkal-D and E Coal Mines of M/s NALCO
City- NALCO Bhawan, P/1 Nayapalli
Tehsil- Bhubaneswar, District- Khurda

Memo No._____/ Date: _____/

Copy forwarded to

1. The Director, Directorate of Mines, Govt. of Odisha, Bhubaneswar
2. The Collector and District Magistrate, Angul
3. The DFO, Angul
4. The Regional Officer, SPCB, Odisha, Angul
5. CTO Cell (Mines), SPCB, Odisha, Bhubaneswar
6. HWM Cell, SPCB, Odisha, Bhubaneswar
7. Guard file

ADDL. CHIEF ENV. ENGINEER

NATIONAL AMBIENT AIR QUALITY STANDARDS

CENTRAL POLLUTION CONTROL BOARD

NOTIFICATION

New Delhi, the 18th November, 2009

No. B-29016/20/90/PCI-L.—In exercise of the powers conferred by Sub-section (2) (h) of section 16 of the Air (Prevention and Control of Pollution) Act, 1981 (Act No.14 of 1981), and in supersession of the Notification No(s). S.O. 384(E), dated 11th April, 1994 and S.O. 935(E), dated 14th October, 1998, the Central Pollution Control Board hereby notify the National Ambient Air Quality Standards with immediate effect, namely:-

NATIONAL AMBIENT AIR QUALITY STANDARDS

S. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO_2), $\mu g/m^3$	Annual*	50	20	- Improved West and Gaeke
		24 hours**	80	80	-Ultraviolet fluorescence
2	Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual*	40	30	- Modified Jacob & Hochheiser (Na-Arsenite)
		24 hours**	80	80	- Chemiluminescence
3	Particulate Matter (size less than 10µm) or PM_{10} $\mu g/m^3$	Annual*	60	60	- Gravimetric - TOEM - Beta attenuation
		24 hours**	100	100	
4	Particulate Matter (size less than 2.5µm) or $PM_{2.5}$ $\mu g/m^3$	Annual*	40	40	- Gravimetric - TOEM - Beta attenuation
		24 hours**	60	60	
5	Ozone (O_3) $\mu g/m^3$	8 hours**	100	100	- UV photometric - Chemilminescence - Chemical Method
		1 hour**	180	180	
6	Lead (Pb) $\mu g/m^3$	Annual*	0.50	0.50	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper - ED-XRF using Teflon filter
		24 hours**	1.0	1.0	
7	Carbon Monoxide (CO) mg/m^3	8 hours**	02	02	- Non Dispersive Infra Red (NDIR) spectroscopy
		1 hour**	04	04	
8	Ammonia (NH_3) $\mu g/m^3$	Annual*	100	100	-Chemiluminescence -Indephenol blue method
		24 hours**	400	400	

(1)	(2)	(3)	(4)	(5)	(6)
9	Benzene (C_6H_6) $\mu g/m^3$	Annual*	05	05	- Gas chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10	Benzo(a)Pyrene (BaP) - particulate phase only, ng/m^3	Annual*	01	01	- Solvent extraction followed by HPLC/GC analysis
11	Arsenic (As), ng/m^3	Annual*	06	06	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni), ng/m^3	Annual*	20	20	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Note. — Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.

SANT PRASAD GAUTAM, Chairman
[ADVT-III/4/184/09/Extv.]

Note: The notifications on National Ambient Air Quality Standards were published by the Central Pollution Control Board in the Gazette of India, Extraordinary vide notification No(s). S.O. 384(E), dated 11th April, 1994 and S.O. 935(E), dated 14th October, 1998.

Printed by the Manager, Government of India Press, Ring Road, Mayapuri, New Delhi-110064
and Published by the Controller of Publications, Delhi-110054

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ANNEXURE-II

SCHEDULE
(see rule 3(I) and 4(I)

Ambient Air Quality Standards in respect of Noise

Area Code	Category of Area/Zone	Limits in dB(A) Leq *	
		Day Time	Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Note

1. Day time shall mean from 06:00 A.M. to 10:00 P.M.
2. Night time shall mean from 10:00 P.M. to 06:00 A.M.
3. Silence zone is defined as an area comprising not less than 100 meters around hospitals, educational institutions and courts. The silence zones are zones which are declared as such by the competent authority.
4. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.

*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

A "decibel" is a unit in which noise is measured.

"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq : It is an energy mean of the noise level, over a specified period.

[F.No. Q-14013/4/96-CPA]
VIJ... R. Secy.

Validity unknown
Digitally Signed by KALPANA BEHERA
Date: 2024.12.09 11:36:17 IST

True Copy attested
B. Behera
Adv

BY REGD. POST WITH AD

STATE POLLUTION CONTROL BOARD, ODISHA

[DEPARTMENT OF FOREST, ENVIRONMENT& CLIMATE CHANGE, GOVERNMENT OF ODISHA]
A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012
Phone-2561909, Fax: 2562822, 2560955 E-mail: paribesh1@ospcboard.org, Website: www.ospcboard.org

CONSENT ORDER

No. 14291 / IND-I-CON-7003 Dt. 29.07.2025 /

CONSENT ORDER NO. 4096.

Sub: Consent for discharge of sewage and trade effluent under section 25/26 of Water (PCP) Act, 1974 and for existing / new operation of the plant under section 21 of Air (PCP) Act, 1981.

Ref: **Your online application No.6056264, Dated 30-12-2024 and online reply dated 23-07-2025.**

Consent to operate is hereby granted under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of Air (Prevention & Control of Pollution) Act, 1981 and rules framed thereunder to

Name of the Industry: **UTKAL-D AND UTKAL-E COAL MINES OF M/S NALCO LTD.**

Name of the Occupier & Designation: **SRI SRINIVASA SUBRAHMANYAM NERALLA, GGM (SMELTER) & EPO ED S & P,**

Address: **AT: RAIJHARAN, NANDICCHOR, KOSAL, PO: CHHENDIPADA, DIST: ANGUL**

This consent order is valid for the period upto **31.03.2026.**

This consent order supersedes the earlier consent order issued vide letter No.6581, dated 28.03.2025.

Details of Products Manufactured

Sl. No.	Product	Quantity
1.	*Coal*	*4.0 MTPA*

This consent order is valid for the specified outlets, discharge quantity and quality, specified chimney/stack, emission quantity and quality of emissions as specified below. This consent is granted subject to the general and special conditions stipulated therein.

A. **Discharge permitted through the following outlet subject to the standard**

Out let No.	Description of outlet	Point of discharge	Quantity of discharge KL/hr	Prescribed Standard				
				pH	TSS (mg/l)	Oil & Grease (mg/l)	BOD (mg/l)	COD (mg/l)
01	*Septic tank (Domestic effluent)*	*Soak pit*	--	*5.5 to 9.0*	*200*	--	*100*	--
02	*Mine Drainage water/surface runoff/other wastewater*	*On land/ inland surface water body*	--	*5.5 to 9.0*	*100*	*10*	--	*250*

B. **Emission permitted through the following stack subject to the prescribed standard**

Chimney Stack No.	Description of Stack	Stack height (m)	Quantity of emission	Prescribed Standard		
				PM (mg/Nm^3)	SO_2	NO_x
						--

C. **Disposal of solid waste permitted in the following manner**

Sl. No.	Type of Solid waste	Quantity generated (TPD)	Quantity to be reused on site(TPD)	Quantity to be reused off site(TPD)	Quantity disposed off (TPD)	Description of disposal site.
1.	*Top soil/over burden*	*As per approved mining plan*	--	--	--	*As per approved mining plan*

D. GENERAL CONDITIONS FOR ALL UNITS

1. The consent is given by the Board in consideration of the particulars given in the application. Any change or alternation or deviation made in actual practice from the particulars furnished in the application will also be the ground for liable to review/variation/revocation of the consent order under section 27 of the Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981 and to make such variations as deemed fit for the purpose of the Acts.
2. The occupier would immediately submit revised application for consent to operate to this Board in the event of any change in the quantity and quality of raw material / products / manufacturing process or quantity /quality of the effluent rate of emission / air pollution control equipment / system etc.
3. The applicant shall not change or alter either the quality or quantity or the rate of discharge or temperature or the route of discharge without the previous written permission of the Board.
4. The application shall comply with and carry out the directives/orders issued by the Board in this consent order without any negligence on his/her part. In case of non-compliance of any order/directives issued at any time and/or violation of the terms and conditions of this consent order, the applicant shall be liable for legal action as per the provisions of the Law.
5. The applicant shall make an application for grant of fresh consent at least 90 days before the date of expiry of this consent order.
6. The issuance of this consent does not convey any property right in either real or personal property or any exclusive privileges nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Central, State laws or regulation.
7. This consent does not authorize or approve the construction of any physical structure or facilities or the undertaking of any work in any natural water course.
8. The applicant shall display this consent granted to him in a prominent place for perusal of the public and inspecting officers of this Board.
9. An inspection book shall be opened and made available to Board's Officers during the visit to the factory.
10. The applicant shall furnish to the visiting officer of the Board any information regarding the construction, installation or operation of the plant or of effluent treatment system / air pollution control system / stack monitoring system any other particulars as may be pertinent to preventing and controlling pollution of Water / Air.
11. The applicant shall display suitable caution board at the place where the effluent is entering into any water-body or any other place to be indicated by the Board, indicating therein that the area into which the effluents are being discharged is not fit for the domestic use/bathing.
12. Storm water shall not be allowed to mix with the trade and/or domestic effluent on the upstream of the terminal manholes where the flow measuring devices will be installed.
13. The applicant shall maintain good house-keeping both within the factory and the premises. All pipes, valves, sewers and drains shall be leak-proof. Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas.
14. The applicant shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems install or used by him to achieve with the term(s) and conditions of the consent.
15. Care should be taken to keep the anaerobic lagoons, if any, biologically active and not utilized as mere stagnation ponds. The anaerobic lagoons should be fed with the required nutrients for effective digestion. Lagoons should be constructed impervious.
16. The utilization of treated effluent on factory's own land, if any, should be completed and there should be no possibility of the effluent gaining access into any drainage channel or other water courses either directly or by overflow.
17. The effluent disposal on land, if any, should be done without creating any nuisance to the surroundings or inundation of the lands at any time.
18. If at any time the disposal of treated effluent on land becomes incomplete or unsatisfactory or create any problem or becomes a matter of dispute, the occupier must adopt alternate satisfactory treatment and disposal measures.
19. The sludge from treatment units shall be dried in sludge drying beds and the drained liquid shall be taken to equalization tank.
20. The effluent treatment units and disposal measures shall become operative at the time of commencement of production.
21. The applicant shall provide port holes for sampling the emissions and access platform for carrying out stack sampling and provide electrical outlet points and other arrangements for chimneys/stacks and other sources of emissions so as to collect samples of emission by the Board or the applicant at any time in accordance with the provision of the Acts or Rules made therein.

22. The applicant shall provide all facilities and render required assistance to the Board staff for collection of samples / stack monitoring / inspection.
23. The applicant shall not change or alter either the quality or quantity or rate of emission or install, replace or alter the air pollution control equipment or change the raw material or manufacturing process resulting in any change in quality and/or quantity of emissions, without the previous written permission of the Board.
24. No control equipments or chimney shall be altered or replaced or as the case may be erected or re-erected except with the previous approval of the Board.
25. The liquid effluent arising out of the operation of the air pollution control equipment shall be treated in the manner so as to meet the standards prescribed by the Board in accordance with the provisions of Water (Prevention and Control of Pollution) Act, 1974 (as amended).
26. The stack monitoring system employed by the applicant shall be opened for inspection to this Board at any time.
27. There shall not be any fugitive or episodal discharge from the premises.
28. In case of such episodal discharge/emissions the occupier shall take immediate action to bring down the emission within the limits prescribed by the Board and stop the operation of the plant if required. Report of such accidental discharge /emission shall be brought to the notice of the Board within 24 hours of occurrence.
29. The applicant shall keep the premises and air pollution control equipments clean and make all hoods, pipes, valves, stacks/chimneys leak proof. The air pollution control equipments, location, inspection chambers, sampling port holes shall be made easily accessible at all times.
30. Any upset condition in any of the plant/plants of the factory which is likely to result in increased effluent discharge/emission of air pollutants and / or result in violation of the standards mentioned shall be reported to the Headquarters and Regional Office of the Board by E-mail within 2 hours of its occurrence.
31. The occupier has to ensure that minimum three varieties of trees are planted at the density of not less than 1000 trees per acre. The trees may be planted along boundaries of the premises. This plantation is stipulated over and above the bulk plantation of trees in that area.
32. The solid waste such as sweeping, wastage packages, empty containers residues, sludge including that from air pollution control equipments collected within the premises of the shall be disposed off scientifically to the satisfaction of the Board.
33. All solid wastes arising in the premises shall be properly classified and disposed off to the satisfaction of the Board by :
    i) Land fill in case of inert material, care being taken to ensure that the material does not give rise to leachate which may percolate into ground water or carried away with storm run-off.
    ii) Controlled incineration, wherever possible in case of combustible organic material.
    iii) Composting, in case of bio-degradable material.
34. Any toxic material shall be detoxicated if possible, otherwise be sealed in steel drums and buried in protected areas after obtaining approval of this Board in writing. The detoxication or sealing and burying shall be carried out in the presence of Board's authorized persons only. Letter of authorization shall be obtained for handling and disposal of hazardous wastes.
35. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any control equipment either in whole or in part) this Board shall after giving the applicant an opportunity of being heard, vary all or any of such condition and thereupon the applicant shall be bound to comply with the conditions so varied.
36. The applicant, his/heirs/legal representatives or assignees shall have no claim whatsoever to the condition or renewal of this consent after the expiry period of this consent.
37. The Board reserves the right to review, impose additional conditions or condition, revoke change or alter the terms and conditions of this consent.
38. Notwithstanding anything contained in this conditional letter of consent, the Board hereby reserves to it the right and power under section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 to review any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Act by the Board.
39. The conditions imposed as above shall continue to be in force until revoked under section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 and section 21 A of Air (Prevention & Control of Pollution) Act, 1981.
40. The occupier shall comply to the conditions stipulated in CTE order issued by Odisha State Pollution Control Board and conditions stipulated in Environmental Clearances issued by MoEF&CC, Govt. of India.
41. The occupier shall abide by E(P) Act, 1986 and Rules framed there-under.
42. In case the consent fee is revised upward during this period, the industry shall pay the differential fees to the Board (for the remaining years) to keep the consent order in force. If they fail to pay the amount within the period stipulated by the Board the consent order will be revoked without prior notice.

GENERAL CONDITIONS FOR UNITS WITH INVESTMENT OF MORE THAN Rs 50 CRORES, AND 17 CATEGORIES OF HIGHLY POLLUTING INDUSTRIES (RED A).

1. The applicant shall analyse the emissions every month for the parameters indicated in TABLE. B & C as mentioned in this order and shall furnish the report thereof to the Board by the 10th of the succeeding month.

2. The applicant shall provide and maintain at his own cost three ambient air quality monitoring stations for monitoring Suspended Particulate Matter, Sulphor Dioxide, Oxides of Nitrogen, Hydro-Carbon, Carbon-Monoxide and monitor the same once in a day/week/fortnight/month. The data collected shall be maintained in a register and a monthly extract be furnished to the Board.

3. The applicant shall provide and maintain at his own cost a meteorological station to collect the data on wind velocity, direction, temperature, humidity, rainfall, etc. and the daily reading shall be recorded and the extract sent to the Board once in a month.

4. The applicant shall forward the following information to the Member Secretary, State Pollution Control Board, Odisha, Bhubaneswar regularly.
   a. Report of analysis of stack monitoring, ambient air quality monitoring meteorological data as required every month.
   b. Progress on planting of trees quarterly.

5. The applicant shall install mechanical composite sampling equipment and continuous flow measuring / recording devices on the effluent drains of trade as well as domestic effluent. A record of daily discharge shall be maintained.

6. The following information shall be forwarded to the Member Secretary on or before 10th of every month.

   a. Performance / progress of the treatment plant.
   b. Monthly statement of daily discharge of domestic and/or trade effluent.

7. Non-compliance with effluent limitations

   a) If for any reason the applicant does not comply with or is unable to comply with any effluent limitations specified in this consent, the applicant shall immediately notify the consent issuing authority by telephone and provide the consent issuing authority with the following information in writing within 5 days of such notification.

      Causes of non-compliance

      i) A description of the non-compliance discharge including its impact on the receiving waters.
      ii) Anticipated time of continuance of non-compliance if expected to continue or if such condition has been corrected the duration or period of non-compliance.
      iii) Steps taken by the applicant to reduce and eliminate the non-complying discharge and
      iv) Steps to be taken by the applicant too prevent the condition of non-compliance.

   b) The applicant shall take all reasonable steps to minimize any adverse impact to natural waters resulting from non-compliance with any effluent limitation specified in this consent including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

   c) Nothing in this consent shall be construed to relieve the applicant from civil or criminal penalties for non-compliance whether or not such non-compliance is due to factors beyond his control, such as break-down, electric failure, accident or natural disaster.

8. The applicant shall at his own cost get the effluent samples collected both before and after treatment and get them analysed at an approval laboratory every month for the parameters indicated in Part-D and shall submit in duplicate the report thereof to the Board.

9. The addition of various treatment chemicals should be done only with mechanical dosers and proper equipment for regulation of correct dosages determined daily and for proper uniform feeding. Crude practices such as dumping of chemicals in drains or sumps or trickling of acids or alkalies arbitrarily and utilizing poles for stirring etc. should not be resorted to.

10. In the disposal of treated effluent on land for irrigation, the industry shall keep in view of the need for;

    a. Rotation of crops

    b. Change of point of application of effluent on land

    c. A portion of land kept fallow.

11. The adoption of these would avoid soil becoming sick or state, the industry may ensure this in consultation with the Agriculture Department.

12. It is the sole responsibility of the industry to ensure that there are no complaints at any time from the royats in the surrounding areas as a result of discharge of sewage or trade effluent if any.

13. Proper housekeeping shall be maintained by a dedicated team.

14. The industry must constitute a team of responsible and technically qualified personnel who will ensure continuous operation of all pollution control devices round the clock (including night hours) and should be in a position to explain the status of operation of the pollution control measures to the inspecting officers of the Board at any point of time. The name of these persons with their contact telephone numbers shall be intimated to the concerned, Regional Officer and Head Office of the Board and in case of any change in the team it shall be intimated to the Board immediately.

E. SPECIAL CONDITIONS :

1) This Consent Order to the aforesaid mining project is under provisions of Water (PCP) Act, 1974 and Air (PCP) Act, 1981. It does not tantamount to approvals / consent / permissions etc. required to be obtained under any other Act / Rule / Regulation. Operation of the mining project is subject to availability of all other statutory clearances required under relevant Acts/Rules.
2) The quantity of production shall be determined on a monthly pro-rata basis from the date of issue of this order. If the date of issue is 15th of the month, or earlier, then the entire month will be considered for calculation, otherwise the quantity shall be determined from the next month on pro-rata basis.
3) Mining operation in the amalgamated block of Utkal-D & Utkal-E Mines of M/s. NALCO Ltd is subject to permission from MoEF & CC, Govt. of India, Steel & Mines Department, Govt. of Odisha and State Forest Department.
4) Permission from competent authority shall be obtained for drawl of surface water/ground water for usage.
5) Excavation of coal shall be done using surface miners. The surface miner shall be operated along with dust control measures.
6) Drills shall either be operated with dust extractors or equipped with water injection system to minimize dust generation in the work environment. Controlled blasting shall also be done and blasting shall be carried out during day time.
7) Loading, unloading and coal stack yard shall have adequate dust suppression measures. The pollution control systems shall be properly maintained and operated.
8) The haul roads and arterial roads shall be made black topped / concrete with avenue plantation. Necessary dust suppression measures shall also be taken in these roads to prevent generation of dust during movement of vehicles. Plantation of thick leaf trees on both sides of the road shall be done.
9) Mobile water sprinkling shall be provided for dust suppression on the temporary quarry haul roads and sprinkling of water shall be done at desired intervals so as to prevent generation of fugitive dust.
10) All internal coal transportation roads, temporary mine haul roads and other material transportation roads of the mine shall be maintained properly to avoid creation of ruts and pot holes.
11) Coal transportation from the Coal Stockyard of mine to Captive Power Plant NALCO shall be done through road over a distance of 40 km [2 km within the lease area (In pit to ML boundary) + 38 km outside the ML Area (Approach Road to SH-63, SH-63 & NH-55)] is allowed with permission from concerned authority till Rail transport infrastructure at San-Kerjang is developed and made operational. The project proponent shall ensure that the operationalization of San-Kerjang

Railway siding by December, 2026 to reduce the coal transportation by road (19 km distance).

12) Plantation shall be carried out with the saplings of native species of not less than 2 meter height, on both the sides of the coal transportation route in consent with the highway authorities (wherever required). The community plantation shall be carried out within the Angul town with fruit bearing species and ensure the survival of the same.

13) Ambient Air Quality (AAQ) and Noise quality data along the entire coal transportation route shall be monitored and data shall be submitted to Board on annual basis. In case of exceedance observed in monitoring value, remedial action shall be taken to bring down the values within prescribed limit.

14) The railway sidings shall be upgraded to silo-loading facilities integrated with air pollution control facilities. A time-bound action plan shall be prepared and submitted to the Board.

15) Coal transportation through roads shall be done in covered vehicles. To ensure that the trucks are covered with tarpaulin, IP cameras shall be installed at the exit points of mine and shall be connected to the SPCB server. No village road shall be used for transportation of coal and no road transport route shall be adopted, which is passing through any sensitive location such as schools, hospitals etc.

16) After commissioning of the Mahanadi Coal Rail Ltd. (MCRL) Railway siding, coal shall be conveyed 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 MCRL Railway Siding for further transportation of coal to the delivery point in accordance with the provisions of the Coal Mining Agreement. For the establishment of MCRL railway siding, separate Consent to Establish shall be obtained from the Board.

17) Instant water shower system at the exit point of the quarry shall be provided and all heavy vehicles loaded with coal shall move through the instant shower system. Mechanized wheel washing facility for coal transport vehicles at the exit point of the quarry or at the coal stack yard as per the requirement shall be provided. The wheel washing facility shall be integrated with complete recirculation system. The existing wheel washing facility shall be upgraded to body washing facility alongwith wastewater treatment and recirculation system.

18) Transportation of coal through rail shall be enhanced to 80% of total coal to be despatched in the year 2025-26.

19) All necessary precaution shall be taken to prevent fire in coal stack yards and coal seams. Necessary precautionary measures, inter alia, maintaining a minimum stock shall be taken to avoid fire hazards in the coal stack yard. A technology based mechanism shall be adopted for monitoring and mitigation of coal fire.

20) The mine shall develop wind barrier wall of 10 meters height all round the coal stack yard to control fugitive coal dust emission.

21) Fog canons shall be deployed at the coal stockyard for control of fugitive dust emission.

22) Ambient air quality measured at a distance of 500m from the dust generating sources {Loading or un-loading, haul road, coal transportation road, coal handling plant (CHP), Railway siding, Blasting, Drilling, overburden dumps or any other dust generating source like nearby roads etc.} in the down wind direction shall meet the following standards.

Pollutant	Concentration in (microgram/m^3) (24 hourly)
SPM	- 500
RPM	- 250
SO_2	- 120
NO_x	- 120

In case any residential or commercial or industrial place falls within 500 metres of any generating sources, the National Ambient Air Quality Standards for industrial area notified shall be applicable.

23) Adequate Ambient Air Quality Monitoring Stations (at least 04 nos.) shall be established in core as well as in buffer zone and locations shall be decided in consultation with the Regional Officer, State Pollution Control Board. Monitoring of parameters shall as SPM, PM_{10}, $PM_{2.5}$, SO_2 and NO_x shall be done.

24) Monitoring of Ambient Air Quality of the mine shall be done once in a fortnight (24 hourly) and data shall be submitted to the State Pollution Control Board once in a year.

25) Continuous ambient air quality monitoring stations (CAAQMS) with data transfer facility shall be established in the core zone as well as in the buffer zone for PM_{10}, $PM_{2.5}$, SO_2 and NOx monitoring. Location of the stations shall be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets in consultation with the Regional Officer, State Pollution Control Board. The action plan with time limit for installation of CAAQMS shall be submitted within 07 days. Till installation of CAAQMS, AAQ monitoring shall be carried out as per Special Condition No.22 & 23.

26) The top soil and overburden shall be removed separately and stored it in separate heaps, duly covered with grass and vegetation and shall be utilized for backfilling of mined out area in future. No OB dumping shall be done outside the mine lease area.

27) The proponent shall mix the fly ash generated by thermal power plant with OB for back filling of the mine as per Fly Ash Notification of MoEF&CC, Govt. of India Dt. 31-12-2021 and amendments made thereafter.

28) Action shall be taken for removal of residual coal going along with overburden so that spontaneous fire in the dump site can be eliminated. Water sprinkling arrangements shall also be provided at the coal seam faces and active dump sites to control fire.

29) The surface runoff generated from the mining area during monsoon shall be diverted to adequate size of sedimentation pond for storage and use. Systems shall be in place for collection and channelizing the surface runoff to the sedimentation pond.

30) Strata water generated during mining operation shall be diverted to adequate size of sedimentation pond for storage and use.

31) Water from sedimentation pond shall be used for sprinkling purposes on haulage roads, other dust generating areas, vehicle washing and plantation activities. In case of discharge of strata water and runoff to outside, it shall conform to the prescribed standard (Part-A, Sl. No. 2).

32) Workshop from where water pollution due to wash out of oil and grease and suspended solids is expected, Effluent Treatment Plant (ETP) shall be operated at all the time and the quality of the treated wastewater shall remain within the following standards and shall be re-used for washing of vehicles:

pH	-	6.5 -8.5
TSS	-	50 mg/l
Oil & grease	-	10 mg/l
COD	-	150 mg/l

No wastewater from workshop shall be allowed to be discharged to outside under any circumstances.

33) Domestic effluents shall be treated in a sewage treatment plant (STP) and or shall be discharged to soak pit via septic tank constructed as BIS specification. The treated wastewater quality of STP shall remain within the following standards and shall be used for plantation:

pH	-	6.5 -9.0
TSS	-	<100 mg/l
BOD	-	30 mg/l
Fecal Coliform	-	<1000 MPN/100 ml.

34) Acid mine drainage water if any, shall be treated adequately and used only for sprinkling activity.

35) 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.

36) Any Nalla passing through Utkal-E Coal block shall not be diverted without the prior permission from the Department of Water Resources (DoWR), Govt. of Odisha. Further, all protection measures as suggested by DoWR shall be implemented at site to protect the nallas.

37) The pre-mining and mining activities shall be commenced with a restriction not to excavate and dump overburden within 15 mtrs. on both side of nallah till clearance

from Water Resources Department, Govt. of Odisha for diversion of nallah is obtained.

38) Adequate safety measures like construction of retaining wall, garland drain and settling ponds and embankment shall be made to prevent wash out during rain from the excavation area, OB dumping areas, topsoil dump, coal stockyard and other areas to these nallahs.

39) The diversion of nallah and realignment shall be done as per the design and plan approved by Water Resources Dept., Govt. of Odisha. A copy of the permission from the Water Resources Dept. regarding diversion of nallah shall be submitted to the Board for record.

40) Mining shall be carried out as per statuette at a safe distance from the SinghadaJhor and the nallah flowing within the lease boundary. An embankment of 3m height shall be constructed within 2 years of start of mining operations along the southern bank of the Jhor and also by the side of the diverted nallahs. The slope of the embankment shall at least 2:1 towards the ML: The height of the embankment shall be at least 5 m higher than the HFL.

41) Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells. The monitoring should be done four times a year in pre-monsoon (April/May), monsoon (August), post-monsoon (November) and winter (January) seasons. Data thus collected should be submitted to the Board quarterly.

42) Adequate measures shall be taken for control of noise levels below the following limits.

(06.00 AM – 10.00 PM)	-	Leq 75 dB(A)
(10.00PM – 06.00 AM)	-	Leq 70 dB(A)

43) Ambient air quality monitoring data, noise monitoring data and wastewater quality monitoring data shall be electronically displayed at the entry point of the mine or at a suitable location of the mine for public view.

44) The mine shall take action to supply of drinking water in the peripheral villages.

45) The height of the stack connected to DG sets of capacity more than 800 KW (1000 KVA) shall conform to the following:
   i) $14Q^{0.3}$, Q = Total SO_2 emission from the plant in kg/hr.
   ii) Minimum 6m. above the building where generator set is installed.
   iii) 30 m.

46) The height of the stack connected to DG set of capacity less than and upto 800 KW (1000 KVA) shall conform to the following:
   i) $H = h+0.2\sqrt{KVA}$
   ii) h= Height of the building where it is installed in meter
   iii) KVA = Capacity of DG set
   iv) H = Height of the stack in meter above ground level.

47) All DG sets installed before 1.7.2004 shall be scrapped. DG sets complying with either State-I or Stage-II emission norms shall reduce Particulate Matter Emission by 70% by installing RECD without affecting any other emission parameters as per the CPCB guidelines and Board's letter vide No.17927, dated 14.11.2023 and letter No.7146, dated 10.05.2024, in this regard.

48) Plantation of trees shall be undertaken in the colony/ township, over top soil dumps, OB dumps, along the side of haul road and in other areas of the mines not being utilized for mining activities. The mine shall take up avenue plantation and plantation in nearby village areas in consultation with DFO/Horticulture Department. The plantation details shall be submitted to the Board before end of April every year.

49) The annual coal production status shall be submitted to the Board latest by 30th April every year.

50) The environmental statement report for the financial year ending 31st March shall be submitted to the Board in Form-V on or before 30th September every year.

29/7/25

MEMBER SECRETARY
STATE POLLUTION CONTROL BOARD, ODISHA

TO,

THE GGM (SMELTER) & EPO ED S & P,
UTKAL-D & UTKAL-E COAL MINES OF M/S NALCO LTD.,
AT: NALCO BHAWAN, P-1, NAYAPALLI,
BHUBANESWAR, DIST: KHURDA, PIN: 751 013.

Memo No._____/Dt._____/

Copy forwarded to :

i) Regional Officer, State Pollution Control Board, **Angul**
ii) District Collector, **Angul**
iii) Director of Mines, Govt. of Odisha, Bhubaneswar
iv) Director, Environment-cum-Special Secretary, F, E & CC Dept., Govt. of Odisha, Bhubaneswar.
v) D.F.O, **Angul**
vi) Deputy Director of Mines, **Talcher**
vii) Chief Env. Scientist, Central Laboratory, SPCB, Bhubaneswar
viii) Addl. Chief Env. Engineer, (Hazardous Waste Management Cell)
ix) Guard File

CHIEF ENV. ENGINEER (M)
STATE POLLUTION CONTROL BOARD, ODISHA

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS PART –A : EFFLUENTS

Sl. No.	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Costal Areas
		(a)	(b)	(c)	(d)
1.	Colour & odour	Colourless/ Odourless as far as practible	--	See 6 of Annex-1	See 6 of Annex-1
2.	Suspended Solids (mg/l)	100	600	200	a. For process wastewater – 100 b. For cooling water effluent 10% above total suspended matter of influent.
3.	Particular size of SS	Shall pass 850	--	--	--
5.	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
6.	Temperature	Shall not exceed 5°C above the receiving water temperature	--	--	Shall not exceed 5°C above the receiving water temperature
7.	Oil & Grease mg/l max.	10	20	10	20
8.	Total residual chlorine	1.0	--	--	1.0
9.	Ammonical nitrogen (as N) mg/l max.	50	50	--	50
10.	Total Kajeldahl nitrogen (as NH_3) mg/1 max.	100	--	--	100
11.	Free ammonia (as NH_3) mg/1 max.	5.0	--	--	5.0
12.	Biochemical Oxygen Demand (5 days at (20°C) mg/1 max.	30	350	100	100
13.	Chemical Oxygen Demand, mg/1 max.	250	--	--	250
14.	Arsenic (as As) mg/1 max.	0.2	0.2	0.2	0.2
15.	Mercury (as Hg) mg/1 max.	0.01	0.01	--	0.001
16.	Lead (as pb) mg/1 max.	01.	1.0	--	2.0

Sl. No.	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Costal Areas
		(a)	(b)	(c)	(d)
17.	Cardmium (as Cd) mg/1 max.	2.0	1.0	--	2.0
18.	Hexavalent Chromium (as Cr + 6) mg/l max.	0.1	2.0	--	1.0
19.	Total Chromium (as Cr) mg/l max.	2.0	2.0	--	2.0
20.	Copper (as Cu) mg/l max.	3.0	3.0	--	3.0
21.	Zinc (as Zn) mg/l max.	5.0	15	--	15
22.	Selenium (as Sc) mg/l max.	0.05	0.05	--	0.05
23.	Nickel (as Nil) mg/l max.	3.0	3.0	--	5.0
24.	Cyanide (as CN) mg/l max.	0.2	2.0	0.2	0.02
25.	Fluoride (as F) mg/l max.	2.0	15	--	15
26.	Dissolved Phosphates (as P) mg/l max.	5.0	--	--	--
27.	Sulphide (as S) mg/l max.	2.0	--	--	5.0
28.	Phennolic compounds as (C_6H_5OH) mg/l max.	1.0	5.0	--	5.0
29.	Radioactive materials a. Alpha emitter micro curle/ml. b. Beta emitter micro curle/ml.	10^{-7} 10^{-8}	10^{-7} 10^{-8}	10^{-8} 10^{-7}	10^{-7} 10^{-8}
30.	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
31	Manganese (as Mn)	2 mg/l	2 mg/l	--	2 mg/l
32.	Iron (Fe)	3 mg/l	3 mg/l	--	3 mg/l
33.	Vanadium (as V)	0.2 mg/l	0.2 mg/l	--	0.2 mg/l
34.	Nitrate Nitrogen	10 mg/l	--	--	20 mg/l

NATIONAL AMBIENT AIR QUALITY STANDARDS

Sl. No.	Pollutants	Time Weighed Average	Concentrate of Ambient Air		
			Industrial Residential, Rural and other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1.	Sulphur Dioxide (SO_2), µg/m³	Annual *	50	20	-Improved west and Gaeke
		24 Hours **	80	80	- Ultraviolet fluorescence
2.	Nitrogen Dioxide (NO_2), µg/m³	Annual *	40	30	- Modified Jacob &Hochheiser (Na-Arsenite)
		24 Hours **	80	80	- Chemiluminescence
3.	Particulate Matter (size less than 10µm) or PM_{10}µg/m³	Annual *	60	60	-Gravimetric - TOEM
		24 Hours **	100	100	- Beta Attenuation
4.	Particulate Matter (size less than 2.5µm) or $PM_{2.5}$µg/m³	Annual *	40	40	-Gravimetric - TOEM
		24 Hours **	60	60	- Beta Attenuation
5.	Ozone (O_3) µg/m³	8 Hours **	100	100	- UV Photometric - Chemiluminescence
		1 Hours **	180	180	- Chemical Method
6.	Lead (Pb) µg/m³	Annual *	0.50	0.50	-AAS/ICP method after sampling on EMP 2000 or equivalent filter paper. - ED-XRF using Teflon filter
		24 Hours **	1.0	1.0	
7.	Carbon Monoxide (CO) mg/m³	8 Hours **	02	02	- Non Dispersive Infra Red (NDIR) Spectroscopy
		1 Hours **	04	04	
8.	Ammonia (NH_3) µg/m³	Annual*	100	100	-Chemiluminescence - Indophenol Blue Method
		24 Hours**	400	400	
9.	Benzene (C_6H_6) µg/m³	Annul *	05	05	-Gas Chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10.	Benzo (a) Pyrene (BaP)-Particulate phase only, ng/m³	Annual*	01	01	-Solvent extraction followed by HPLC/GC analysis
11.	Arsenic (As), ng/m³	Annual*	06	06	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12.	Nickel (Ni),ng/m³	Annual*	20	20	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year, 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

True Copy attested
B. Behera
Adv

सत्यमेव जयते

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)
NALCO Bhawan, P-1, Nayapalli P.O.-RRL, Bhubaneswar, Nayapalli, KHORDHA, ODISHA, Nayapalli, 751013
E-mail: gm_uecb@nalcoindia.co.in

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, Raijharan, 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)	ANUGUL, ODISHA
(x) Issuing Authority	MoEF&CC
(xii) Applicability of General Conditions	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, Raijharan, 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	Njl
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 stack 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: I 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 19th May, 1993 and 31st 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 implementation 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 outlay 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 Ruppe) 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	Road/Conveyor covering a distance of 5.8 km to nearest railway siding and then transported by rail to existing MGR to the linked 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: 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.

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 (Melurusus 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 adsimillis), Wood pecker (Picoides maharastra), Red-necked parakeet (Dinopium benghaensis), Dove (Streptopelia Chinensis), Koel (Eudymysscolopacea), Barn Owl (Buba buba), Patridge (Francolinus pondicerianus), Quail (Perdicula 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 allotees. 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 2nd 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**:

i. 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.
ii. 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%.
iii. 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 amgalmation 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-warming	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 raod 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: · 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:

<table>
<tr><th>S. No.</th><th>Points</th><th>Written submissions made</th></tr>
<tr><td></td><td></td><td>· 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.
<table>
<tr><th>Year</th><th colspan="3">Area</th><th>No. of Plants</th></tr>
<tr><th></th><th>Waste Dump</th><th>Safety Zone</th><th>Others (rationalization area, garland drains, settling ponds etc)</th><th></th></tr>
<tr><td>1st Year</td><td>-</td><td>20</td><td>-</td><td>50,000</td></tr>
<tr><td>2nd Year</td><td>-</td><td>20</td><td>-</td><td>50,000</td></tr>
<tr><td>3rd Year</td><td>-</td><td>17.34</td><td>-</td><td>43,350</td></tr>
<tr><td>4th Year onwards</td><td>305.990</td><td></td><td>13.336</td><td>7,98,315</td></tr>
<tr><td>Total</td><td>305.990</td><td>57.34</td><td>13.336</td><td>9,41,665</td></tr>
</table>
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.</td></tr>
<tr><td>4.</td><td>Undertaking for not doing mining without Nala diversion study in Utkal E Coal Block</td><td>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, Bhubaneshwar, MoEFCC and MoEFCC, New Delhi. Undertaking for the same is submitted.</td></tr>
<tr><td>5.</td><td>Air Control Measures to be submitted</td><td>· 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</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Points</th><th>Written submissions made</th></tr>
<tr><td></td><td></td><td>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
<table>
<tr><th>S. No.</th><th>Particulars</th><th>Existing</th><th>Proposed</th></tr>
<tr><td colspan="4">Coal Stock Yard</td></tr>
<tr><td>1</td><td>Length of Yard</td><td>250 Mtrs</td><td>250 Mtrs</td></tr>
<tr><td>2</td><td>Breadth of Yard</td><td>90 Mtrs</td><td>90 Mtrs</td></tr>
<tr><td>3</td><td>Proposed No. of Nozzles</td><td>20 Nos</td><td>20 Nos</td></tr>
<tr><td colspan="4">Details of Nozzle</td></tr>
<tr><td>1</td><td>Working Pressure</td><td>20-50 kgf/ cm3</td><td>20-50 kgf/ cm3</td></tr>
<tr><td>2</td><td>Coverage Radius</td><td>20-40 Mtr</td><td>20-40 Mtr</td></tr>
<tr><td>3</td><td>Water consumption per minute for full circle</td><td>324 LPM</td><td>324 LPM</td></tr>
<tr><td>4</td><td>Trajectory Angle</td><td>24 deg</td><td>24 deg</td></tr>
<tr><td>5</td><td>Inlet</td><td>6.0 Inch</td><td>6.0 Inch</td></tr>
<tr><td>6</td><td>Water consumption from 20 nos nozzles and operational time 2.0 hr/ day</td><td>324 Ltrs
778 m3</td><td>324 Ltrs
778 m3</td></tr>
</table>
Proposed water spraying at Haul Road
<table>
<tr><th>S. No.</th><th>Particulars</th><th>Existing</th><th>Proposed</th></tr>
<tr><td colspan="4">Details of Haul Road</td></tr>
<tr><td>1</td><td>Length of Road</td><td>5000 Mtr</td><td>10000 Mtr</td></tr>
<tr><td>2</td><td>Width of Road</td><td>30 Mtr</td><td>30 Mtr</td></tr>
<tr><td>3</td><td>Proposed no. of Nozzles</td><td>-</td><td>100 Nos</td></tr>
<tr><td colspan="4">Details of Nozzle</td></tr>
<tr><td>1</td><td>Working Pressure</td><td>-</td><td>5.0 kgf/ C2</td></tr>
<tr><td>2</td><td>Coverage Radius</td><td>-</td><td>10.20 sq mtr</td></tr>
<tr><td>3</td><td>Water consumption per minute for full circle</td><td>-</td><td>76.50 LPM</td></tr>
<tr><td>4</td><td>Trajectory Angle</td><td>-</td><td>12 degree</td></tr>
<tr><td>5</td><td>Inlet</td><td>-</td><td>1.5 Inch</td></tr>
<tr><td>6</td><td>Part Circle Mechanism</td><td>-</td><td>918000 Ltr.</td></tr>
<tr><td>7</td><td>Total Water consumption for 20 nozzles and operational time 3 hr/ day (by 28 KL, 09 nos tanker)</td><td>760 m3</td><td>918 m3</td></tr>
</table></td></tr>
<tr><td>6.</td><td>Surrender letter of 2.33 Ha of Durgapur Reserved Forest</td><td>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.</td></tr>
</table>

S. No.	Points	Written submissions made
		· 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	PP submitted the following: · 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 15th 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	PP submitted the following: 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. NALCO in collaboration with IISSSC 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 IISSSC and NALCO to enable both entities to contribute towards the Skill India mission as well as sustain growth in their areas. Indian Iron and Steel Sector Skill Council (IISSSC) was constituted as mandated by GOI in the National Skill Development Policy 2009 in order to

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 andexecution 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, Rajharan, 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)	
1st Year	-	20	-	50,000

Year	Area (Ha)			No. of Plants
	Waste Dump	Safety Zone	Others (rationalization area, garland drains, settling ponds etc)	
2nd Year	-	20	-	50,000
3rd Year	-	17.34	-	43,350
4th 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 Bhubaneshwar, 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 (IISSSC) 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 trsining 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/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 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, Raijharan, 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, Chandershekharpur, 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, Bhubaneshwar - 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, Bhubaneshwar, 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 Bulkers 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 Bhubaneshwar.

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. TThe 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 statue 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 themeteorological 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 pons, 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 rivarine/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 Recalmation

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 maintanance

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 approve 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.

True Copy attested
B. Behera
Adv

Validity unknown
Digitally Signed by / Sundar Ramanathan
Member Secretary, MoEFCC (EC)
Date: 07/12/2024

STATE POLLUTION CONTROL BOARD, ODISHA

A/118, NILKANTHA NAGAR,
UNIT - VIII BHUBANESWAR - 751012
Form IV (A)(a)

APPLICATION FOR CONSENT TO ESTABLISH UNDER SECTION OF 25 OF WATER (PREVENTION & CONTROL OF POLLUTION) ACT 1974/SECTION 21 OF AIR (PREVENTION & CONTROL OF POLLUTION) ACT, 1981

From:
Railway Siding at San-Kerejanga, Village -Sankerajang and Golabandha,
City:Angul
Tehsil:Banarpal
District:Angul

To

The Member Secretary,
State Pollution Control Board, ODISHA
Bhubaneswar - 751012

Sir,

I/We hereby apply herewith the Consent to Establish (NOC) for an industry namely **Railway Siding at San-Kerejanga** for production of Coal transportation by Rail siding , The site is located at **Village - Sankerajang and Golabandha,** District of **Angul**

1. The annexure and other particulars and plans etc. are attached here with in triplicate.

2. I/We further declare that the information furnished in the annexure and plans etc. are correct to the best of my / our knowledge.

3. I/We hereby undertake to furnish any other information to be called for with in one month.

Yours Faithfully

Name of the Occupier: National Aluminium Company Limited

Designation: ED Smelter and Power

Name of the Applicant: Sri. Srinivasa Subrahmanyam Neralla

Accompaniments:-

1. Land Schedule (Attached)
2. other documents (Attached)
3. EIA report PART 1 (Attached)
4. Project Report (Attached)
5. ENV CLEARNACE (Attached)
6. POROJECTREPORT (Attached)
7. KML FILE** (Attached)

DATA SHEET
(TO BE FILLED IN BY THE INDUSTRY)

A. BASIC INFORMATION :

1.	**Name of the Industry**	: Railway Siding at San-Kerejanga
	(a) Occupier Name, address & Phone, Fax	: National Aluminium Company Limited City:NALCO Bhawan P/1, Nayapalli, Bhubaneswar Tehsil:Bhubaneswar District:Khorda Telephone:0674-2301988 Occupier Fax:2301290
	(b) Industry address	: Village -Sankerajang and Golabandha, City:Angul Tehsil:Banarpal District:Angul Industry Telephone:0674-2300633 Industry Fax:0674-2301290
	(c) Status of Institution	: Individual
2.	**Occupier**	
	(a) Name	: National Aluminium Company Limited
	(b) Designation :	: ED Smelter and Power
	(c) Industry Details & Telephone No./Fax No.:	: Village -Sankerajang and Golabandha, City:Angul Tehsil:Banarpal District:Angul Industry Telephone:0674-2300633 Industry Fax:0674-2301290
3.	**Address for Correspondence**	NALCO Bhawan P/1, Nayapalli, Bhubaneswar District:Khorda Tehsil:Bhubaneswar
4.	**Name & Address of the official authorized to deal with questionaries :**	: Sri. Srinivasa Subrahmanyam Neralla
5.	**a) Time schedule for year of commissioning of industry**	: 2025
	b) Capital investment :	: 2976.0 (in Lakhs)
	c) Total Application Capital investment :	: 8283 (in Lakhs)
	d) Regd. No./ License No. if any	: L27203OR1981GOI000920
6.	**Man Power**	
	a) No. of workers :	: 50
	b) No. of working hours	: 24
	c) Are any personal residing in the premises. Yes/No (Give number)	: Yes, 0

d) Operating period. Seasonal(Specify period)/Whole year	: Apr to Mar	

7. Raw materials (other than fuel) and chemical

Raw Materials Name	Raw Materials Quantity	Raw Materials Unit
HSD(Diesel)	0.5	Kilo Liters/Day

8. Products/By products manufactured

Name of Products	Quantity	Unit
Coal transportation by Rail siding	15000.0	Metric Tonnes/Day

9. Manufacturing Process	: DPR REPORT	
i) Source & process know how : In house/NationalLaboratory/Foreign/other (specify)	: other	
ii) Have you considerd less polluting process alternatives?	: Yes	
iii) Have you any foreign collaboration?	: No	
iv) Manufacturing Process (in brief) with flow chart: (Attach additional sheet)	: DPR REPORT	
10. i) Energy consumption	:	
ii) Source of energy		
a) In plant generation	:	
b) Public Supply	:	
iii) If energy is generating at plant, type and quantity of fuel daily consumed:	--	

Fuel Coal/Fuel Oil/Diesel/Natural Gas/Wood/Other Specify Daily consumption in tonnes

Fuel Name	Daily Comsumption(T/day)	Calorific value	Ash contents %	Sulphur contents %	Others

11. Siting details:	(Attach vicinity map with topological features)	
Location		
11.1 (Village/Panchayat)/NAC/Municipality/Municipal corporation/Industrial Estate)	: Village	
11.2 Plot No./Khata No.	: 9-644(P),12-647,15-27	
11.3 District	: Angul	
11.4 Surrounding of the site		
E	: Ganesh sponge	
W	: Pond (Sankerjang)	
N	: JSPL Power Plant	

	S	: Malikeswar School
11.5	**Area of land proposed to be acquired**	: 65.41 (in Acre)
11.6	**Area proposed to be built up or developed**	: NOT REQUIRED (in Acre)
11.7	**Vacant area available for waste treatment & plantation**	: 2.5 (in Acre)
11.8	**Present use of the land**	: Agriculture
11.9	**Specify site character**	: Estuarine landlocked

11.10 **Existing features within 500 mtrs of the proposed site**

Name of Surrounding	Distance(in meters)	Description

11.12 **Existing features within 25 Kms radius of the proposed site**

Name of Surrounding	Distance(in meters)	Description

11.13 **Climate Details :**

(a) Indicate the climate conditions at the site(arid and semi-arid etc.)	:
(b) Rainfall(yearly average range)	:
(c) Temperature(seasonal range)	:
(d) Provide Information on speed and direction of wind	:

11.14 **Settlement**

a) Total number of person proposed to be employed

- During construction	: 50
- After completion	: 30
b) Do you propose to built a township / housing / quarters for your employees	: Quartars
c) Area allocated for above	: NOT REQUIRED (in Acre)
d) Population to be accommodated	: 15
e) Distance from township to plant site	: Only office building required. (in meters)
f) Service provided in township	:
i) Water - daily consumption	: 4000
ii) Sewer system	: NOT REQUIRED
iii) Sewage treatment	: SOAK PIT
iv) Garbage disposal	: Within premises

B. EMISSION INVENTRY OF AIR POLLUTION :

1. Air Stack Details

No. of stack:	
Stack Attached to:	
Height above ground level(in metres):	
Height above roof(in metres):	
Material for construction of Stack:	
Stack Top:	
Diameter/Size:	
Flue gas temperature 'C:	
Flow rate of flue gas:	
Sampling Provision:	
Capacity of fan:	
Date of Installation:	
Type of melting furnace:	
Type of Device:	
Capacity of melting furnace:	
Method of fuel charging:	
Type of Burner:	
Type of fuel in boilers:	
Drought:	
Gas quantity-m^3/hr:	

2. D.G. Set Details

D.G Set	Capacity (in KVA)	Number	Fuel Consumed/Day
01	125	1	0.5

3. Process emission

Type of fuel	Consumption of fuel	Unit	Calorific value	Ash Content	Sulphur Contents	Others

4. Emission Control equipment for air pollution

Stack Name	Equipment Name	State	Efficiency

C. ASSESSMENT OF WASTE DISCHARGE :

1. **Source of water supply**

Source of Water Supply
Ground Water (within premises)

2. **Quantity of water used for different purposes**

Source		Quantity(KL/D)	Purpose
Ground Water (within premises)	Bore well	5.0	Others(Dust Suppression)
Ground Water (within premises)	Bore well	0.0	Others(Dust Suppression)

3. **a) Whether separate water meters are installed/proposed to be installed for different water consumption** :

b) Pump Details

Pump HP	Discharge (m^3/hr)	Pumping(hrs/day)	If Log Book is maintained
2.0	2.0	2	Yes

4. **Provision of water storage tank** :

if yes, specify the size capacity --

5. **Treatment Details:-**

Uses	Treatment Arrangement Status	Treatment Type	Name of treatment Unit	Quantity Treated(KL)	Treatment Unit Cost
Others(Dust Suppression)	No	Secondary			

6. **Quantity of waste water generated**

Type of waste water	Quantity Generated(m3/Day)	Quantity Treated (m3/Day)
Others(Dust Suppression)	0.00	

(Please attach a flow sheet showing point of generation of waste water & waste water collection system)

7. **Brief description of the Treatment Plant**

Parameters	Existing Status	Size(in m^2)	Type of Plant	Area occupied by plant	Constructed by	Consulting Agency	Year of construction

8. **Characterization of waste water**

Parameters	Influent to Treatment Plant	Effluent from treatment plant	Limits imposed by pollution control board

9. a) Efficiency of treatment Plant : Not required

Percentage of reduction of different parameters (attach separate sheet if required)

b) Reuse of waste water/treated effluent

Volume used in m^3/day	Extent of recycle of treated/partially treated/ untreated effluent	Characteristics of refused effluent	Purpose for which used	Treatment cost for reused if any	Agricultural utilization of treated/untreated waste water

10. Treated effluent discharge to : Sewer

11. Distance of final dispoal point from the industry : WITHIN PREMISES

12. Maintenance and other problems associated with the treatment plant :

13. Capital cost of waste water treatment plant :

14. Operation & Maintenance cost of treatment plants per annum (in lakhs) :

15. Maintenance personnel

Cadre/Designation :

Number :

16. Monitoring Laboratory personnel

Cadre/Designation :

17. i) Proposed schedule of monitoring :

ii) Location of sampling points :

iii) Frequency of sampling :

iv) Parameters determined :

D. SOLID WASTE :

Source of solid waste	Type/Nature of Waste	Other Waste type detail	Quantity (in Metric Tonnes/ Month)	Quantity Reused	Quantity Sold	Quantity Disposed	Method of collection	Method/ Mode of disposal	Place of disposal	Distance of discharge point from factor(in metres)
Canteen,factory toilets & gardening	Any Other	Garbage	0.5	used in back filling	0.5 Ts.per MONTH	6.0	BY DUMPER	MINE PIT	Within Mining Lease Boundary	5000

E. OTHER TYPES OF POLLUTION :

1. **Is your industry likely to cause any thermal pollution. If yes, what measures are proposed to be taken.** NO
2. **Is your industry likely to cause any odour pollution?** NO
3. **Is your industry likely to cause radioactive pollution?** NO
4. **Environmental Management at the industry**

   a) Give details of the Orgnaizational set up you process to have for pollution control : (see the attached document)

   b) What is the level of expertise of the person in-charge of pollution control : (see the attached document)

   c) Do you propose to monitor the pollution from the industry : YES

   If yes, give details : See attached document

   d) What labouratory facilities your propose to have for the above? : See attached documents

   e) Give details of operation and maintenance facilities you propose to have for treatment plants and pollution monitoring and control equipments : See attached documents

5. **Cost of pollution control Details:**

Type of expenditure	Amount (in rupees)	Recurring

Percentage of capital investment/Operating expenditure of the Industry

6. **Any other additional information about environmental impacts of your industry**

Date: 17/10/2024

Signature :

Place: Khorda

Name of the Occupier: National Aluminium Company Limited

Designation: ED Smelter and Power

Name of the Applicant: Sri. Srinivasa Subrahmanyam Neralla

Address of the Applicant: NALCO Bhawan P/1, Nayapalli, Bhubaneswar

True Copy attested
B. Behera
Adv

INSPECTION REPORT OF M/S. SANKERJANG RAILWAY SIDING AT/PO- SANKERJANG, TAHSIL: BANARPAL, DIST-ANGUL

The proposed site for establishment and operation of railway siding (RS) at Sankerjang Railway Station, Sankerjang, Tahsil: Banarpal in the district of Angul was visited on date: 01.11.2024 to verify the suitability of the new site for the establishment of railway siding at Sankerjang Railway Station, Sankerjang, Tahsil: Banarpal, Dist-Angul for handling of Coal (bulk commodities) – 15000 Metric Tonnes/Month. Sri S.R. Jha, A.G.M., Environment, Mythri Infra & Mining Pvt. Ltd. accompanied the undersigned during the site visit.

Consent Status:

- The unit had previously applied for CTE, vide application No.: 5244504, dtd. December 20th, 2023 and the file was rejected on August 6, 2024, vide Board's Letter No.: 2872 due to close proximity of the nearby dwellings to the proposed site for railway siding.
- Now the unit has again applied a fresh Consent to Establish vide online application No.5876765, dtd.17.10.2024 for the establishment of railway siding at Sankerjang Railway Station, Sankerjang, Tahsil: Banarpal, Dist-Angul for handling of Coal (bulk commodities) – 15000 Metric Tonnes/day.
- The unit has already paid CTE fees of amount Rs.2,35,136/- on dtd.20.12.2023 vide money receipt no.39662 which is adequate.

1.0 Project at a glance

	Correspondence Address	National Aluminum Company Ltd City:Nalco Bhawan, P/1,Nayapalli.Bhubaneswar Tehsil:Bhubaneswar, District:Khordha Telephone:0674-2301988 E-mail: gmuecb@nalcoindia.co.in
	Category	GREEN
	Coal Handling Capacity	15000 Metric Tonnes/Month
	Land Requirement	16.23 Acres (Acquired)
	Water Requirement	02 KLD, Source: Groundwater
	Project Cost	Rs.82.83 Crores (as mentioned in the CA certificate submitted by the unit.)

2.0 Location of the unit:

1. The unit has now changed the previously proposed site and a new alignment has specifically been selected to maximise distance from the nearby dwellings and minimise impact on the nearest habitations and to reduce potential disturbances on the surrounding community.
2. Co-ordinates of the proposed site are 20°51'36.13"N (Latitude) & 84°59'51.78"E (Longitude). The proposed site for railway siding is at Sankerjang village, Tahsil: Banarpal, Dist-Angul.
3. The total area acquired by the unit is about **16.23** acres, bearing 31 plots under Sankerjang and Golabandha Panchayat.
4. From the KML file submitted online by the unit followed by field visit, it was observed that the proposed site is located at about 150m (approximately) away in the south from the nearest human habitation, Badadanda Sahi is also at a distance of 155m (approx.) away in south from the nearest human habitation, Golabandha village and at a distance of 200m (approx.) away in east

from the nearest human habitation. Jindal Stainless Private Ltd. plant exists at a distance of 300m (approx.) in the North direction.

5. Kerjang Railway Station is at an aerial distance of 1.8 km (approx.) and Derjang Reservoir is at a distance of 1.8 kms(approx.) from the proposed site.
6. Nearest Health centre is at a distance of about 1.6 km(approx.) and School (Government Primary School, Golabandha) at a distance of 530m(approx.) from the proposed site.
7. NH-55 is at a distance of 4.5kms and SH-63 is at a distance of 3.5kms (approx.) from the proposed site. And also a small temple named Mallikeswar Temple is at a distance of 220m (approx.) from the proposed site.

3.0 Brief Description about the unit:

- It is proposed to transport coal from mines of M/s. **Utkal-D Coal Mine of M/s. National Aluminium Company Ltd.** located in Chendipada area of Angul district to the proposed site through road. Siding will be used for storage of coal and loading of wagons for further transportation of coal through rail to M/s NALCO CPP.
- As per NALCO's letter vide no. 816/2024 received on dtd.28.10.2024, IDCO had acquired the land in favour of KCMPL during the year 2006, and there was no permanent or temporary civil structures were present near the vicinity of 300m from the proposed Railway Siding project and all the construction near the proposed area have been constructed after the allotment of land to NALCO for RS project.
- Moreover, Railway Siding is categorised as a green category industry as per Board's notification vide letter no.8333, dtd.11.07.2018 which implies that it may be assessed as a comparatively minimal polluting industry in comparison to other category industries.
- Most importantly, the sole purpose of construction of this railway siding proposed by NALCO is for maximum reduction of truck movement for coal transportation to NALCO which may prove to be a vital contributor for reduction of overall pollution load and may be a major step for greener environment in Angul.

4.0 Pollution Potential:

Water:

Industry has proposed to consume 2.0 m^3/day of water for sprinkling (dust suppression) purpose which will be sourced from groundwater. The siding has proposed measures for water pollution control as:

i. Garland drain shall be provided all along the boundary wall inside the RS and mineral stack yard.
ii. Provision shall be made for collection of wash water from the garland drain and water so collected shall be treated in a sedimentation tank for further use inside the premises for watering plantations and dust suppression etc.
iii. Under no circumstances the wash water shall be allowed to go outside the premises.
iv. All mineral storage areas containing fine or dusty materials shall be covered with tarpaulins when not in use and fitted with Automatic Water Sprinkling/Dry fog systems shall be done.
v. Dry fog cannon of throw put 100m with 1800 rotational axis should be installed at stockyards and siding areas at regular intervals.

VI. Dust sprinklers / rain guns should be installed at the siding area for suppression of dust during loading and unloading activities.

Air:

The major source of air pollution at the railway siding is coal handling and vehicle movement. Unit has proposed to do water sprinkling for dust suppression. The siding has proposed measures for air pollution control as:

I. Reinforced concrete boundary shall be constructed around the stockyard, particularly on the side facing human habitation, to enhance containment and safety.
II. Multi-tier (2-3 tier) greenbelt plantation shall be established all around the boundary, creating a natural barrier to improve air quality and reduce noise.
III. Metallic wind barrier of designated height will be constructed to reduce dust dispersal beyond the stockyard.
IV. Mobile fog cannons shall be stationed on-site to further suppress dust emissions during loading and unloading operations.
V. Abundant nos. of Fog/mist sprinklers shall be installed in the stack yards, rack loading areas and coal transportation roads.
VI. Moreover, stack yards, rack loading area, coal transportation roads, etc. shall be concreted.

Solid Waste Management:

The siding has proposed to take adequate measures for managing solid waste and shall maintain good housekeeping.

Remarks:

In the view of the above observations necessary decision may be taken towards granting of Consent to Establish (CTE) to the proposed railway siding.

S.R. Kuanr
Asst. Env. Scientist
Asst. Env. Scientist
State Pollution Control Board
Regional Office, Angul

True Copy attested
D. Behera
Adv

- 9X - ANNEXURE - F/S Series

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
(पर्यावरण एवं वन मंत्रालय, भारत सरकार)
(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

No.B-29012/ESS(CPA)/2015-16/

March 07, 2016

To

The Chairman
All the State Pollution Control Boards / Pollution Control Committees
(List Attached)

SUB: MODIFIED DIRECTIONS UNDER SECTION 18(1)(b) OF THE WATER (PREVENTION & CONTROL OF POLLUTION) ACT, 1974 and THE AIR (PREVENTION & CONTROL OF POLLUTION) ACT, 1981 REGARDING HARMONIZATION OF CLASSIFICATION OF INDUSTRIAL SECTORS UNDER RED / ORANGE / GREEN / WHITE CATEGORIES.

WHEREAS, under section 16 (2)(b) of the Water (Prevention and Control of Pollution) Act, 1974 and under Section 16 (2)(c) of the Air (Prevention & Control of Pollution) Act, 1981, one of the functions of the Central Pollution Control Board (CPCB), constituted under the Water (Prevention and Control of Pollution) Act, 1974, is to coordinate activities of the State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs); and

WHEREAS, under section 16 (2)(c) of the Water (Prevention and Control of Pollution) Act, 1974 and under Section 16 (2)(d) of the Air (Prevention & Control of Pollution) Act, 1981, one of the functions of the CPCB is to provide technical assistance and guidance to SPCBs and PCCs; and

WHEREAS, it was brought to the notice of CPCB, that different SPCBs /PCCs were following different criteria for classification of industrial sectors under Red/Orange/ Green category and that classification was being used by the SPCBs/PCCs for grant of consents to industries and for Inventorization / surveillance of industries.

WHEREAS, the issue regarding classification of industries was deliberated upon in the 56th Conference of Chairmen & Member Secretaries of CPCB & SPCBs/PCCs held on August 31, 2010 and a working group comprising of representatives from SPCBs & CPCB was constituted to prepare a consolidated list of industrial sectors falling under Red/Orange/Green category to bring uniformity in classification of industrial sectors across the country;

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032
'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032
दूरभाष/Tel. : 43102030, फैक्स/Fax : 22305793, 22307078, 22307079, 22301932, 22304948
ई-मेल/e-mail : cpcb@nic.in वेबसाईट/Website : www.cpcb.nic.in

WHEREAS, the report prepared by the Working Group was discussed in the 57th Conference of Chairmen & Member Secretaries of CPCB& SPCBs/PCCs held in Delhi on September 15, 2011, wherein some modifications were proposed;

WHEREAS, the final report of the working group was prepared, incorporating the suggestions/observations made in the 57th Conference of Chairmen and Member Secretaries of CPCB & SPCBs/PCCs and in exercise of the powers delegated to the Chairman, CPCB under Section 18(1)(b) of the Water Act, 1974, following directions were issued for compliance to all SPCBs/PCCs to maintain uniformity in categorization of industries as red, orange and green as per list finalized by CPCB, which identified 85 types of industrial sectors as 'Red', 73 industrial sectors as 'Orange' and 86 sectors as 'Green':

a). To maintain uniformity in categorization of industries under Red/ Orange/Green category, the SPCBs / PCCs shall adopt the list as finalized by CPCB based on the recommendations of that Working Group for grant of Consent, inventorization of industries under Red, Orange and Green categories and other related activities.

(b). The SPCBs/PCCs shall revise the list of Red, Orange and Green categories of industries operating in their jurisdiction based on the criteria specified in the final report of that Working Group and submit the same to CPCB within 90 days in hard copy as well as soft copy;

WHEREAS, later-on, it was observed that the process of categorization thus far was primarily based on the size of the industries and consumption of resources and pollution due to discharge of emissions and effluents and its likely impact on health was not considered as primary criteria;

WHEREAS, there have been proposals from the SPCBs / PCCs and industrial associations for categorization of the industrial sectors in a more pragmatic manner. The issue was discussed during the national level conference of the Environment Ministers of the States, held in New Delhi during April 06-07, 2015 and also during the Conference of the Chairmen and Member Secretaries of CPCB and SPCBs/PCCs held in New Delhi on April 08, 2015. Accordingly, a 'Working Group' comprising of the Members from Central Pollution Control Board and State Pollution Control Boards representing the States of Andhra Pradesh, Punjab, Tamilnadu, West Bengal, Madhya Pradesh and Maharashtra, was constituted to revisit the criteria of categorization of industries and suggest rationale based on pollution potential for categorization of industrial sectors and adopting it for implementation of pollution control plan;

WHEREAS, the Working Group has developed the criteria of categorization of industrial sectors based on the concept of Pollution Index which is a function of the emissions (air pollutants), effluents (water pollutants), hazardous wastes generated and consumption of resources. For this purpose the references are taken from the the Water (Prevention and Control

of Pollution) Cess (Amendment) Act, 2003, Standards so far prescribed for various pollutants under Environment (Protection) Act , 1986 and Doon Valley Notification, 1989 issued by MoEFCC. The Pollution Index (PI) of any industrial sector is a number from 0 to 100 and the increasing value of PI denotes the increasing degree of pollution load from the industrial sector;

WHEREAS , based on the series of consultations with SPCBs, different Government / Non-government Institutions including industries and MoEFCC , the following criteria on 'Range of Pollution Index 'for the purpose of categorization of industrial sectors has been finalized:

- Industrial Sectors having Pollution Index score of 60 and above – Red category
- Industrial Sectors having Pollution Index score of 41 to 59 –Orange category
- Industrial Sectors having Pollution Index score of 21 to 40 –Green category
- Industrial Sectors having Pollution Index score incl. & upto 20 -White category

WHEREAS, based on the revised criteria, the 'Final Report on Revised Categorization of Industrial Sectors under Red/Orange/Green/White' has been evolved. The 'Categorization' is based on the relative pollution potential of the industrial sectors and grouping of the industrial sectors based on the use of raw materials, manufacturing process adopted and pollutants likely to be generated;

WHEREAS, based on relative Pollution Index, the number of industries in various categories are as under :

i. The Red category of industrial sectors: 60
ii. The Orange category of industrial sectors: 83
iii. The Green category of industrial sectors: 63 and
iv. The Newly introduced White category: 36

WHEREAS, there shall be no necessity of obtaining the Consent to Operate" for White category of industries and an intimation to concerned SPCB / PCC shall suffice;

WHEREAS, the purpose of categorization is to ensure that the industry is established in a manner consistent with the environmental objectives and to prompt industrial sectors to adopt cleaner technologies, ultimately resulting in generation of no or minimum pollutants.

WHEREAS the new categorization system shall also facilitate in self-assessment by industries;

Now, therefore, in exercise of the powers delegated to the Chairman, CPCB under Section 18(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974 and Section 18(1)(b) of the Air (Prevention & Control of Pollution), Act , 1981 the earlier Directions issued in June 2012 in the context of categorisation of industries as Red, Orange & Green are withdrawn with immediate effect and following **'Directions'** are hereby issued for compliance by all SPCBs and PCCs :

1. That the SPCBs and PCCs shall adopt the Revised Criteria of categorization of industrial sectors as detailed in table nos. F1, F2, F3 and F4 and Revised Lists of Red, Orange, Green and White categories of industrial sectors, presented at table no. G2, G3, G4 and G5 respectively, in the 'Final Report' as attached herewith immediately.
2. That all pending applications for consideration of 'Consent to Establish' and 'Consent to Operate' and future such applications shall be processed as per revised criteria.
3. That the SPCBs and PCCs will provide the list of industries identified in each category existing in the State which have been considered for grant of consents. SPCBs/PCCs will forward the list of such industries before 31.05.2016 and the same will be uploaded on the websites of respective SPCB/PCC.

4. That the 'Revised Lists of Red, Orange, Green and White category of industrial sectors' shall be used by the SPCBs and PCCs for Consent Management and inventorization of industries under Red, Orange ,Green and White categories. Siting of industries shall be only in conforming areas. SPCBs / PCCs shall evolve sector specific plans for control of pollution and industrial surveillance for verifying compliance.

5. That the SPCBs and PCCs shall revise /prepare the inventory of Red, Orange, Green and White categories of industries operating in their jurisdiction based on the revised criteria specified in the Final Report and submit the same to CPCB within 90 days i.e., before 30.05.2016 in hard copy as well as soft copy.

6. That the listed category of industries or those identified later-on under different categories shall not be linked to sanction of loan /finance or bank proceedings.

7. That any further addition of any new or left-over industrial sector and their categorization which is not listed in the revised list of Red, Orange, Green and White industrial sectors, shall be done at the level of concerned SPCB /PCC following revised criteria & guidelines as detailed in the attached document and no concurrence of CPCB shall normally be required. It is further clarified that while categorizing the industries, fractional numbers shall be rounded off to nearest integer.

The SPCBs/PCCs shall acknowledge the receipt of directions and submit the 'Action Taken Report' in compliance with these directions to CPCB before 15.04.2016.

(Arun Kumar Mehta)
Chairman
7/3/16

Copy to:

1. The Chief Secretary of all the States and UTs
2. The Secretary ,
   Ministry of Micro, Small and Medium Entrepreneurs
   Udyog Bhawan, Rafi Marg, New Delhi - 110 011
3. The Secretary ,
   Ministry of Heavy Industries
   Udyog Bhawan, Rafi Marg, New Delhi - 110 011
4. The Secretary,
   Ministry of New and Renewable Energy
   Block-14, CGO Complex,
   Lodhi Road,New Delhi-110 003,
5. The Advisor(CP Division)
   Ministry of Environment ,Forests and Climate Change
   Indira Paryavaran Bhawan
   Jor Bagh Road, New Delhi – 110 003
6. All Zonal Offices of CPCB

(A.B. Akolkar) 7.3.16
Member Secretary

Final Document on Revised Classification of Industrial Sectors Under

Red, Orange, Green and White Categories

(February 29, 2016)

Central Pollution Control Board

Delhi

Executive Summary

Categorization of Industrial Sectors under Red, Orange, Green and White Category

The Ministry of Environment, Forest and Climate Change (MoEFCC) had brought out notifications in 1989, with the purpose of prohibition/ restriction of operations of certain industries to protect ecologically sensitive Doon Valley. The notification introduced the concept of categorization of industries as " Red", "Orange "and "Green" with the purpose of facilitating decisions related to location of these industries. Subsequently, the application of this concept was extended in other parts of the country not only for the purpose of location of industries, but also for the purpose of Consent management and formulation of norms related to surveillance / inspection of industries.

The concept of categorization of industries continued to evolve and as different State Pollution Control Boards interpreted it differently, a need arose to bring about necessary uniformity in its application across the country. In order to harmonize the 'Criteria of categorization', Directions were issued by CPCB under Section 18(1)(b) of the Water (Prevention & Control of Pollution) , Act, 1974 to all SPCBs/PCCs to maintain uniformity in categorization of industries as red, green and orange as per list finalized by CPCB, which identified 85 types of industrial sectors as 'Red', 73 industrial sectors as 'Orange' and 86 sectors as 'Green'.

The process of categorization thus far was primarily based on the size of the industries and consumption of resources. The pollution due to discharge of emissions & effluents and its likely impact on health was not considered as primary criteria. There was demand from the SPCBs / PCCs and industrial associations for categorization of the industrial sectors in a more transparent manner. Accordingly, the issue was discussed thoroughly during the national level conference of the Environment Ministers of the States, held in New Delhi during April 06-07, 2015 and a 'Working Group' comprising of the members from CPCB, APPCB, TNPCB, WBPCB, PPCB, MPPCB and Maharashtra PCB is constituted to revisit the criteria of categorization of industries and recommend measures for making the system transparent and rational.

The Working Group has developed the criteria of categorization of industrial sectors based on the Pollution Index which is a function of the emissions (air pollutants), effluents (water pollutants), hazardous wastes generated and consumption of resources. For this purpose the references are taken from the the Water (Prevention and Control of Pollution) Cess (Amendment) Act, 2003, Standards so far prescribed for various pollutants under Environment (Protection) Act , 1986 and Doon Valley Notification, 1989 issued by MoEFCC. The Pollution Index PI of any industrial sector is a number from 0 to 100 and the increasing value of PI denotes the increasing degree of pollution load from the industrial sector. Based on the series of brain storming sessions among CPCB, SPCBs and MoEFCC , the following criteria on 'Range of Pollution Index 'for the purpose of categorization of industrial sectors is finalized.

- Industrial Sectors having Pollution Index score of 60 and above – Red category
- Industrial Sectors having Pollution Index score of 41 to 59 -Orange category
- Industrial Sectors having Pollution Index score of 21 to 40 -Green category
- Industrial Sectors having Pollution Index score incl.&upto 20 -White category

The newly introduced White category of industries pertains to those industrial sectors which are practically non-polluting such as Biscuit trays etc. from rolled PVC sheet (using automatic vacuum forming machines), Cotton and woolen hosiers making (Dry process only without any dying/washing operation), Electric lamp (bulb) and CFL manufacturing by assembling only, Scientific and mathematical instrument manufacturing, Solar power generation through photovoltaic cell, wind power and mini hydel power (less than 25 MW).

The salient features of the 'Re-categorization' Exercise are as follows:

- Due importance has been given to relative pollution potential of the industrial sectors based on scientific criteria . Further, wherever possible, splitting of the industrial sectors is also considered based on the use of raw materials, manufacturing process adopted and in-turn pollutants expected to be generated.
- The Red category of industrial sectors would be 60.
- The Orange category of industrial sectors would be 83.
- The Green category of industrial sectors would be 63.
- Newly introduced White category contains 36 industrial sectors which are practically non-polluting.
- There shall be no necessity of obtaining the Consent to Operate" for White category of industries. An intimation to concerned SPCB / PCC shall suffice.
- No Red category of industries shall normally be permitted in the ecologically fragile area / protected area.

The purpose of categorization is to ensure that the industry is established in a manner which is consistent with the environmental objectives. The new criteria will prompt industrial sectors willing to adopt cleaner technologies, ultimately resulting in generation of fewer pollutants. Another feature of the new categorization system lies in facilitating self-assessment by industries as the subjectivity of earlier assessment has been eliminated. This 'Re-categorization' is a part of the efforts, policies and objective of present government to create a clean & transparent working environment in the country and promote the Ease of Doing Business.

Other similar efforts include installation of Continuous Online Emissions/ Effluent Monitoring Systems in the polluting industries, Revisiting of the CEPI (Comprehensive Environment Pollution Index) concept for assessment of polluted industrial clusters, Revision of existing industrial Emission/Effluent discharge standards, initiation of special drive on pollution control activities in Ganga River basin and many more in coming future.

Revised Criteria of Categorization of Industries

"Securing industrial pollution control in accordance with the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 by linking with categorization of industries, consent management and vigilance – 'In context of Red, Orange, Green and White categories of industries"

A: Genesis of Categorization:

- The Ministry of Environment, Forest and Climate Change (MoEFCC) had brought out notifications, which inter-alia refers to Prohibition/ Restriction on operation of industries to protect ecologically sensitive areas or areas of specific importance. This has for the first time brought the concept of categorization of industries to" Red", "Orange "and "Green" and restrict their operation in certain areas of importance. Therefore, it is at-once interpreted that Red, Orange and Green categorization is linked with location specific needs.
- The notification of MoEF was first brought on 2nd February,1989 in case of "Restriction on location of industries, mining operations and other developmental activities in Doon Valley in "Uttarakhand" and thereafter another notification on 24th February 1999 regarding restriction on the setting up of industries in Dahanu Taluka in Maharashtra. The categorization had been made mainly on the basis of size of the industries, man power and consumption of resources.
- However, in other parts of the country, there have been variations in context to the classification of industries under Red, Orange and Green categories. SPCBs / PCCs were following their own criteria in different States thereby creating confusion.
- In order to harmonize the 'Criteria of categorization', a 'Working Group' was formed as per resolution passed during the 57th Conference of the Chairmen & Member Secretaries of CPCB and SPCBs. Based on the recommendations of the Working Group, Directions dated 4/6/2012 under Section 18(1)(b) of the Water

(Prevention & Control of Pollution) , Act, 1974 were issued to all SPCBs/PCCs with the effects to maintain uniformity in categorization of industries as red, green and orange as per list finalized by the Working Group. This indicative list included 85 types of industrial sectors as 'Red', 73 industrial sectors as 'Orange' and 86 sectors as 'Green'. However, these identified categories have not been assigned with scores as per existing criteria/ or any new criteria

B: Categorization criteria used by SPCBs/PCCs:

SPCBs and PCCs use the criteria of Red, Orange and Green categories for consent management and vigilance purposes for carrying out inspections to verify compliance to the stipulated standards. However the above categorization do not emphasize on sector-specific plan for control of pollution in accordance with priority based on pollution index.

C: Gap in the process:

1. The categorization has been made mainly on the basis of size of the industries and consumption of resources. The pollution due to discharge of emissions & effluents and its impact on health was not considered as primary criteria.
2. Categorization was on random basis, no scoring system was adopted.

D: Resolutions made during National Level Conferences

The issue was discussed thoroughly during the following national level conferences held in New Delhi:

- Conference of the Environment Ministers of Central Government and State Governments during April 06-07, 2015
- 59th Conference of Chairmen & Member Secretaries of Pollution Control Boards / Pollution Control Committees held on April 08, 2015

Accordingly following resolutions were made during the Conferences:

1. *A 'Working Group' comprising of the members from CPCB, APPCB, TNPCB, WBPCB, PPCB, MPPCB and Maharashtra PCB is constituted.*
2. *This WG shall revisit the categorization of industries that is based on pollution index criteria & environmental issues such as generation of emission, effluent and hazardous wastes.*
3. *The categorization will be done on the basis of composite score (0-100 marks) of Pollution Index given in accordance with the following weightage.*

Air Pollution Score based on parameters namely PM, CO, NOx, SOx, HMs , Benzene, Ammonia and other toxic parameters relevant to the industry.	*40 Marks*
Water Pollution Score based on parameters namely pH, TSS, NH_3-N, BOD, Phenol and other toxic pollutants relevant to the industry.	*40 Marks*
Hazardous wastes (land fillable, incinerable, recyclable) as generated by the industry.	*20 Marks*
Note : • *Parameters to be decided on the basis of the nature of the wastes generating from the industrial sector.* • *Industries having only either water pollution or air pollution, the score will be normalized wrt 100.*	

4. *Based on the score of the Pollution Index, following categorization be made :*
   - *Type of industries, if scores 60 and above be categorized as Red*
   - *Type of industries, if scores from 30 to 59 be categorized as Orange*
   - *Type of industries, if scores from 15 to 29 be categorized as Green*
   - *Type of industries, if less than 15 be categorized as White or non-polluting industry.*
5. *SPCBs/PCCs may issue consent to the industries*
   - *Red category of industries for 5 years.*
   - *Orange category of industries for 10 years.*
   - *Green category of industries for 15 years.*
   - *No necessity of consent for non-polluting industries.*
6. *No red categories of industries will be permitted to establish in eco-sensitive areas and protected areas.*

E: Follow-up Actions made on the Resolutions :-

- Accordingly, a Committee comprising the Chairmen of CPCB, APPCB, TNPCB, MPPCB, MPCB, PPCB, WBPCB and MS, CPCB was constituted vide CPCB OM dated

23.04.2015 to review & classify industrial sectors into different categories based on criteria of respective pollution potential.

- The categorization is made on the basis of following:
  - Quality of emissions (air pollutants) generated
  - Quality of effluents (water pollutants) generated
  - Types of hazardous wastes generated
  - Consumption of resources

- Reference is taken from the following :
  - The Water (Prevention and Control of Pollution) Cess Act, 1977
  - Standards so far prescribed for various pollutants under the Environment (Protection) Act , 1986
  - Doon Valley Notification, 1989 issued by MoEF.

F : Scoring Methodology :

The details on the scoring methodology in respect of the aforesaid 3 components is presented in the following tables F-1 to F-4 .

Table F-1 : Water Pollution Scoring Methodology

Sl. No.	Activity / Types of Discharges	Score
Part A : Score W1 : Score based on types of expected criteria water-pollutants present in industrial processes waste waters. **Maximum of the following seven categories is to be taken.**		
W11	Waste-water which is polluted and the pollutants are - • not easily biodegradable (very high strength waste waters having BOD > 5000 mg/l); or • toxic; or • both toxic and not easily biodegradable. (Presence of criteria water pollutants having prescribed standard limits up-to 10 mg/l or having BOD > 5000 mg/l). For details appendix 1 may be referred)	30
W12	Non-toxic high strength polluted waste-water having BOD in the range of 1000-5000 mg/l and the pollutants are biodegradable. (Presence of criteria water pollutants having prescribed standard limits from 11 mg/l to 250 mg/l and having BOD strength in the range of 1000-5000 mg/l) . For details appendix 1 may be referred)	25
W13	Non toxic- polluted waste-water having BOD below 1000 mg/l and the pollutants are easily biodegradable. (Presence of criteria water pollutants having prescribed standard limits from 11mg/l to 250 mg/l and having BOD strength below 1000 mg/l) . For details appendix 1 may be referred)	20
W14	Waste-water generated from the chemical processes and which is polluted due to presence of high TDS (total dissolved solids) of inorganic nature. (Presence of criteria water pollutants having prescribed standard limits more than 250 mg/l. For details appendix 1 may be referred)	15
W15	Waste-water generated from the physical unit operations / processes and which is polluted due to presence of TDS (total dissolved solids) of inorganic nature and of natural origin like fresh-water RO rejects, boiler blow-downs, brine solution rejects etc. (Presence of criteria water pollutants having prescribed standard limits more than 250 mg/l. For details appendix 1 may be referred)	12
W16	Non-toxic polluted waste-water from those units which are: • Having the overall waste-water generation less than 10 KLD and • The pollutants are easily bio-degradable having BOD below 200 mg/l which can be easily treated in a single stage ASP (activated	12

	sludge process) based Effluent Treatment Plant. Note : This is a special category and is applicable to only those units having over-all liquid waste generation less than 10 KLD with low strength organic load.	
W17	Waste-water from cooling towers and cooling-re-circulation processes	10
Part B : Score W2 : Score based on huge discharges of any kind (Penalty Clause)		
W2	Industry having overall liquid waste generation of 100 KLD or more including industrial & domestic waste-water.	10
Overall Water Pollution Score W = W1+W2		

Appendix 1

- **Water Pollutants covered under Group W11:**

  - ✓ Free available Chlorine , Total residual chlorine, Fluoride (as F), Sulphide (as S), Free Ammonical Nitrogen, Dissolved phosphates (as P), Free ammonia (as NH3), Nitrate Nitrogen, Mercury (As Hg), Selenium (as Se), Hexa-valent chromium (as Cr + 6), Lead (as Pb), Tin , Vanadium (as V), Cadmium (as Cd), Manganese (as Mn), Total chromium (as Cr), Copper (as Cu), Iron (as Fe), Nickel (as Ni), Zinc (as Zn), Benzene, Arsenic (as As), Benzo-a-pyrene, Cyanide (as CN), Phenolic compounds (as C_6H_5OH) , Adsorbable Organic Halogens (AOX), Boron and /or
  - ✓ BOD strength of waste water > 5000 mg/l

- **Water Pollutants covered under Group W12:**

  - ✓ Sodium Absorption Ratio (SAR) , Biochemical oxygen demand (3 days at 27°C), Total Kjeldahl nitrogen (TKN), Ammonical nitrogen (as N), Suspended solids, Total nitrogen (as N), Chemical oxygen demand, Oils & grease and
  - ✓ BOD strength of waste water is in the range of 1000-5000 mg/l

- **Water Pollutants covered under Group W13:**

  - ✓ Sodium Absorption Ratio (SAR), Biochemical oxygen demand (3 days at 27°C), Total Kjeldahl nitrogen (TKN), Ammonical nitrogen (as N), Suspended solids, Total nitrogen (as N), Chemical oxygen demand and
  - ✓ BOD strength of waste water is below 1000 mg/l

- **Water Pollutants covered under Group W14 and W15:**

  Chlorides as Cl, Colour , Total dissolved solids (TDS - Inorganic)

- **Water Pollutants covered under Group W16**

  - ✓ BOD strength of waste water is below 200 mg/l and overall discharge is less than 10 KLD.

Table F-2 : Air Pollution Score

Sl. No.	Air Pollutants Group	'Range of Prescribed Standard ' of criteria pollutants	Marks
Part 1 : Score A1 = Score based on types of expected criteria Air Pollutants present in the emissions . Maximum of the following seven categories is to be taken. For details appendix 2 may be referred.			
1	Group A1A	Presence of criteria air pollutants having prescribed standard limits up-to 2 mg/Nm3	30
2	Group A1B	Presence of criteria air pollutants having prescribed standard from 3 to10 mg/Nm3	25
3	Group A1C	Presence of criteria air pollutants having prescribed standard from 11 to 50 mg/Nm3	20
4	Group A1D	Presence of criteria air pollutants having prescribed standard from 51 to 250 mg/Nm3	15
5	Group A1E	Presence of criteria air pollutants having prescribed standard from 251mg/Nm3 & above.	10
6	Group A1F	• Generation of fugitive emissions of Particulate Matters which are: o Not generated as a result of combustion of any kind of fossil-fuel. o Generated due to handling / processing of materials without involving the use of any kind of chemicals. o Which can be easily contained /controlled with simple conventional methods	10
7	Group A1G	• Generation of Odours which are : o Generated due to application of binding gums / cements /adhesives /enamels o Which can be easily contained /controlled with simple conventional methods	10
Part 2 : Score A2 = Score based on consumption of fuels and technologies required for air pollution control :			
6	Group A2F1	• All such industries in which the daily consumption of coal/fuel is more than 24 MT/day and the particular (Particulate/gaseous/process) emissions from which can be controlled only with high level equipments / technology like ESPs, Bag House Filters, High Efficiency chemical wet scrubbers etc.	10
7	Group A2F2	• All such industries in which the daily consumption of coal/fuel is from 12 MT/day to 24 MT/day and the particular (Particulate/gaseous/process) emissions from which can be controlled with suitable proven technology.	5
Overall Air Pollution Score -A = A1 + A2			

Appendix 2

- Air pollutants covered under Group A1A:

  Cd+Th, Dioxins & Furans, Mercury, Asbestos

- Air Pollutants covered under Group A1B:

  HF, Nickel+ Vanadium, HBr, Manganese, Lead, H2S, P2O5 as H3PO4

- Air Pollutants covered under Group A1C:

  Chlorine, Pesticide compounds, CH3Cl, TOC, Total Fluoride, Hydrocarbons, NH3, HCL vapour & Mist, H2SO4 Mist, SO2

- Air Pollutants covered under Group A1D:

  CO, PM, CO, NOx

- Air Pollutants covered under Group A1E:

  NOx with liquid-fuel, SO2 with liquid-fuel

Table F-3: Hazardous Waste Generation Score

Sl.No.	**Types of Hazardous Waste Generated as** per Schedule 1 / Schedule 2 of Hazardous Waste (Management, Handling & Trans-boundary Movement) Rules , 2008 . **Maximum of the following four categories is to be taken**	**Score**
HW1	• Land disposable HW which require special care & treatment for stabilization before disposal.	20
HW2	• Incinerable HW	15
HW3	• Land disposable HW which doesn't require treatment & stabilization before disposal. • High volume low effect wastes such as fly-ash, phspho-gypsum, red-mud, slags from pyro-metallurgical operations, mine tailings and ore beneficiation rejects)	10
HW4	• Recyclable HW, which are easily recyclable with proven technologies.	10

Table F-4 : Calculation Sheet

Industrial Sector - .....

1. Water Pollution Score (W)			
Scores	Waste Water Category	Value	
Score on W1			
Score on W2			
Water Pollution Score = W1+W2			
2. Air Pollution Score (A)			
Scores	Air Pollutant Category	Value	
Score on A1			
Score on A2	-	-	
Air Pollution Score = A1+A2			
3. Hazardous Waste Score (HW)			
Score	HW Category	Value	
HW			
Grand Total = W + A + HW			

Note :

1. Any of the industrial sector having only either air pollution (A) or water pollution (W) , the score will be normalized to 100 as per the following formula –

   Normalized Score = {100 x W (or A)} / 40

2. Any of the industrial sector having air pollution (A) and water pollution (W) both but no hazardous waste generation (H) , the joint score of air & water pollution will be normalized to 100 as per the following formula –

   Normalized Score = {100 x (W+A)} / 80

3. Any of the industrial sector having air pollution (A) & hazardous waste generation (H) but no water pollution (W), the joint score of air pollution & hazardous waste generation will be normalized to 100 as per the following formula –

   Normalized Score = {100 x (A+H)} / 60

4. Any of the industrial sector having water pollution (W) and hazardous waste generation (H) but no air pollution (A), the joint score of water pollution & hazardous waste generation will be normalized to 100 as per the following formula –

   Normalized Score = {100 x (W+H)} / 60

G : Developments :

i. The existing Red (85 sectors) , Orange (73 sectors) and Green (86 sectors) i.e a total of 244 industrial sectors have been assessed as per the proposed formula by the Working Group. For this purpose, concerned Engineers / Scientists from the Member SPCBs were also involved & consulted during May 28-29, 2015.

ii. After careful examination and consideration of the suggestions of concerned stake-holders the "Draft Document on Revised Concept of Categorization of Industrial Sectors " was prepared by the Committee and circulated to all the SPCBs, PCCs and concerned Ministries for their information & comments. The ' Draft Document ' was uploaded on the website of CPCB also for information & comments of one & all.

iii. The matter was discussed during the 170th Board Meeting also and issues raised by the Board Members pertaining to some of the industrial sectors were clarified.

iv. Responses were received from various concerned Ministries, SPCBs, Industrial Associations including individuals.

v. Based on the above, final meeting was convened by the Secretary , MoEFCC with CPCB and senior officers of MoEFCC on January 06, 2016 to resolve the issues appropriately and finalize the 'Re-categorization'. Accordingly , following modifications in the 'Range of Pollution Index 'for the purpose of categorization of industrial sectors were suggested :

- Industrial Sectors having Pollution Index score of 60 and above – Red category
- Industrial Sectors having Pollution Index score of 41 to 59 –Orange category
- Industrial Sectors having Pollution Index score of 21 to 40 –Green category
- Industrial Sectors having Pollution Index score incl.& upto 20 –White category

vi. Based on the final criteria as described in v above , the final categorization is as follows :

Category of Industrial Sector	Existing Categorization	Proposed (New) categorization
Red	85	60
Orange	73	83
Green	86	63
White	---	36
Total	244	242

vii. In the proposed categorization, some of the industrial sectors have been either deleted due to duplication or merged with similar type of sectors on account of same

characteristics of pollution generation. In a similar way, some of the industrial sectors are split into more sectors on account of variation in the raw materials / manufacturing process. As a result final totals of the existing and proposed categorization are different.

viii. The industrial sector which doesn't fall under any of the above four categories (Red, Orange, Green and White) , decision with regard to its categorization will be taken at the level of concerned SPCB/PCC by a committee headed by the Member Secretary , SPCB/PCC and comprising of two senior cadre Engineers / Scientists of the SPCB / PCC in accordance with the scoring-criteria specified in this document.

ix. The summary is presented in the following Table G-1 and final lists of Red, Orange, Green and White categories of industries are presented in Tables G-2, G-3, G-4 and G-5 respectively, which are self explanatory.

Table G-1: Final Summary Table Red , Orange, Green and White Categories of Industries (16-01-16)

Sl No.	Original Categorization	Initial Nos.	Addition by Splitting into further classes	Deletion/ Shifting to foot-note due to vague term / Merger / other reasons	Re-categorization to Red	Re-categorization to Orange	Re-categorization to Green	Re-categorization to White	Check
		1	2	3	4	5	6	7	(1+2) = (3 to 7)
1	Red	85	11	7	60	26	3	Nil	96=96
2	Orange	73	2	3	Nil	51	19	2	75=75
3	Green	86	Nil	3+2=5	Nil	6	41	34	86=86
Final Categorization		244	13	15	60 (Red)	83 (Orange)	63 (Green)	36 (White)	257 =257 (Total categories including in foot-note)

Table G-2 : Final List of Red Category of Industrial Sectors

Sl No.	Orgnl Sl.No	Industry Sector	W1	W2	W	A1	A2	A	H	W+A+H	Revised Category	REMARKS
1.	38	Isolated storage of hazardous chemicals (as per schedule of manufacturing, storage of hazardous chemicals rules ,1989 as amended)									R-R	As per provisions of Rules, to be kept under Red category especially for safety purposes.
2.	4	Automobile Manufacturing (integrated facilities)	30	-	30	20	-	20	10	60	R-R	i. Such types of plants are having either one or combinations of polluting activities viz. washing, metal surface finishing operations, pickling, plating, electro-plating , phosphating, painting , heat treatment etc. ii. Some of such plants may outsource some /all of the polluting activities. In such cases, after thorough inspection of such units by concerned SPCB, re-categorization of the industry shall be made accordingly.
3.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Spent cleared metal catalyst containing copper,, Spent cleared metal catalyst containing zinc,,	30	-	30	20	-	20	10	60	R-R	All the three types of pollutants are expected.
4.	44	Manufacturing of lubricating oils ,grease and petroleum based products	20	-	20	20	-	20	20	60	R-R	Generates all sorts of pollution.
5.	66 E	DG Set of capacity > 5 MVA	-	-	-	20	5	25	-	62.5	R-R	i. Mainly air polluting. ii. DG sets consume the diesel @ 0.21 litres/hr/KVA at full load. iii. Average running is taken @ 12 hrs / day although many of the DG sets run for more than this period.
6.	31	Industrial carbon including electrodes and graphite blocks, activated carbon, carbon black	10	-	-	20	5	25	10	62.5	R-R	Mainly air polluting. Air pollution score is normalized to 100.

7.	39	Lead acid battery manufacturing(excluding assembling and charging of lead-acid battery in micro scale)	10	-	10	25	-	25	10	62.5	R-R	i. Mainly air polluting. Air pollution scores are normalized to 100. ii. Lead Acid Battery manufacturing consists of various stages which broadly involve (after producing or receiving lead oxide): Paste Mixing , Grid Casting , Grid Pasting & Curing , Hydro-setting, parting & enveloping , Stacking, grouping & inter-cell welding , Formation. iii. Exposure of workmen to lead during all or any of the processes outlined above exceeds the prescribed standards if appropriate equipment in this respect is not installed at any Battery Manufacturing Unit. iv. All of the above processes, some more than others, involve release of lead particles or fumes into the environment. Pollution from the above processes can be grouped into two possible types, viz: (a) Lead Oxide becomes airborne and there is Particulate Pollution (b) Fumes are generated and there is Gaseous Pollution
8.	62	Phosphate rock processing plant	30	-	30	20	-	20	-	62.5	R-R	i. The separation of phosphate rock from impurities and non-phosphate materials for use in fertilizer manufacture consists of beneficiation, drying or calcining at some operations, and grinding. Phosphate rock from the mines is first sent to beneficiation units to separate sand and clay and to remove impurities. Steps used in beneficiation depend on the type of rock. ii. The water & air pollution scores are normalized to 100.

9.	66	Power generation plant [except Wind and Solar renewable power plants of all capacities and Mini Hydel power plant of capacity <25MW]	10	-	10	15	10	25		62.5	R-R	1. Mainly air polluting. It uses a mixture of biomass (agro based) and coal (< 10 %) as a fuel. Almost, round the year operation. 2. In case of DG sets of 5 MVA & more and emissions of SO2 will take place due to use of liquid fuel. Air pollution score will be =20 + 10 = 30, Normalized score will be 75. 3. In case of 'Waste to Energy Plants' , water will be used for cooling and air score will be - 30+10 = 40.
10.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Spent catalyst containing nickel, cadmium, Zinc, copper, arsenic, vanadium and cobalt,	30	-	30	25	-	25	10	65	R-R	All the three types of pollutants are expected.
11.	67	Processes involving chlorinated hydrocarbons	30	-	30	20	-	20	15	65	R-R	Chlorinated hydrocarbons are used in the manufacture of insecticides, pestiddes and organo chloro pestiddes. Effluents & emissions are toxic in nature.
12.	74	Sugar (excluding Khandsari)	20	10	30	15	10	25	10	65	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Sugar mills generate all sorts of pollution problems.
13.	22	Fibre glass production and processing (excluding moulding)	-	-	-	20	-	20	20	67	R-R	i. The use of styrene in most methods of fiberglass production causes hazardous air pollution that is harmful to breathe at excessive levels. ii. It is mainly air polluting & HW generating industry. The air pollution & HW scores are normalized to 100. iii. In case of lead containing glass, the score of A1 will be 25 and final normalized score will be 75 and shall be categorized as Red.
14.	23	Fire crackers manufacturing and bulk storage facilities	-	-	-	20	-	20	20	67	R-R	i. This is the normalized score based on air pollution & HW generation. ii. Various hazardous chemicals are used in the manufacturing process. iii. These chemicals are namely Potassium Nitrate , Potassium per-chlorate, Barium Nitrate, Aluminium compounds, Copper Chloride etc.

												iv. These chemicals are highly hazardous and cause serious diseases among the workers. especially ability of blood to carry oxygen leading to headaches, methemoglobinemia and kidney problems , skin problems, thyroid metal fume etc.
15.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Dismantlers Recycling Plants -- Components of waste electrical and electronic assembles comprising accumulators and other batteries included on list A, mercury-switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule.	-	-	-	30	0	30	10	67	R-R	Mainly air polluting and hazardous waste generating. Air & HW pollution scores are jointly normalized to 100.
16.	47	Milk processes and dairy products(integrated project)	20	10	30	20	5	25	-	68.75	R-R	i. Water as well as air polluting due to use of boilers. ii. Water & air pollution scores are normalized to 100.
17.	63	Phosphorous and its compounds	30	-	30	25	-	25	-	68.75	R-R	Water pollution & air pollution containing compounds of phosphorous are expected
18.	61	Pulp & Paper (waste paper based without bleaching process to manufacture Kraft paper)	20	10	30	15	10	25	0	68.75	R-R	Mainly water & air polluting . Water & air pollution scores are normalized to 100.
19.	13	Coke making , liquefaction, coal tar distillation or fuel gas making	30	-	30	20	-	20	20	70	R-R	It is a kind of petrochemical industry.

20.	41	Manufacturing of explosives, detonators, fuses including management and handling activities	30	-	30	20	-	20	20	70	R-R	i. Explosives manufacture and use contribute some measure of hazardous waste to the environment. ii. Nitroglycerin produces several toxic byproducts such as acids, caustics, and oils contaminated with heavy metals. These must be disposed of properly by neutralization or stabilization and transported to a hazardous waste landfill. iii. The use of explosives creates large amounts of dust and particulate from the explosion, and, in some cases, releases asbestos, **lead,** and other hazardous materials into the atmosphere.
21.	45	Manufacturing of paints varnishes, pigments and intermediate (excluding blending/mixing)	30	-	30	25	-	25	15	70	R-R	i. The process may cause considerable emissions of volatile organic compounds (VOC). VOC contribute to the creation of ozone in the lower layers of the atmosphere (photochemical air pollution) and can present danger to health. ii. Dust and odour may also be a problem. iii. Washing of vessels will contribute waste-waters. iv. Large quantity of HWs are also produced.
22.	56	Organic Chemicals manufacturing	30	-	30	20	-	50	20	70	R-R	Such types of industrial sectors generate all sorts of pollution.
23.	1	Airports and Commercial Air Strips	20	10	30	-	-	-	10	75	R-R	i. The Airports are generating mainly the waste-waters. ii. This is the water pollution normalized score for airports having discharge more than 100 KLD. iii. The airports / strips having discharge less than 100 KLD will have score of 50 and hence orange category. iv. If the score is normalized wrt water + HW both, then all the airports will come under Orange category (score - 58.33).
24.	3	Asbestos and asbestos based industries	-	-	-	30	-	30	10	75	R-R	i. This is mainly air polluting industry. ii. Final score is based on air pollution score only. iii. Asbestos is cardinogenic and banned in many countries.
25.	5	Basic chemicals and electro chemicals and its derivatives including manufacturing of acid	30	-	30	-	-	-	10	75	R-R	i. Standards prescribed for Inorganic Chemicals are adopted. ii. It is mainly water polluting industry having effluents which are toxic and not easily biodegradable.

												iii. Water pollution score normalized to 100 is undertaken. iv. The earlier Red category industrial sector namely "Hydrocyanic acid and its derivatives " is also merged under this industrial sector.
26.	7	Cement	-	-	-	20	10	30	-	75	R-R	This is mainly air polluting industry & hence normalized air pollution score.
27.	9	Chlorates, per-chlorates & peroxides	30	-	30	-	-	-	-	75	R-R	i. It is mainly water polluting industry having effluents which are toxic and not easily biodegradable. ii. Water pollution score normalized to 100 is undertaken.
28.	10	Chlorine, fluorine, bromine, iodine and their compounds	30	-	30	-	-	-	-	75	R-R	i. It is mainly water polluting industry having effluents which are toxic and not easily biodegradable. ii. Water pollution score normalized to 100 is undertaken.
29.	16	Dyes and Dye- Intermediates	30	-	30	20	5	25	20	75	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Such types of industrial sectors generate all sorts of pollution.
30.	26	Health-care Establishment (as defined in BMW Rules)	20	10	30	-	-	-	-	75	R-R	i. Mainly water polluting. ii. The water pollution score is normalized to 100 & valid for Hospitals having total waste-water generation > 100 KLD. iii. The hospitals with incinerator will be categorized as Red irrespective of the quantity of the waste-water generation. iv. The hospitals having total waste-water generation less than 100 KLD and without incinerator, the normalized water pollution score will be 50 and will be categorized as Orange category.
31.	29	Hotels having overall waste-water generation @ 100 KLD and more.	20	10	30	15	-	15	-	75	R-R	i. Mainly water polluting. Small boiler may be installed. ii. The water pollution score is normalized to 100 & valid for Hotels having waste-water generation > 100 KLD. iii. The hotels having more than 20 rooms and waste-water generation less than 100 KLD and having a coal / oil fired boiler , the pollution score will be 35/40 & are categorized as Orange. iv. The hotels having more than 20 rooms and waste-water generation less than 10 KLD and

												having no-boiler & no hazardous waste generation, the pollution score will be 20 & are categorized as Green.
32.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Lead acid battery plates and other lead scrap/ashes/residues not covered under Batteries (Management and Handling) Rules, 2001. [* Battery scrap, namely: Lead battery plates covered by ISRI, Code word "Rails" Battery lugs covered by ISRI, Code word "Rakes". Scrap drained/dry while intact, lead batteries covered by ISRI, Code word "rains".	30	-	30	25	--	25	20	75	R-R	All the three types of pollutants are generated.
33.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Integrated Recycling Plants -- Components of waste electrical and electronic assembles compdsing accumulators and other batteries included on list A, mercury-switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule.	30	-	30	25	-	25	20	75	R-R	All the three types of pollutants are expected.
34.	43	Manufacturing of glue and gelatin	30	10	40	20	-	20	-	75	R-R	Highly water polluting & obnoxious air polluting.
35.	49	Mining and ore beneficiation	30	10	40	15	5	20	-	75	R-R	Both air and water polluting. Score is normalized with air & water pollution.

36.	52	Nuclear power plant	10	-	10	30	-	30	15	75	R-R	i. Mainly air polluting due to incinerator. Others - cooling water. ii. Air pollution score is normalized to 100.
37.	58	Pesticides (technical) (excluding formulation)	30	-	30	25	-	25	20	75	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Such types of industrial sectors generate all sorts of pollution.
38.	64	Photographic film and its chemicals	30	-	30	-	-	-	-	75	R-R	i. Silver salts and other chemicals are used in preparation. Slight quantity of effluents is generated. ii. Water pollution scores are normalized to 100.
39.	68	Railway locomotive work shop/Integrated road transport workshop/Authorized service centers	20	10	30	-	-	-	10	75	R-R	i. Mainly water polluting industry. Water is used in the washing of locomotives, road transport vehicles during servicing. ii. This score is valid for those Centers having discharge more than 100 KLD. iii. Service Centers having waste-water generation < 100 KLD, the normalized score will be =(100*20)/40= 50.
40.	84	Yarn / Textile processing involving any effluent/emission generating processes including bleaching, dyeing, printing and colouring	30	10	40	15	-	15	20	75	R-R	In this sector all sorts of pollution are generated.
41.	8	Chlor Alkali	30	10	40	20	10	30	10	80	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Chlor-alkali units are having different section like NaOH, Cl2, SBP etc which are having toxic effluents. Additionally, fuel consumption is also on higher-side.
42.	70	Ship Breaking Industries	30	-	30	30	-	30	20	80	R-R	i. The ship-breaking industry creates numerous hazards for the coastal and marine environment. ii. Ship-breaking releases a large number of dangerous pollutants, including toxic waste, oil, poly-chlorinated biphenyls, and heavy metals, into the waters and sea bed. iii. While most of the oil is removed before a ship is scrapped, sand used to mop up the remaining oil is thrown into the sea. High concentrations of oil and grease are then found in the coastal waters, choking marine life.

												iv. Solid waste strewn on the shore, 45 tonnes on any given day according to a study by the Central Pollution Control Board, also finds its way into the sea. v. Adding to the stress on coastal waters, the organic load from the thousands of workers living in cramped conditions with little or no sanitary facilities results in unacceptably high levels of BOD.
43.	53	Oil and gas extraction including CBM (offshore & on-shore extraction through drilling wells)	30	-	30	-	-	-	20	83	R-R	i. Mainly water polluting & hazardous waste generating. ii. The water pollution & HW generation scores are normalized to 100.
44.	36	Industry or process involving metal surface treatment or process such as pickling/ electroplating/paint stripping/ heat treatment using cyanide bath/ phosphating or finishing and anodizing / enamellings/ galvanizing	30	-	30	-	-	-	20	83	R-R	Mainly water polluting & toxic hazardous waste generating industry. Scores are normalized to 100.
45.	80	Tanneries	30	-	30	-	-	-	20	83	R-R	Mainly water polluting & hazardous waste generating industry. Scores are normalized to 100.
46.	65	Ports and harbour, jetties and dredging operations	30	10	40	15	10	25	20	85	R-R	This category contain all sorts of pollution.
47.	77	Synthetic fibers including rayon ,tyre cord, polyester filament yarn	30	10	40	25	10	35	10	85	R-R	This sector generates all sorts of pollution problems.
48.	81	Thermal Power Plants	30	10	40	20	10	30	15	85	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. TPP generate all sorts of pollution problems.
49.	71	Slaughter house (as per notification S.O.270(E)dated 26.03.2001)and meat processing industries, bone mill, processing of animal horn, hoofs and other body parts	25	10	35	-	-	-	-	87.5	R-R	Mainly water polluting and obnoxious odour generating industry. The water pollution score is normalized to 100
50.	2	Aluminium Smelter	30	10	40	20	10	30	20	90	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. This sector is generating all sorts of pollution i.e. air, water and HW.
51.	12	Copper Smelter	30	10	40	20	10	30	20	90	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Integrated Copper Smelters contain all sorts of

													pollution.
52.	20	Fertilizer (basic) (excluding formulation)	30	10	40	20	10	30	20	90	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Generates all sorts of pollution.
53.	37	Iron & Steel (involving processing from ore/ integrated steel plants) and or Sponge Iron units	30	10	40	20	10	30	20	90	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Such types of industrial sectors generate all sorts of pollution.
54.	61	Pulp & Paper (waste paper based units with bleaching process to manufacture writing & printing paper)	25	10	35	25	10	35	20	90	R-R	Waste paper based Pulp & Paper mills with bleaching process generate all sorts of pollution.
55.	85	Zinc Smelter	30	10	40	20	10	30	20	90	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Integrated Zinc smelter generates all sorts of pollution problems.
56.	55	Oil Refinery (mineral Oil or Petro Refineries)	30	10	40	25	10	35	20	95	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Such types of industrial sectors generate all sorts of pollution.
57.	59	Petrochemicals Manufacturing (including processing of Emulsions of oil and water)	30	10	40	25	10	35	20	95	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Such types of industrial sectors generate all sorts of pollution. iii. The earlier red category industrial sector namely "Processing of Emulsions of Oil & Water " is merged with this industrial sector.
58.	60	Pharmaceuticals	30	10	40	30	5	35	20	95	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Such types of industrial sectors generate all sorts of pollution.
59.	61	Pulp & Paper (Large-Agro + wood) . Small Pulp & Paper (agro based-wheat straw/rice husk)	30	10	40	25	10	35	20	95	R-R	i. This industrial sector is the one among the '17 categories of Highly Polluting Industries'. ii. Large /Small Agro based Pulp & Paper mills contribute all sorts of pollution problems.
60.	15	Distillery (molasses / grain / yeast based)	30	10	40	-	-	-	-	100	R-R	Mainly water polluting industry. Final score is the normalized water pollution score.

Note :

i. Under the column Revised Category, the full forms of the abbreviations are as follows :

a. R-R means original category was Red and revised category is also Red
b. R-O means original category was Red and revised category is Orange
c. O-O means original category was Orange and revised category is also Orange
d. O-G means original category was Orange and revised category is Green
e. O-W means original category was Orange and revised category is White
f. G-O means original category was Green and revised category is Orange
g. G-G means original category was Green and revised category is also Green
h. G-W means original category was Green and revised category is White

ii. There are specific remarks in respect of some of the industrial sectors. These sectors are either merged with other relevant sectors or deleted due to duplication. The overall details are as follows :

Sl No.	Original Sl No.	Industry Sector	Original Category	Remarks
1	14	Common treatment and disposal facilities(CETP, TSDF, E-waste recycling, CBMWTF, effluent conveyance project, incinerator, solvent/acid recovery plant, MSW sanitary land fill site)	R	i. All such facilities are classified as Red but special category projects as these are parts of pollution control facilities. ii. In case of CETP, the categorization will depend upon the category of member industries being served.
2	18	Processing of Emulsions of Oil & Water		It is a part of Petrochemical industries. Transferred and merged with the industrial sector namely 'Petrochemicals' at Sl. No. 54.
3	27	Heavy engineering including ship building (with investment on Plant & Machineries more than Rs 10 crores)	R	Most of the pollution generating processes / operations under this category are similar to the industry category namely "Automobile Manufacturing (integrated facilities)" at Sl . No. 1 and may be referred accordingly.
4	30	Hydrocyanic acid and its derivatives	R	Have been merged with the red category industrial sector namely " Basic chemicals and electro chemicals and its derivatives including manufacturing of acid " at Sl. No. 24
5	32	Industrial estates/ parks / complexes/ areas/ export processing zones/ SEZs/ Biotech parks/ leather complex	R	The classification will depend upon the category(ies) of the industries operating / proposed to be permitted in the area. In this context, guidelines prescribed in EIA Notification, 2006 shall be followed.
6	33	Industrial inorganic gases namely- a) Chemical gas- Acetylene, hydrogen, chlorine, fluorine, ammonia, sulphur dioxide, ethylene, hydrogen-sulphide, phosphine b) Hydrocarbon gases- Methane , ethane, propane	R	These gases are generally secondary products and produced alongwith other main products. To be classified as per the main parent plant.
7	69	Reprocessing of used oils & waste oils	R	i. The industry generates mainly the air pollution and oil bearing hazardous wastes. The normalized (air pollution & HW generation score is 58.33. ii. To be deleted as already covered under HW Recyclers / Re-processors (Used oils / Waste Oils) under Orange Category

Table G-3 : Final List of Orange Category of Industrial Sectors

Final Sl. No.	Orgnl S.No	Industry Sector	W1	W2	W	A1	A2	A	H	W+A+H	Revised category	Remarks
1.	20	Dismantling of rolling stocks (wagons/ coaches)	--	--	--	15	--	15	10	41.67	O-O	Emissions of dust and generation of waste oils take place during dismantling. Air pollution & HW generation scores (15+10=25) are normalized to 100.
2.	5	Bakery and confectionery units with production capacity > 1 TPD. (With ovens / furnaces)	20	--	20	15	--	15	--	43.75	O-O	
3.	10	Chanachur and ladoo from puffed and beaten rice(muri and shira) using husk fired oven	20	--	20	15	--	15	--	43.75	O-O	Normal water and air polluting.
4.	23	Coated electrode manufacturing	15	0	15	20	0	20	0	43.75	**G-O**	Preparation of core wire / rod, preparation of dry mix, preparation of wet mix, application of coating by extrusion, baking of coated electrodes
5.	24	Compact disc computer floppy and cassette manufacturing / Reel manufacturing	15	0	15	20	0	20	0	43.75	**G-O**	Generates waste-water and process emissions.
6.	24	Flakes from rejected PET bottle	20	-	20	15	-	15	-	43.75	R-O	Normal water & air pollutions are generated.
7.	30	Food and food processing including fruits and vegetable processing	20	--	20	15	--	15	--	43.75	O-O	Normal water and air polluting.
8.	40	Jute processing without dyeing	20	--	20	15	--	15	--	43.75	O-O	CPCB has notified standards for this category. Both air and water pollutions are generated.
9.	56	Manufacturing of silica gel	15	0	15	20	0	20	0	43.75	**G-O**	Waste-waters containing TDS and emissions of H_2SO_4 are generated.

10.	45	Manufacturing of tooth powder, toothpaste, talcum powder and other cosmetic items	20	--	20	15	--	15	--	43.75	O-O	Both air and water pollution are generated.
11.	55	Printing or etching of glass sheet using hydrofluoric acid	15	--	15	20	--	20	--	43.75	O-O	Both air and water pollution are generated.
12.	65	Silk screen printing, sari printing by wooden blocks	20	--	20	15	--	15	--	43.75	O-O	Wash-water and PM emissions from boilers .
13.	76	Synthetic detergents and soaps(excluding formulation)	20	-	20	15	-	15	-	43.75	R-O	i. This is the score for units having generation of waste-waters less than 100 KLD. ii. The units having waste-water generation more than 100 KLD will become mainly water polluting and accordingly normalized water pollution score will be 75 and be categorized as Red.
14.	71	Thermometer manufacturing	15	--	15	20	--	20	--	43.75	O-O	Process - making glass bulb, forming reservoir in the glass tube for fluid, inserting fluid, scale marking. Use of fuel to heat the glass tubes and hydrofluoric acid to seal the scaling. Small quantities of spent acids are generated.
15.	14	Cotton spinning and weaving (medium and large scale)	--	--	--	15	--	37.5	10	47.5	O-O	Mainly air polluting industry. Sources of air pollution (PM) are the fine particles of cotton from spinning process. Air pollution score is normalized to 100.
16.	1	Almirah, Grill Manufacturing (Dry Mechanical Process)	--	--	--	20	--	20	--	50	O-O	Air pollution due to spray painting (emissions of VOCs). Units without painting operations shall be categorized as White.

17.	2	Aluminium & copper extraction from scrap using oil fired furnace (dry process only)	--	--	--	20	--	20	10	50	O-O	i. Normalized Air pollution score. ii. Significant air pollution due to melting (emissions of SO2, PM).
18.	3	Automobile servicing, repairing and painting (excluding only fuel dispensing)	20	--	20	20	--	20	10	50	O-O	Normal water & air polluting and recyclable waste oil generating. If the waste water generation is more than 100 KLD, it will become mainly water polluting and Red category unit.
19.	4	Ayurvedic and homeopathic medicine	20	--	20	15	--	15	15	50	O-O	
20.	7	Brickfields (excluding fly ash brick manufacturing using lime process)	--	--	--	20	--	20	--	50	O-O	Significantly air polluting.
21.	8	Building and construction project more than 20,000 sq. m built up area	20	--	20	20	--	20	--	50	O-O	1. In the pre-construction stage , it is mainly air polluting due to generation of dust (PM) emissions. 2. After construction, it is mainly water polluting. If the discharge is more than 100 KLD, it will be having the normalized score of 75 and be categorized as Red.
22.	6	Ceramics and Refractories	-	-	-	20	-	20	-	50	R-O	i. Mainly air polluting industry. ii. This score is for the units having coal consumption < than 12 MT/day. iii. For the units having coal consumption > 12 MT /day, the normalized air pollution score will be 62.5 and shall be categorized as Red.

23.	11	Coal washeries	15	10	25	15	-	15	-	50	R-O	i. Wet washeries are mainly water polluting industry generating effluents which are having inorganic SS & TDS. Additionally, air pollution due to PM emissions is also generated. ii. Water & air pollution scores are jointly normalized to 100.
24.	16	Dairy and dairy products (small scale)	20	--	20	20	--	20	--	50	O-O	Water and air polluting both.
25.	18	DG set of capacity >1MVA but < 5MVA	--	--	--	20	--	20	--	50	O-O	Mainly air polluting . air pollution score is normalized to 100.
26.	17	Dry coal processing, mineral processing, industries involving ore sintering, pelletisating, grinding & pulverization	-	-	-	20	-	20	-	50	R-O	Mainly air polluting industry. Final score is the normalized air pollution score.
27.	19	Fermentation industry including manufacture of yeast, beer, distillation of alcohol (Extra Neutral Alcohol)	20	-	20	-	-	-	-	50	R-O	i. Mainly water polluting industry. This is the normalized water pollution score for units having discharge < 100 KLD. ii. For the units having discharge > 100 KLD, the normalized water pollution score will be 75 and shall be accordingly categorized as Red.
28.	21	Ferrous and Non- ferrous metal extraction involving different furnaces through melting, refining, re-processing, casting and alloy-making	-	-	-	15	5	20	10	50	R-O	i. Mainly air polluting. ii. This score is applicable to secondary production of ferrous & non-ferrous metals (excluding lead) up-to 1 MT/hour production.

												iii. For lead, the normalized air pollution score will be = (100*25)/40= 62.5 and is categorized as Red. iv. For Induction Furnace clubbed with AOD furnace – separate calculation shall be made based on the capacity of the furnaces. In such industries, the molten metal from induction furnace is transferred to AOD furnace where other metals like manganese and nickel are added to get the metal of desired constituents. The lime and silicon are also added for reduction of the metal oxides to the base metal. the normalized air pollution score will be = (100*25)/40= 62.5 and is categorized as Red.
29.	26	Fertilizer (granulation / formulation / blending only)	--	--	--	20	--	20	--	50	O-O	Air polluting.
30.	27	Fish feed, poultry feed and cattle feed	--	--	--	20	--	20	--	50	O-O	Obnoxious odour , H2S etc. AP score is normalized to 100
31.	28	Fish processing and packing (excluding chilling of fishes)	20	--	20	--	--	--	--	50	O-O	Mainly water polluting. WP score is normalized to 100.

32.	31	Forging of ferrous and non- ferrous metals (using oil and gas fired furnaces)	--	--	--	20	--	20	--	50	O-O	Heating furnace. Mainly air polluting.
33.	32	Formulation/pelletization of camphor tablets, naphthalene balls from camphor/ naphthalene powders.	--	--	--	20	--	20	--	50	O-O	Mainly air polluting. Emissions of Benzene, HC are expected.
34.	33	Glass ceramics, earthen potteries and tile manufacturing using oil and gas fired kilns, coating on glasses using cerium fluorides and magnesium fluoride etc.	--	--	--	20	--	20	--	50	O-O	Mainly air polluting. Emissions of SO2 are expected.
35.	35	Gravure printing, digital printing on flex, vinyl	20	--	20	20	--	20	10	50	O-O	Waste waters , emissions of VOCs
36.	36	Heat treatment using oil fired furnace (without cyaniding)	--	--	--	20	--	20	--	50	O-O	Mainly air polluting and noise generating. AP Score is normalized to 100.
37.	28	Hot mix plants	-	-	-	20	-	20	-	50	R-O	Mainly air polluting. Air pollution scores are normalized to 100.
38.	37	Hotels (< 3 star) or hotels having > 20 rooms and less than 100 rooms.	20	--	20	20	--	20	--	50	O-O	Mainly water polluting. WP score is normalized to 100.
39.	38	Ice cream	20	--	20	20	--	20	--	50	O-O	Wash-water and boilers / oven for pasteurization.
40.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Paint and ink Sludge/residues	-	-	-	20	0	20	0	50	R-O	Mainly air polluting. Air pollution score is normalized to 100
41.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Brass Dross ,, Copper Dross,, Copper Oxide Mill Scale,, Copper Reverts, Cake & Residues,, Waste Copper and copper alloys in	10	-	10	20	-	20	10	50	R-O	Mainly air polluting.

		dispersible form,, Slags from copper processing for further processing or refining ,, Insulated Copper Wire,, Scrap/copper with PVC sheathing including ISRI-code material namely "Druid" ,, Jelly filled Copper cables ,, Zinc Dross-Hot dip Galvanizers SLAB,, Zinc Dross-Bottom Dross,, Zinc ash/Skimming arising from galvanizing and die casting operations,, Zinc ash/Skimming/other zinc bearing wastes arising from smelting and refining,, Zinc ash and residues including zinc alloy residues in dispersible from ,,										
42.	35	Industry or processes involving foundry operations	-	-	-	20	--	20	-	50	R-O	i. This score is valid for the foundries having capacity < 5 MT/hr as such units require the coal/coke @ < 500 kg/hr. ii. The units having capacity of 5 MT/hr and more, the coal/coke consumption will be more than 500 kg/hr and the normalized score will be 62.5 and classified accordingly as Red.
43.	40	Lime manufacturing (using lime kiln)	-	-	-	20	-	20	-	50	R-O	Mainly air polluting
44.	41	Liquid floor cleaner, black phenyl, liquid soap, glycerol mono-stearate manufacturing	20	--	20	20	--	20	--	50	O-O	Both air and water pollution are generated.

45.	42	Manufacturing of glass	10	-	-	20	-	20	-	50	R-O	i. Mainly air polluting (melting at 1500°C and refining . ii. In case of lead glass , the score of A1 will be 25 and accordingly the normalized scores will be 62.5 i.e. Red .
46.	43	Manufacturing of iodized salt from crude/ raw salt	12	--	12	20	--	20	--	50	O-O	Boiling in Evaporators (multiple effect evaporators), centrifuging, iodization with KIO3 mixing . Mainly air polluting. Air pollution score is normalized to 100.
47.	42	Manufacturing of mirror from sheet glass	--	--	--	20	--	20	--	50	O-O	Evaporator & furnace for heating the metal to be applied as reflector on mirror. Mainly air polluting.
48.	44	Manufacturing of mosquito repellent coil	--	--	--	20	--	20	--	50	O-O	Mainly air polluting. Toxic fumes are expected.
49.	46	Manufacturing of Starch/Sago	25	-	25	15	-	15	-	50	R-O	i. Water and air polluting industry. Boiler is used for steam generation. ii. Water & air pollution scores are normalized to 100
50.	46	Mechanized laundry using oil fired boiler	20	--	20	20	--	20	--	50	O-O	Both air and water pollution are generated.
51.	47	Modular wooden furniture from particle board, MDF< swan timber etc, Ceiling tiles/ partition board from saw dust, wood chips etc., and other agricultural waste using synthetic adhesive resin, wooden box making (With boiler)	--	--	--	20	--	20	--	50	O-O	1. Mainly air polluting. Boiler as well as VOCs from use of adhesives. 2. Without boiler, it will be a Green category industry.
52.	50	New highway construction project	-	-	-	20	-	20	-	50	R-O	Mainly air polluting project.

53.	51	Non-alcoholic beverages(soft drink) & bottling of alcohol/non alcoholic products	20	-	20	15	5	20	-	50	R-O	i. Both air and water polluting. Score is normalized with air & water pollution. This score is valid for industries having waste-water generation < 100 KLD. ii. For the units having waste-water generation > 100 KLD the , normalized score would be 62.5 and categorized as Red.
54.	49	Paint blending and mixing (Ball mill)	20	--	20	20	--	20	10	50	O-O	Both air and water pollution are generated.
55.	62	Paints and varnishes (mixing and blending)	20	0	0	20	0	20	0	50	G-O	Waste-waters as well as fumes of VOCs due to solvents, pigments, varnishes.
56.	51	Ply-board manufacturing(including Veneer and laminate) with oil fired boiler/ thermic fluid heater(without resin plant)	0	--	0	20	--	20	--	50	O-O	Mainly air polluting because of use of boiler. AP score is normalized to 100
57.	52	Potable alcohol (IMFL) by blending, bottling of alcohol products	20	--	20	--	--	--	--	50	O-O	Mainly water polluting. WP scoreis normalized to 100.
58.	54	Printing ink manufacturing	20	--	20	20	--	20	--	50	O-O	1. Pigments, binders and solvents are used. 2. Boiler is also used. 3. Emissions of VOCs take place.
59.	70	Printing press	20	0	20	20	0	20	0	50	G-O	Colored waste-waters containing dyes and VOC emissions are generated.
60.	59	Reprocessing of waste plastic including PVC	20	--	20	20	--	20	--	50	O-O	Large quantities of wash-water and fugitive emissions are generated.
61.	61	Rolling mill (oil or coal fired) and cold rolling mill	10	--	10	20	--	20	--	50	O-O	Mainly air polluting. Air pollution score is normalized to 100. Others - cooling water and recyclable waste oils etc. are generated.
62.	67	Spray painting, paint baking, paint shipping	--	--	--	20	--	20	10	50	O-O	Mainly air polluting. Emissions of VOCs and HC are generated.

63.	72	Steel and steel products using various furnaces like blast furnace /open hearth furnace/induction furnace/arc furnace/submerged arc furnace / basic oxygen furnace /hot rolling reheated furnace	10	-	10	20	-	20	10	50	R-O	i. Mainly air polluting. In the emissions, oxides of manganese, nickel etc. are also present. ii. Air pollution score is normalized to 100.
64.	73	Stone crushers	-	-	-	20	-	20	-	50	R-O	Mainly air polluting. Air pollution score is normalized to 100.
65.	75	Surgical and medical products including prophylactics and latex	20	-	20	20	-	20	-	50	R-O	Both air as well as water polluting. Air and water pollution scores are normalized to 100.
66.	85	Tephlon based products	0	0	0	20	0	20	0	50	G-O	Due to spraying applications, emissions (HC) are generated
67.	70	Thermocol manufacturing (with boiler)	--	--	--	20	--	20	--	50	O-O	Polystyrene is heated. Mainly air polluting with boiler.
68.	82	Tobacco products including cigarettes and tobacco/opium processes	20	-	20	20	-	20	-	50	R-O	Such industries generate both air as well as water pollution. These scores are normalized to 100.
69.	72	Transformer repairing/ manufacturing (dry process only)	--	--	--	20	--	20	10	50	O-O	Mainly air polluting because of ovens, shot-blasting etc.
70.	73	Tyres and tubes vulcanization/ hot retreating	10	--	10	20	--	20	--	50	O-O	Mainly air polluting. Emissions of PM, VOCs and obnoxious odour are generated.
71.	83	Vegetable oil manufacturing including solvent extraction and refinery /hydrogenated oils	20	-	20	15	5	20	10	50	R-O	i. All sorts of pollution are generated. ii. This score is valid for plants having waste-water generation < 100 KLD. iii. If the waste-water generation is more than 100 KLD, the unit shall be classified as Red.
72.	74	Wire drawing and wire netting	20	--	20	--	--	--	--	50	O-O	Mainly water polluting. WP score is normalized to 100.

73.	21	Dry cell battery (excluding manufacturing of electrodes) and assembling & charging of acid lead battery on micro scale	30	--	30	15	--	15	10	55	O-O	Water and air polluting both.
74.	50	Pharmaceutical formulation and for R & D purpose (For sustained release/ extended release of drugs only and not for commercial purpose)	20	--	20	20	--	20	15	55	O-O	i. All sorts of pollution are generated. ii. R&D activities are to be shifted to Red category.
75.	78	Synthetic resins	20	-	20	20	-	20	15	55	R-O	All sorts of pollution are generated.
76.	79	Synthetic rubber excluding molding	20	-	20	20	-	20	15	55	R-O	i. Most synthetic rubber is created from two materials, styrene and butadiene. Both are currently obtained from petroleum. ii. Process is similar to a part of Petrochemical plants.
77.	9	Cashew nut processing	25	--	25	20	--	20	--	56	O-O	Normal water and air polluting.
78.	12	Coffee seed processing	25	--	25	20	--	20	--	56	O-O	Normal water & air polluting industry.
79.	57	Parboiled Rice Mills	25	-	25	20	-	20	-	56	R-O	i. Rice Mills are generating both air and water pollution. Waste-waters are having high strength in respect of BOD. ii. This is the normalized air & water pollution score for units having waste-water generation < 100 KLD and fuel consumption less than 12 MTD. iii. For units having waste-water generation > 100 KLD or fuel consumption > 12 MTD or both , the unit shall be classified as Red.

80.	29	Foam manufacturing	--	--	--	20	--	20	15	58	O-O	i. Raw material is polyurethane, latex etc. ii. Emissions of VOCs and HAPs. CH3Cl2 and similar compounds as blowing agents. iii. Outdated raw materials and spoiled slots are discarded as HW.
81.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Used Oil – As per specifications prescribed from time to time.	10	0	10	20	0	20	15	58.33	R-O	Mainly air polluting and hazardous waste generating industry. Air pollution & HW scores are normalized to 100
82.	34	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule iv of HW(M, H& TBM) rules, 2008 - Items namely - Waste Oil —As per specifications prescribed from time to time.	-	-	-	20	0	20	15	58.33	R-O	Mainly air polluting and hazardous waste generating industry. Air pollution & HW scores are normalized to 100.
83.	56	Producer gas plant using conventional up drift coal gasification (linked to rolling mills glass and ceramic industry refectories for dedicated fuel supply)	--	--	--	20	--	20	15	58.33	O-O	Mainly air polluting & tar (HW) generating. SO2, CO, NOx are generated. Tar is the by-product and utilized by other industries in co-processing.

Note :

i. *Under the column Revised Category, the full forms of the abbreviations are as follows :*

- a. *R-R means original category was Red and revised category is also Red*
- b. *R-O means original category was Red and revised category is Orange*
- c. *O-O means original category was Orange and revised category is also Orange*
- d. *O-G means original category was Orange and revised category is Green*
- e. *O-W means original category was Orange and revised category is White*
- f. *G-O means original category was Green and revised category is Orange*
- g. *G-G means original category was Green and revised category is also Green*
- h. *G-W means original category was Green and revised category is White*

ii. *There are specific remarks in respect of some of the industrial sectors. These sectors are either merged with other relevant sectors or deleted due to duplication / vague category. The overall details are as follows:*

Sl No.	Original Sl No.	Industry Sector	Original Category	Remarks
1	24	Excavation of sand from the river bed (excluding manual excavation)	O	Since such types of activities cause ecological disturbances, the instructions issued by the government from time to time be followed. To be categorized by MoEF&CC.
2	39	Infrastructure Development Project	O	Vast variety of such projects come under such category. This is to be decided by the concerned SPCB in line of EIA Notification , 2006.
3	53	Power press	O	Very vague term hence deleted. Such types of general engineering units have already been covered.

Table G-4 : Final List of Green Category of Industrial Sectors

Sl. No.	Orgnl Sl. No.	Industry Sector	W1	W2	W	A1	A2	A	H	W+A+H	Revised Category	Remarks
1.	2	Aluminium utensils from aluminium circles by pressing only (dry mechanical operation)	–	–	–	10	–	10	–	25	G-G	Minor air pollution due to some fugitive PM emissions from buffing operations.
2.	6	Ayurvedic and homeopathic medicines (without boiler)	10	–	10	–	–	–	–	25	G-G	Small quantities of waste-waters are generated from washing operations.
3.	8	Bakery /confectionery /sweets products (with production capacity <1tpd (with gas or electrical oven)	10	–	10	–	–	–	–	25	G-G	Small quantities of waste-waters are generated from washing operations.
4.	6	Bi-axially oriented PP film along with metalizing operations	10	–	10	–	–	–	–	25	O-G	Mainly extrusion process involving Cooling water recirculation
5.	10	Biomass briquettes (sun drying) without using toxic hazardous wastes	–	–	–	10	–	10	–	25	G-G	Minor air pollution due to some fugitive PM emissions from pulverization / mixing operations.
6.	13	Blending of melamine resins & different powder, additives by physical mixing	–	–	–	10	–	10	–	25	G-G	Minor air pollution due to some fugitive PM emissions from pulverization / mixing operations.
7.	15	Brass and bell metal utensils manufacturing from circles(dry mechanical operation without re-rolling facility)	–	–	–	10	–	10	–	25	G-G	Minor air pollution due to some fugitive PM emissions from buffing operations.
8.	16	Candy	10	–	10	10	–	10	–	25	G-G	Small quantities of waste-water and minor

												PM emissions are generated.
9.	17	Cardboard or corrugated box and paper products (excluding paper or pulp manufacturing and without using boilers)	–	–	–	10	–	10	–	25	G-G	This score is valid with Small gas / electricity operated oven / furnace for making glue.
10.	18	Carpentry & wooden furniture manufacturing (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc.	–	–	–	10	–	10	–	25	G-G	Minor air pollution due to some fugitive PM emissions from cutting operations.
11.	19	Cement products (without using asbestos / boiler / steam curing) like pipe ,pillar, jafri, well ring, block/tiles etc.(should be done in closed covered shed to control fugitive emissions)	–	–	–	10	–	10	–	25	G-G	Minor air pollution due to some fugitive PM emissions from mixing operations.
12.	20	Ceramic colour manufacturing by mixing & blending only (not using boiler and wastewater recycling process)	–	–	–	10	–	10	–	25	G-G	Minor air pollution due to some fugitive PM emissions.
13.	11	Chilling plant, cold storage and ice making	10	–	10	–	–	–	–	25	O-G	Cooling water recirculation only.
14.	13	Coke briquetting (sun drying)	–	–	–	10	–	10	–	25	O-G	Mainly air polluting industry. Sources of air pollution (PM) are pulverizes and mixers. Air pollution score is normalized to 100.
15.	28	Cotton spinning and weaving (small scale)	–	–	–	10	–	10	–	25	G-G	Minor PM emissions from spinning process.
16.	17	Dal Mills	–	–	–	10	–	10	–	25	O-G	Some fugitive emissions of PM.

17.	29	Decoration of ceramic cups and plates by electric furnace	–	–	–	10	–	10	–	25	G-G	Fumes of enamels. Minor air pollution.
18.	19	Digital printing on PVC clothes	–	–	–	10	–	10	–	25	O-G	Minor emissions / odour generations are expected.
19.	25	Facility of handling, storage and transportation of food grains in bulk	–	–	–	10	–	10	–	25	O-G	Some fugitive emissions of PM during handling of grains.
20.	36	Flour mills (dry process)	–	–	–	10	–	10	–	25	G-G	Fugitive dust emissions.
21.	41	Glass , ceramic, earthen potteries, tile and tile manufacturing using electrical kiln or not involving fossil fuel kiln	–	–	–	10	–	10	–	25	G-G	Minor fugitive emissions only.
22.	34	Glue from starch (physical mixing) with gas / electrically operated oven /boiler.	–	–	–	10	–	10	–	25	O-G	Some fugitive emissions of PM during mixing of raw materials.
23.	42	Gold and silver smithy (purification with acid smelting operation and sulphuric acid polishing operation) (using less or equal to 1 litre of sulphuric acid/ nitric acid per month)	–	–	–	10	–	10	–	25	G-G	Minor fumes from cleaning process.
24.	36	Heat treatment with any of the new technology like ultrasound probe , induction hardening , ionization beam, gas carburizing etc.	10	–	10	10	–	10	–	25	O-G	• Cooling waters and minor heat fumes. • Finalization of categorization subject to field verification.
25.	46	Insulation and other coated papers (excluding paper or pipe manufacturing)	–	–	–	10	–	10	–	25	G-G	Minor fumes due to application of poly-urethane
26.	49	Leather foot wear and leather products (excluding tanning and hide processing except cottage scale)	–	–	–	10	–	10	–	25	G-G	Minor fumes due to use of adhesives / gums.

27.	50	Lubricating oil, greases or petroleum based products (only blending at normal temperature)	–	–	–	10	–	10	–	25	G-G	Minor fumes at the time of transfers from one container to other.
28.	54	Manufacturing of pasted veneers using gas fired boiler or thermic fluid heater and by sun drying	–	–	–	10	–	10	–	25	G-G	1. Minor fumes due to application of gums / adhesives / pastes etc. 2. This score is valid only for gas fired boiler.3. The units having coal fired boilers shall be categorized as Orange.
29.	59	Oil mill Ghani and extraction (no hydrogenation / refining)	10	–	10	–	–	–	–	25	G-G	Small quantities of floor washings & equipments washings are generated.
30.	48	Packing materials manufacturing from non asbestos fibre, vegetable fibre yarn	–	–	–	10	–	10	–	25	O-G	Some fugitive emissions of PM are expected.
31.	65	Phenyl/toilet cleaner formulation and bottling	–	–	–	10	–	10	–	25	G-G	Minor fumes of VOCs in the work zone
32.	67	Polythene and plastic processed products manufacturing (virgin plastic)	10	–	10	10	–	10	–	25	G-G	Cooling water & emissions due to mixing of raw materials.
33.	68	Poultry, Hatchery and Piggery	–	–	–	10	–	10	–	25	G-G	Obnoxious odour containing H_2S, CH_4 etc. and fugitive PM emissions
34.	69	Power looms (without dye and bleaching)	–	–	–	10	–	10	–	25	G-G	Minor emissions of PM.
35.	71	Puffed rice (muri) (using gas or electrical heating system)	–	–	–	10	–	10	–	25	G-G	Minor emissions of PM.
36.	57	Pulverization of bamboo and scrap wood	–	–	–	10	–	10	–	25	O-G	Some fugitive emissions of PM are expected.
37.	72	Ready mix cement concrete	–	–	–	10	–	10	–	25	G-G	PM emissions.
38.	73	Reprocessing of waste cotton	–	–	–	10	–	10	–	25	G-G	PM emissions.
39.	60	Rice mill (Rice hullers only)	–	–	–	10	–	10	–	25	O-G	PM emissions are generated. Mainly air

												polluting. AP score is normalized to 100
40.	62	Rolling mill (gas fired) and cold rolling mill	10	–	10	10	–	10	–	25	O-G	Mainly air polluting. AP score is normalized to 100
41.	75	Rubber goods industry (with gas operated baby boiler)	–	–	–	10	–	10	–	25	G-G	Some PM emissions and obnoxious odour.
42.	63	Saw mills	–	–	–	10	–	10	–	25	O-G	Mainly air polluting. PM and noise are generated.
43.	77	Soap manufacturing (hand made without steam boiling / boiler)	10	–	10	–	–	–	–	25	G-G	Small quantities of waste-water are generated.
44.	80	Spice grinding (upto-20 HP motor)	–	–	–	10	–	10	–	25	G-G	Small quantities of fugitive emissions of raw materials.
45.	66	Spice grinding (>20 hp motor)	–	–	–	10	–	10	–	25	O-G	Mainly air polluting. Fugitive emissions of PM.
46.	81	Steel furniture without spray painting	–	–	–	10	–	10	–	25	G-G	Obnoxious gases from welding as well as noise pollution.
47.	82	Steeping and processing of grains	10	–	10	–	–	–	–	25	G-G	Washing waters are generated.
48.	86	Tyres and tube retreating (without boilers)	–	–	–	10	–	10	–	25	G-G	Due to applications of binding gum / adhesives / cement, some obnoxious fumes may generate.
49.	22	Chilling plant and ice making without using ammonia	12	–	12	–	–	–	–	30	G-G	Cooling water and brine water circuits. Spillages / blow down may take place
50.	26	CO2 recovery	12	–	12	–	–	–	–	30	G-G	Normal water pollution from scrubbing action
51.	32	Distilled water (without boiler) with electricity as source of heat	12	–	12	–	–	–	–	30	G-G	TDS as distillation residues

52.	45	Hotels (up to 20 rooms and without boilers)	12	–	12	–	–	–	–	30	G-G	This score is valid for hotels having overall waste-water generation less than 10 KLD.
53.	53	Manufacturing of optical lenses (using electrical furnace)	12	–	12	–	–	–	–	30	G-G	Small quantities of waste-waters containing TDS, SS are generated.
54.	58	Mineralized water	12	–	12	–	–	–	–	30	G-G	RO Rejects.
55.	68	Tamarind powder manufacturing	12	–	12	15	–	15	–	33.75	O-G	• Dried tamarind fruits - cleaned and after soaking them in water they are boiled in steam jacketed kettle for about 40-45 minutes. Then pulp is extracted in pulper and dried in drum type drier and on cooling, the final product is packed. • Generates small quantities of waste waters and air emissions. Joint score is normalized to 100.
56.	15	Cutting, sizing and polishing of marble stone	15	–	15	–	–	–	–	37.5	O-G	Mainly water polluting . Water pollution score is normalized to 100.
57.	22	Emery powder (fine dust of sand) manufacturing	–	–	–	15	–	15	–	37.5	O-G	Air polluting. PM emissions take place during various stages of grindings of naturally occurring minerals.
58.	25	Flyash export, transport & disposal facilities	-	-	-	15	-	15	-	37.5	R-G	• This is mainly air polluting activity. • This is the normalized score based on air pollution.
59.	48	Mineral stack yard / Railway sidings	15	-	15	15	-	15	-	37.5	R-G	• Mainly air pollution due to loading, unloading, storage and transportation of the minerals.

												• Waste-water generation mainly during rains only.
60.	54	Oil and gas transportation pipeline	-	-	-	10	5	15	-	37.5	R-G	• Contains small gas based power plants up-to 5 MWs. • Air pollution score is normalized to 100. • In case , if these power plants are bigger / liquid fuel / oil based, scores will be calculated accordingly.
61.	64	Seasoning of wood in steam heated chamber	--	--	--	15	--	15	--	37.5	O-G	Air pollution due to use boiler for supply of steam. Air pollution score is normalized to 100.
62.	84	Synthetic detergent formulation	--	--	--	15	--	15	--	37.5	G-G	• This score is valid for the industries which are not manufacturing LABSA. It is procured from outside. • Small quantities of emissions are generated from mini boiler. • Air pollution score is normalized to 100.
63.	69	Tea processing (with boiler)	--	--	--	15	--	15	--	37.5	O-G	With boiler, it is an orange category industry. Without boiler, it will be green category industry.

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Note :

i. *Under the column Revised Category, the full forms of the abbreviations are as follows :*
   a. *R-R means original category was Red and revised category is also Red*
   b. *R-O means original category was Red and revised category is Orange*
   c. *O-O means original category was Orange and revised category is also Orange*
   d. *O-G means original category was Orange and revised category is Green*
   e. *O-W means original category was Orange and revised category is White*
   f. *G-O means original category was Green and revised category is Orange*
   g. *G-G means original category was Green and revised category is also Green*
   h. *G-W means original category was Green and revised category is White*

ii. *There are specific remarks in respect of some of the industrial sectors. These sectors are either merged with other relevant sectors or deleted due to duplication. The overall details are as follows :*

Sl No.	Original Sl No.	Industry Sector	Original Category	Remarks
1	47	Jobbing and Machining	G	Vague category to be deleted, as such activities have already been covered in other categories.
2	66	Reel manufacturing	G	Already covered in other categories. Hence, deleted
3	1	Assembling of acid lead batteries (up to 10 batteries per day excluding lead plate casting)	G	Already covered in Orange category. Hence, deleted
4	5	Automobile fuel outlets (only dispensing)	G	Minor air pollution due to some fugitive emissions during fuel filling operations. May be exempted from the purview of Consent management.
5	30	Diesel generator sets (15 KVA to 1 MVA)	G	• Normal operation – 12 hrs a day. • Consumption of diesel = 1680 litres for 1 MVA DG set at full load @ 0.21 litres / KVA / hr. • Stand-alone DG Sets having total capacity 1 MVA or less and equipped with acoustic enclosures alongwith adequate stack height may be exempted from the purview of Consent management. Higher capacity DG sets have already been covered under Red / Orange categories .

Table G-5: Final List of White Category of Industries

Sl. No.	Orgnl Sl. No.	Industry Sector	W1	W2	W	A1	A2	A	H	W+A+H	Revised Category
1.	3	Assembly of air coolers / conditioners ,repairing and servicing	--	--	--	--	--	--	--	--	G-W
2.	4	Assembly of bicycles ,baby carriages and other small non motorizing vehicles	--	--	--	--	--	--	--	--	G-W
3.	7	Bailing (hydraulic press)of waste papers	--	--	--	--	--	--	--	--	G-W
4.	9	Bio fertilizer and bio-pesticides without using inorganic chemicals	--	--	--	--	--	--	--	--	G-W
5.	11	Biscuits trays etc from rolled PVC sheet (using automatic vacuum forming machines)	--	--	--	--	--	--	--	--	G-W
6.	12	Blending and packing of tea	--	--	--	--	--	--	--	--	G-W
7.	14	Block making of printing without foundry (excluding wooden block making)	--	--	--	--	--	--	--	--	G-W
8.	21	Chalk making from plaster of Paris (only casting without boilers etc. (sun drying / electrical oven)	--	--	--	--	--	--	--	--	G-W
9.	25	Compressed oxygen gas from crude liquid oxygen (without use of any solvents and by maintaining pressure & temperature only for separation of other gases)	--	--	--	--	--	--	--	--	G-W
10.	27	Cotton and woolen hosiers making (Dry process only without any dying / washing operation)	--	--	--	--	--	--	--	--	G-W
11.	31	Diesel pump repairing and servicing (complete mechanical dry process)	--	--	--	--	--	--	--	--	G-W
12.	33	Electric lamp (bulb) and CFL manufacturing by assembling only	--	--	--	--	--	--	--	--	G-W

13.	34	Electrical and electronic item assembling (completely dry process)	--	--	--	--	--	--	--	--	G-W
14.	23	Engineering and fabrication units (dry process without any heat treatment / metal surface finishing operations / painting)	--	--	--	--	--	--	--	--	O-W
15.	35	Flavoured betel nuts production/ grinding (completely dry mechanical operations)	--	--	--	--	--	--	--	--	G-W
16.	37	Fly ash bricks/ block manufacturing	--	--	--	--	--	--	--	--	G-W
17.	38	Fountain pen manufacturing by assembling only	--	--	--	--	--	--	--	--	G-W
18.	39	Glass ampules and vials making from glass tubes	--	--	--	--	--	--	--	--	G-W
19.	40	Glass putty and sealant (by mixing with machine only)	--	--	--	--	--	--	--	--	G-W
20.	43	Ground nut decorticating	--	--	--	--	--	--	--	--	G-W
21.	44	Handloom/ carpet weaving (without dying and bleaching operation)	--	--	--	--	--	--	--	--	G-W
22.	48	Leather cutting and stitching (more than 10 machine and using motor)	--	--	--	--	--	--	--	--	G-W
23.	51	Manufacturing of coir items from coconut husks	--	--	--	--	--	--	--	--	G-W
24.	52	Manufacturing of metal caps containers etc	--	--	--	--	--	--	--	--	G-W
25.	55	Manufacturing of shoe brush and wire brush	--	--	--	--	--	--	--	--	G-W
26.	57	Medical oxygen	--	--	--	--	--	--	--	--	G-W
27.	60	Organic and inorganic nutrients (by physical mixing)	--	--	--	--	--	--	--	--	G-W
28.	61	Organic manure (manual mixing)	--	--	--	--	--	--	--	--	G-W
29.	63	Packing of powdered milk	--	--	--	--	--	--	--	--	G-W
30.	64	Paper pins and u clips	--	--	--	--	--	--	--	--	G-W
31.	58	Repairing of electric motors and generators (dry mechanical process)	--	--	--	--	--	--	--	--	O-W
32.	74	Rope (plastic and cotton)	--	--	--	--	--	--	--	--	G-W

33.	76	Scientific and mathematical instrument manufacturing	--	--	--	--	--	--	--	--	G-W
34.	78	Solar module non conventional energy apparatus manufacturing unit	--	--	--	--	--	--	--	--	G-W
35.	79	Solar power generation through solar photovoltaic cell, wind power and mini hydel power (less than 25 MW)	--	--	--	--	--	--	--	--	G-W
36.	83	Surgical and medical products assembling only (not involving effluent / emission generating processes)	--	--	--	--	--	--	--	--	G-W

Note : Under the column Revised Category, the full forms of the abbreviations are as follows :

a. *R-R means original category was Red and revised category is also Red*
b. *R-O means original category was Red and revised category is Orange*
c. *O-O means original category was Orange and revised category is also Orange*
d. *O-G means original category was Orange and revised category is Green*
e. *O-W means original category was Orange and revised category is White*
f. *G-O means original category was Green and revised category is Orange*
g. *G-G means original category was Green and revised category is also Green*
h. *G-W means original category was Green and revised category is White*

Annexure

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
(पर्यावरण एवं वन मंत्रालय, भारत सरकार)
(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

No. B-29012/ESS/CPA/2015-16

19.08.2015

Sub: "Harmonization of Classification of industries under Red / Orange / Green / White Categories".

During the Conference of the Environment Ministers of States held in New Delhi during April 06-07, 2015, it was resolved to adopt pollution potential criteria for categorization of Red, Orange & Green categories of industries and that a Committee be constituted with State representatives. Further, in the 59th Conference of Chairmen & Member Secretaries of Pollution Control Boards/PCCs held in New Delhi on April 08, 2015, it was agreed to constitute a Committee to look into categorization system of industries based on their respective pollution potential index.

2. Accordingly, a Committee comprising the Chairmen of CPCB, APPCB, TNPCB, MPPCB, MPCB, PPCB, WBPCB and MS, CPCB was constituted vide CPCB OM dated 23.04.2015 to review & classify industrial sectors into different categories based on criteria of respective pollution potential indices.

3. The existing Red (85 sectors) , Orange (73 sectors) and Green (86 sectors) industrial sectors have been assessed as per the proposed formula by a group of Scientists from CPCB . For this purpose , concerned Engineers / Scientists from the Member SPCBs of the Committee were also involved & consulted during May28-29, 2015.

4. After careful examination and consideration of the suggestions of concerned stake-holders the "Draft Document on Revised Concept of Categorization of Industrial Sectors " is prepared by the Committee .

In this context, the Undersigned is directed to forward a copy of the " Draft Document on Revised Concept of Categorization of Industrial Sectors to all the SPCBs, PCCs and concerned Ministries for their comments. Accordingly, the same is enclosed herewith and all the SPCBs, PCCs and concerned Ministries are, hereby requested to provide their comments by 04.09.2015. The comments may kindly be sent through hard copy as well as soft copy at e-mail: nkgupta.cpcb@nic.in , nkgcpcb@hotmail.com .

Encl : As above

[N.K. Gupta]
Incharge - ESS

To:

1. All the State Pollution Control Boards / Pollution Control Committees
2. The Secretary, Ministry of Micro Small and Medium Enterprises, New Delhi
3. The Secretary, Ministry of Heavy Industries & Public Enterprises, New Delhi
4. The Advisor & Incharge , CP Division, MoEFCC, New Delhi
5. CPCB Website

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032
'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032
दूरभाष / Tel. : 43102030, फैक्स / Fax : 22305793, 22307078, 22307079, 22301932, 22304948
ई-मेल / e-mail :cpcb@nic.in वेबसाईट / Website : www.cpcb.nic.in

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E-mail: paribesh1@ospcboard.org
Website: www.ospcboard.org

STATE POLLUTION CONTROL BOARD, ODISHA

[DEPARTMENT OF FOREST & ENVIRONMENT, GOVERNMENT OF ODISHA]
Paribesh Bhawan, A/118, Nilakantha Nagar, Unit – VIII
Bhubaneswar – 751 012, INDIA

No. 8333 / Ind-I-Con-1505 Date: 11.07.2018/

OFFICE ORDER

WHEREAS, Central Pollution Control Board, New Delhi vide it's office order No. B-29012/ESS(CPA)/2015-16/8583, dtd.7.3.2016 had laid down an elaborate process for categorization of industrial sectors and brought out a list of industrial sectors categorized under Red, Orange, Green and White based on pollution potential with a direction u/s18(b) Water (PCP) Act,1974 and Air (PCP) Act,1981 to all State Pollution Control Boards/ Pollution Control Committees to follow an uniform pattern of classification of the industries under Red, Orange, Green and White category which is mandatory and binding upon SPC Board, Odisha;

AND WHEREAS, upon receipt of approval of State Govt. the Board vide it's office order No.15889, dtd.31.10.2016 brought out an Office Order notifying the revised categorization of industrial units classified under Red (81 nos.), Orange(91 nos.), Green(73 nos.) and White (42 nos.) following the criteria stipulated by CPCB;

AND WHEREAS, further several industrial units/projects not included in CPCB list were required for classification by the State Pollution Control Board, Odisha at later stage following the criteria fixed by CPCB. Revised classification of additional industrial units under different categories have been notified by the Board subsequently vide office order No.6488, dtd.08.05.2017, & No.16226, dtd.16.12.2017;

AND WHEREAS, in the process of furnishing updated list of categorized industrial units through the India E-track Web Portal of CPCB, inconsistency in the serial numbers in the lists of classification made by the CPCB & SPCB has been observed though the contents remain almost same;

AND WHEREAS, such inconsistency causes too much of manual intervention and difficulties while working with the India E-track Web Portal of CPCB) for information dissemination and sharing;

AND WHEREAS, there is a need to prepare a comprehensive list to bring uniformity and consistency in the contents and serial numbers of the industrial units/projects in the lists of CPCB and SPC Board, Odisha;

P.T.O

Now therefore, SPC Board, Odisha hereby notifies a revised list of industrial units/processes categorized under Red, Orange, Green and White fully consistent and similar to the serial numbers in the list of CPCB for ease of working and sharing information online through India E-track Web Portal. The new revised list contains 92 types of units under Red category, 95 types of units under Orange category, 78 types of units under Green and 43 types of units under White category.

The list of industrial units classified under Red/Orange & Green categories are required to obtain Consent to Establish and Consent to Operate from the State Pollution Control Board, Odisha whereas the industrial units listed under White Category are exempted from obtaining Consent to Establish and Consent to Operate from the Board.

This order supersedes all earlier orders issued relating to categorization of industrial units / project with immediate effect.

By Order of Chairman.

MEMBER SECRETARY

Encl: List of revised classification
of industrial units.

Memo No. 8334 /Dt. 11.07.2018 /
Copy forwarded to the Member Secretary, Central Pollution Control Board, Paribesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 110032 for kind information.

MEMBER SECRETARY

Memo No. 8335 /Dt. 11.07.2018
Copy forwarded to Addl. Chief Secretary, Forest & environment Deptt., Govt. of Odisha for kind information and necessary action.

MEMBER SECRETARY

Memo No. 8336 /Dt. 11.07.2018
Copy forwarded to Principal Secretary/Addl. Chief Secretary, Industries Deptt./MSME Deptt./Steel & Mines Deptt./Energy Deptt./Housing and Urban Deptt./Health & Family Welfare Deptt./ Agriculture Deptt./ Works Deptt./Water Resources Deptt. /F & ARD/ Excise Deptt./ Commerce & Transport Deptt. / Textile & Handloom/CMD, IPICOL /CMD,IIDCO /Special Secretary P&C Deptt./Director, Factory & Boilers, Govt. of Odisha for information & necessary action.

MEMBER SECRETARY

P.T.O

Memo No. 8337 /Dt. 11.07.2018

Copy forwarded to All Branch Officers, SPCB, Odisha, Bhubaneswar/ All Regional Officers, SPCB, Odisha for information and necessary action.

MEMBER SECRETARY

Memo No. 8338 /Dt. 11.07.2018

Copy forwarded to IT Cell for information and necessary action. It is requested to upload the Office Order in the website of the Board.

MEMBER SECRETARY

Categorization of Industrial sectors under Red, Orange, Green and White as per CPCB Criteria

CPCB Sl.No	Red Category
1.	Isolated storage of hazardous chemicals (as per schedule of manufacturing, storage of Hazardous Chemicals Rules, 1989 as amended)
2.	Automobile Manufacturing (integrated facilities)
3.	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016- Items namely - Spent cleared metal catalyst containing copper, Spent cleared metal catalyst containing zinc.
4.	Manufacturing of lubricating oils, grease and petroleum based products
5.	DG Set of capacity > 5 MVA
6.	Industrial carbon including electrodes and graphite blocks, activated carbon, carbon black
7.	Lead acid battery manufacturing (excluding assembling and charging of lead-acid battery in micro scale)
8.	Phosphate rock processing plant
9.	Power generation plant [except Wind and Solar renewable power plants of all capacities and Mini Hydel power plant of capacity <25MW)
10.	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016- Items namely - Spent catalyst containing nickel, cadmium, Zinc, copper, arsenic, vanadium and cobalt.
11.	Processes involving chlorinated hydrocarbons
12.	Sugar (Excluding Khandsari)
13.	Fibre glass production and processing (excluding moulding)
14.	Fire crackers manufacturing and bulk storage facilities
15.	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016- Items namely - Dismantlers Recycling Plants --Components of waste electrical and electronic assembles comprising accumulators and other batteries included on list A, mercury-switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule.
16.	Milk processes and dairy products (integrated project)
17.	Phosphorous and its compounds
18.	Pulp & Paper (waste paper based without bleaching process to manufacture Kraft paper)
19.	Coke making, liquification, coal tar distillation or fuel gas making.

CPCB Sl.No.	Red Category
20.	Manufacturing of explosives, detonators, fuses including management and handling activities
21.	Manufacturing of paints varnishes, pigments and intermediate (excluding blending/mixing)
22.	Organic Chemicals Manufacturing
23.	Airports and Commercial Air Strips
24.	Asbestos & asbestos based industries
25.	Basic chemicals and electro chemicals and its derivatives including manufacturing of acid.
26.	Cement
27.	Chlorates, per-chlorates & peroxides
28.	Chlorine, fluorine, bromine, iodine and their compounds
29.	Dyes and Dye- Intermediates
30.	Health-care Establishment (as defined in BMW Rules, 2016) having total wastewater generation more than 100 KLD or with incinerator.
31.	Hotels having overall waste-water generation @ 100 KLD and more.
32.	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016- Items namely - Lead acid battery plates and other lead scrap/ashes/residues not covered under Batteries (Management and Handling) Rules, 2001. [* Battery scrap, namely: Lead battery plates covered by ISRI, Code word "Rails" Battery lugs covered by ISRI, Code word "Rakes". Scrap drained/dry while intact, lead batteries covered by ISRI, Code word "Rains".
33.	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016- Items namely - Integrated Recycling Plants -- Components of waste electrical and electronic assembles comprising accumulators and other batteries included on list A, mercury-switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule.
34.	Manufacturing of Glue and Gelatin
35.	Mining and ore beneficiation
36.	Nuclear power plant
37.	Pesticides (technical) (excluding formulation)
38.	Photographic film and its chemicals
39.	Railway locomotive work shop/Integrated road transport workshop / Authorized service centers

CPCB Sl.No.	Red Category
40.	Yarn / Textile processing involving any effluent/emission generating processes including bleaching, dyeing, printing and colouring.
41.	Chlor Alkali
42.	Ship Breaking Industries
43.	Oil and gas extraction including CBM (offshore & on-shore extraction through drilling wells)
44.	Industry or process involving metal surface treatment or process such as pickling/ electroplating/paint stripping/ heat treatment using cyanide bath/ phosphating or finishing and anodizing / enamellings/ galvanizing
45.	Tanneries
46.	Ports and harbour, jetties and dredging operations
47.	Synthetic fibers including rayon ,tyre cord, polyester filament yarn
48.	Thermal Power Plants
49.	Slaughter house (as per notification S.O.270(E)dated 26.03.2001)and meat processing industries, bone mill, processing of animal horn, hoofs and other body parts
50.	Aluminium Smelter
51.	Copper Smelter
52.	Fertilizer (basic) (excluding formulation)
53.	Iron & Steel (involving processing from ore/ integrated steel plants) and or Sponge Iron units.
54.	Pulp & Paper (waste paper based units with bleaching process to manufacture writing & printing paper)
55.	Zinc Smelter
56.	Oil Refinery (Mineral Oil or Petro Refineries)
57.	Petrochemicals Manufacturing (including processing of Emulsions of oil and water)
58.	Pharmaceuticals
59.	Pulp & Paper (Large-Agro + wood), Small Pulp & Paper (agro based-wheat straw/rice husk)
60.	Distillery (Molasses/ Grain / Yeast Based)
61.	Others (State Specific List)

State Specific List	
Sl.No.	Red Category
61 (i)	Automobile servicing, repairing and painting (excluding only fuel dispensing) having wastewater generation 100 KLD or more.
61 (ii)	Building and construction project ≥ 20,000 sq.m to ≤ 1,50,000 Sqm of built up area. (Wastewater discharge > 100 KLD)
61 (iii)	Ceramics and Refractories (More than 12 Tons / day coal consumption
61 (iv)	Common Effluent Treatment Plant (CETP)/ Common Sewage Treatment Plant
61 (v)	Common Hazardous Waste Treatment, Storage, Disposal facility (CHWTSDF)
61 (vi)	Common Solid Waste Management facility (CSWMF) as per Solid Waste Management Rules, 2016.
61 (vii)	Fermentation industry including manufacture of Yeast, Beer, Distillation of Alcohol extra Neutral Alcohol having wastewater discharge more than 100 KLD
61 (viii)	Ferrous / Non-ferrous metal extraction ((i) more than 1 Metric ton / hour secondary production, (ii) lead secondary production, (iii) Induction furnace followed with AOD
61 (ix).	Foundries with production capacity more than 5T/hour and more, coal/coke consumption more than 500 kg/hr,
61 (x)	Gold and silver smithy -purification with acid smelting operation and sulphuric acid polishing operation having more than 1 liter of sulphuric acid / nitric acid per month.
61 (xi)	Hydro Cyanide acid and its derivatives
61 (xii)	Industrial Estates/ Parks /Complexes/ Areas, Export Processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks
61 (xiii)	Industrial or inorganics gases namely (a) chemical gases like acetylene, hydrogen, chlorine, flourine, ammonia, sluphur dioxide, ethylene, hydrogen sulphide, phosphine, (b) hydrocarbon gases like methane, butane, ethane, propane.
61 (xiv)	Insecticides / fungicides / herbicides / agrochemical formulation.
61 (xv)	Laboratory chemicals involving distillation and purification process.
61 (xvi)	Lead manufacturing including smelting
61 (xvii)	Manufacturing of lead glass

State Specific List	
Sl.No.	**Red Category**
61 (xviii)	Non-alcoholic beverages (soft drink) & bottling of alcohol / non-alcoholic products, where wastewater generation is more than 100 KLD.
61 (xix)	Parboiled Rice Mills having wastewater more than 100 KLD and/or Fuel consumption more than 12 T/Day.
61 (xx)	Petroleum products / crude oil storage and transfer excluding cross country pipeline.
61 (xxi)	Synthetic Detergents and soaps (excluding formulation) having wastewater generation more than 100 KLD
61 (xxii)	Township and area development projects covering an area more than or equal to 50 Ha. Or built up area more than or equal to 1.5 lakh sq.m.
61 (xxiii)	Vegetable oil manufacturing including solvent extraction and refinery / hydrogenated oils having wastewater generation more than 100 KLD.
61 (xxiv)	Water softening and demineralized plant
61 (xxv)	Calcined Petroleum Coke
61 (xxvi)	Pyrolysis Process
61 (xxvii)	Aluminium Ingot from Aluminium Dross
61 (xxviii)	Common Biomedical Waste treatment and disposal facility
61 (xxix)	Sanitary Land fill (Standalone) > 5 TPD
61 (xxx)	Packing of Pesticides / Chemicals
61 (xxxi)	Septage Treatment (It should be treated as a part of common STP)
61 (xxxii)	Pharmaceuticals R & D purpose

CPCB Sl.No.	Orange Category
1.	Dismantling of rolling stocks (Wagons / Coaches)
2.	Bakery and confectionery units with production capacity > 1 TPD. (With ovens / furnaces)
3.	Chanachur and ladoo from puffed and beaten rice(muri and shira) using husk fired oven
4.	Coated electrode manufacturing
5.	Compact disc computer floppy and cassette manufacturing / Reel manufacturing
6.	Flakes from rejected PET bottle
7.	Food and food processing including fruits and vegetable processing.
8.	Jute processing without dyeing
9.	Manufacturing of Silica gel
10.	Manufacturing of tooth powder, toothpaste, talcum powder and other cosmetic items
11.	Printing or etching of glass sheet using hydrofluoric acid
12.	Silk screen printing, sari printing by wooden blocks (with boiler)
13.	Synthetic Detergents and soaps (excluding formulation) having wastewater generation up to 100 KLD
14.	Thermometer manufacturing
15.	Cotton spinning and weaving (medium and large scale)
16.	Steel furniture, Almirah, Grill Manufacturing (Dry mechanical process) with spray painting
17.	Aluminium & copper extraction from scrap using oil fired furnace (dry process only)
18.	Automobile servicing, repairing and painting (excluding fuel dispensing), where wastewater generation is less than 100 KLD.
19.	Ayurvedic and homeopathic medicine
20.	Brickfields (excluding fly ash brick manufacturing using lime process)
21.	Building and construction project > 20,000 sq.m to < 1,50,000 Sqm of built up area. (Wastewater discharge upto 100 KLD)
22.	Ceramics and Refractories (coal consumption less than 12 tons per day)

CPCB Sl.No.	Orange Category
23.	Coal washeries
24.	Dairy and dairy products (small scale)
25.	DG set of capacity (>1MVA but < 5MVA)
26.	Dry coal processing, mineral processing, industries involving ore sintering, pelletisation, grinding and pulverisation
27.	Fermentation industry including manufacture of yeast, beer, distillation of alcohol (Extra Neutral Alcohol) (Wastewater discharge up to 100 KLD)
28.	Ferrous and Non- ferrous metal extraction involving different furnaces through melting, refining, re-processing, casting and alloy-making (Secondary Production up to 1 Ton / Hour excluding lead)
29.	Fertilizer (granulation / formulation / blending only)
30.	Fish feed, poultry feed and cattle fee
31.	Fish processing and packing (excluding chilling of fishes)
32.	Forging of ferrous and non- ferrous metals (using oil and gas fired furnaces)
33.	Formulation/pelletization of camphor tablets, naphthalene balls from camphor/ naphthalene powders.
34.	Glass ceramics, earthen potteries and tile manufacturing using oil and gas fired kilns, coating on glasses using cerium fluorides and magnesium fluoride etc.
35.	Gravure printing, digital printing on flex, vinyl
36.	Heat treatment using oil fired furnace (without cyaniding)
37.	Hot mix plants
38.	Hotels (<3 star) or hotels having >20 rooms and less than 100 rooms. Hotels having more than 20 rooms and wastewater generation less than 100 KLD and having coal or oil fired boiler. (Hotels with more than 20 rooms with wastewater generation <10 KLD and without any boiler and no generation of hazardous waste will be under Green Category).
39.	Ice cream
40.	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 - Items namely - Paint and ink Sludge/residues

CPCB Sl.No.	Orange Category
41.	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 - Items namely - Brass Dross , Copper Dross, Copper Oxide Mill Scale, Copper Reverts, Cake & Residues, Waste Copper and copper alloys in dispersible form, Slags from copper processing for further processing or refining , Insulated Copper Wire, Scrap/copper with PVC sheathing including ISRI-code material namely "Druid" ,, Jelly filled Copper cables , Zinc Dross-Hot dip Galvanizers SLAB, Zinc Dross-Bottom Dross,, Zinc ash/Skimming arising from galvanizing and Die casting operations, Zinc ash/Skimming/other zinc bearing wastes arising from smelting and refining, Zinc ash and residues including zinc alloy residues in dispersible from.
42.	Industry or processes involving foundry operations. (less than 5 T/hour and coal consumption less than 500 kg/hr)
43.	Lime manufacturing (using lime kiln)
44.	Liquid floor cleaner, black phenyl, liquid soap, glycerol mono-stearate manufacturing
45.	Manufacturing of glass
46.	Manufacturing of Iodized salt from crude/ raw salt
47.	Manufacturing of mirror from sheet glass
48.	Manufacturing of mosquito repellent coil
49.	Manufacturing of Starch/Sago
50.	Mechanized laundry using oil fired boiler
51.	Modular wooden furniture from particle board, MDF<swan timber etc. Ceiling tiles / partition board from saw dust, wood chips etc., and other agricultural waste using synthetic adhesive resin, wooden box making (with boiler)
52.	New highway construction project
53.	Non-alcoholic beverages (soft drink) & bottling of alcohol / non-alcoholic products, where wastewater generation is less than 100 KLD
54.	Paint blending and mixing (Ball mill)
55.	Paints and varnishes (mixing and blending)
56.	Ply-board manufacturing (including Veener and Laminate) with oil fired boiler / thermic fluid heater (without resin plants)

CPCB Sl.No.	Orange Category
57.	Potable alcohol (IMFL) by blending, bottling of alcohol products
58.	Printing ink manufacturing
59.	Printing press
60.	Reprocessing of waste plastic including PVC
61.	Rolling mill (Oil or Coal Fired) and Cold Rolling Mill
62.	Spray painting, paint baking, paint shipping
63.	Steel and steel products using various furnaces like blast furnace / open hearth furnace / induction furnace / arc furnace / submerged arc furnace / basic oxygen furnace / hot rolling reheated furnace.
64.	Stone crushers
65.	Surgical and medical products including prophylactics and latex.
66.	Tephlon based products
67.	Thermocol manufacturing (with boiler)
68.	Tobacco products including cigarettes and tobacco / opium processes.
69.	Transformer repairing / manufacturing (dry process only)
70.	Tyres and tubes vulcanization/ hot retreating
71.	Vegetable oil manufacturing including solvent extraction and refinery / hydrogenated oils, where wastewater generation is upto 100 KLD
72.	Wire drawing and wire netting
73.	Dry cell battery (excluding manufacturing of electrodes) and assembling & charging of acid lead battery on micro scale
74.	Pharmaceutical formulation for R&D purpose.(for sustained release / extended release of drugs only and not for commercial purpose)
75.	Synthetic resins
76.	Synthetic rubber excluding molding
77.	Cashew nut processing
78.	Coffee seed processing
79.	Parboiled Rice Mills, where wastewater generation is up to 100 KLD and/or Fuel consumption less than 12 T/Day.
80.	Foam manufacturing
81.	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 - Items namely - Used Oil – As per specifications prescribed from time to time.
82.	Industries engaged in recycling / reprocessing/ recovery/reuse of Hazardous Waste under schedule IV of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016- Items namely - Waste Oil - As per specifications prescribed from time to time.
83.	Producer gas plant using conventional up drift coal gasification (linked to rolling mills glass and ceramic industry refectories for dedicated fuel supply)
84.	Others (**State Specific List**)

State Specific List	
Sl.No.	**Orange Category**
84 (i)	Chilling plant and ice plant using Ammonia
84 (ii)	Coal Briquetting
84 (iii)	Dumping of Ash/ Char /Slag / Other Non-hazardous industrial waste outside the factory premises (including mine void / or low lying area filling)
84 (iv)	Fish landing centre
84 (v)	Health-care Establishment (as defined in BMW Rules, 2016) having total wastewater generation upto 100 KLD and without incinerator.
84 (vi)	Incineration plants
84 (vii)	Manufacturing of Pasted veneers (using gas fired boiler or thermic fluid heater by sun drying) (Coal fired boiler only)
84 (viii)	Manufacturing of glass (excluding lead glass)
84 (ix)	Ship building
84 (x)	Sports goods
84 (xi)	Standalone composting facility having capacity more than 5 ton per day (without shed)
84 (xii)	Wasting of used sand by hydraulic discharge

CPCB Sl.No.	Green Category
1.	Aluminium utensils from Aluminium Circle by pressing only (Dry Mechanical Operation)
2.	Ayurvedic & Homeopathic medicines (without boiler)
3.	Bakery /confectionery / sweets products with production capacity <1 TPD (with Gas and electrical oven
4.	Bi-axially oriented PP film along with metalizing operations.
5.	Biomass briquettes (sun drying) without using toxic hazardous wastes.
6.	Blending of melamine resins & different powder additives by physical mixing.
7.	Brass and bell metal utensils manufacturing from circles (dry mechanical operation without re-rolling facility)
8.	Candy
9.	Cardboard / corrugated box & Paper products (excluding paper or pulp manufacturing and without using boilers)
10.	Carpentry & wooden furniture manufacturing (Excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade etc.
11.	Cement products (without using asbestos / boiler / steam curing) like pipe, pillar, jaffery, well ring, tiles etc.) should be done in closed covered shed to control fugitive emissions
12.	Ceramic colour by mixing & blending only (not using boiler and wastewater recycling process)
13.	Chilling plant, cold storage and ice making
14.	Coke briquetting (Sun Drying)
15.	Cotton spinning and weaving (Small scale)
16.	Dal Mills
17.	Decoration of ceramic cups and plates by electric furnace
18.	Digital printing on PVC clothes
19.	Facility of handling, storage and transportation of food grains in bulk
20.	Flour mills (dry process)
21.	Glass , ceramic, earthen potteries, tile and tile manufacturing using electrical kiln or not involving fossil fuel kiln
22.	Glue from starch (physical mixing) with gas / electrically operated oven /boiler.
23.	Gold and silver smithy (purification with acid smelting operation and sulphuric acid polishing operation) (using less or equal to 1 litre of sulphuric acid/ nitric acid per month)

CPCB Sl.No.	Green Category
24.	Heat treatment with any of the new technology like ultrasound probe, induction hardening, ionization beam, gas carburizing etc.
25.	Insulation and other coated papers (excluding paper or pipe manufacturing)
26.	Leather foot wear and leather products (excluding tanning and hide processing except cottage scale)
27.	Lubricating oil, greases or petroleum based products (only blending at normal temperature)
28.	Manufacturing of pasted veneers using gas fired boiler or thermic fluid heater and by sun drying
29.	Oil mill Ghani and extraction (no hydrogenation / refining)
30.	Packing materials manufacturing from non-asbestos fibre, vegetable fibre yarn
31.	Phenyl/toilet cleaner formulation and bottling
32.	Polythene and plastic processed products manufacturing (virgin plastic)
33.	Poultry, Hatchery and Piggery (Poultry farms handling 1,00,000 or more birds at a given time in single location as per CPCB guidelines)
34.	Power looms (without dye and bleaching
35.	Puffed rice (muri) (using gas or electrical heating system)
36.	Pulverization of bamboo and scrap wood
37.	Ready mix cement concrete
38.	Reprocessing of waste cotton
39.	Rice mill (Rice hullers only)
40.	Rolling mill (gas fired) and cold rolling mill
41.	Rubber goods industry (with gas operated baby boiler)
42.	Saw mills
43.	Soap manufacturing (hand made without steam boiling / boiler)
44	Spice grinding up to 20 HP motor
45	Spice grinding > 20 HP motor
46.	Steel furniture without spray painting
47.	Steeping and processing of grains
48.	Tyres and tube retreating (without boilers)

CPCB Sl.No.	Green Category
49	Chilling plant, ice making and / or cold storage (without using Ammonia)
50.	CO_2 Recovery
51.	Distilled water (without boiler) with electricity as source of heat
52.	Hotels upto 20 rooms & without boilers and wastewater generation less than 10 KLD and no boiler and no Hazardous Waste generation
53.	Manufacturing of optical lenses (using electrical furnace)
54.	Mineralized water
55.	Tamarind powder manufacturing
56.	Cutting, sizing and polishing of marble stone
57.	Emery powder (fine dust of sand manufacturing)
58.	Fly ash export, transport & disposal facilities
59.	Mineral stack yard / Railway sidings
60.	Oil and gas transportation pipeline
61.	Seasoning of wood in steam heated chamber
62.	Synthetic detergent formulation
63.	Tea processing (with / without boiler)
64.	Others **(State Specific List)**

State Specific List	
Sl.No.	Green Category
64 (i)	Block making for printing
64 (ii)	Bulk cement terminal
64 (iii)	Carpentry excluding saw mill and excluding motorized machines.
64 (iv)	Chuda mill
64 (v)	Concrete Sleeper / Hume Pipes with or without steam curing (without using coal)
64 (vi)	Granite Polishing Units
64 (vii)	Manufacturing of food additives, nutrients and flavours.
64 (viii)	Mineral Conveyor with closed conveying system
64 (ix)	Mineral Slurry Pipeline
64 (x)	Modular wooden furniture from particle board, MDF < swan timber etc. Ceiling tiles / partition board from saw dust, wood chips etc., and other agricultural waste using synthetic adhesive resin, wooden box making (without boiler)
64 (xi)	Musical instrument and manufacturing
64 (xii)	Optical frames
64 (xiii)	Pulverizing units
64 (xiv)	Raw Rice Mill (Pre Boiled)
64 (xv)	Shoe lace manufacturing

Sl. No.	White Category (Non-polluting industries) by State
1	Assembly of Air coolers /conditioners, repairing and servicing
2	Assembly of Bicycles, baby carriages and other small motorizing vehicles.
3	Bailing (hydraulic press) of waste papers
4	Bio fertilizer and bio-pesticides without using inorganic chemicals.
5	Biscuits trays etc. from rolled PVC sheets. (using automatic vacuum foaming machine)
6	Blending / packing of tea
7	Block making of printing without foundry (excluding wooden block making)
8	Candles manufacturing
9	Chalk making from plaster paris by casting without boilers etc.,(sun drying / electrical oven)
10	Compressed oxygen gas from crude liquid oxygen(without use of any solvents and by maintaining pressure & temperature only for separation of other gases)
11	Cotton and woolen hosiers making (dry process only without any drying / washing operation)
12	Diesel pump repairing and servicing (complete mechanical dry process)
13	Electric lamp (bulb) and CFL (by assembling only)
14	Electrical and electronic item assembling (dry process)
15	Engineering and fabrication units (dry process without any heat treatment/metal surface finishing operations/painting)
16	Flavoured betel nuts (production / grinding) completely by dry mechanical operation.
17	Fly ash bricks/ block manufacturing
18	Fountain pen manufacturing and assembling only
19	Garment Stitching and tailoring
20	Glass ampules & vials making from glass tubes.
21	Glass putty and sealant (by mixing with machine only)
22	Gold and silver thread zari work
23	Ground nut decorticating

Sl. No.	White Category (Non-polluting industries) by State
24	Handloom/ carpet weaving (without drying and blenching operation)
25	Jobbing and machining
26	Leather cutting and stitching (more than 10 machine and using motor)
27	Manufacturing of steel trunk / suitcases
28	Manufacturing of Coir items from coconut husk
29	Manufacturing of Metal caps, containers etc.
30	Manufacturing of Shoe brush and wire brush
31	Medical oxygen
32	Organic and inorganic nutrients (by physical mixing)
33	Organic manure (manual mixing)
34	Packing of powdered milk
35	Paper pins and U clips
36	Radio Assembling
37	Repairing of electric motors /generators (dry mechanical process)
38	Rope (plastic and cotton)
39	Scientific and mathematical instrument manufacturing
40	Solar module for non-conventional energy apparatus manufacturing unit
41	Solar power generation through solar photovoltaic cell, wind power and mini hydel power (less than 25 MW)
42	Surgical and medical products assembling only (not involving effluent/ emission generating process)
43	Standalone composting facility (with shed)

True Copy attested
B. Behera
Adv

नालको NALCO

Extracts from the minutes of the 265th meeting of Board of Directors held on 20.03.2013 at New Delhi.

Item No. 265/35 **Authorisation to sign Vaklatnama and to declare officers as Authorised Officers of the Company to handle legal proceedings/cases on behalf of the Company before any Court/Tribunal or any Judicial or Quasi-Judicial or other Authorities.**

XX **XX** **XX** **XX** **XX**

Thereafter the Board approved the proposal by passing the following resolution:

"RESOLVED that CMD/Functional Directors/Concerned EDs be and are hereby severally authorized to sign Vakalatanama in respect of cases, initiated by the Company or against the Company before the Courts, Tribunals or any Judicial or Quasi-Judicial or other Authorities."

"FURTHER RESOLVED that Concerned Executive Directors/General Managers/Deputy General Managers/Asst. General Managers/Concerned Officers and Heads of Regional Offices/Branch Offices of the Company who are well versed with facts to speak and know of things be and are hereby severally declared as authorized Officers of the Company for the purpose of signing the pleadings or verifying the pleadings, swearing the affidavits and signing necessary documents before any Court, Tribunal or any Judicial or Quasi-Judicial or other Authorities."

CERTIFIED TRUE COPY
for National Aluminium Co. Ltd.

(B K SAHU)
COMPANY SECRETARY
श्री/स. बि.के. साहू/ CS. B.K. Sahu
कंपनी सचिव/ Company Secretary
नेशनल एल्यूमिनियम कम्पनी लिमिटेड
National Aluminium Company Ltd
नालको भवन,पी/1,नयापल्ली,भुवनेश्वर-751013
NALCO Bhawan, P/1, Nayapalli,Bhubaneswar-751013