

BEFORE THE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA
ORIGINAL APPLICATION NO. ¹¹⁰-----OF 2026

IN THE MATTER OF

Kailash Chandra Nayak ...Applicant

Versus

State of Odisha & Others ...Respondents

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PLACE: Bhubaneswar

S.Pani

A.Padhy

DATE: 08/03/2026

SANKAR PRASAD PANI

ASHUTOSH PADHY

ADVOCATE'S

Plot 2132/4814, NageswarTangi, Bhubaneswar 751002 Cell-9437279278, Email:
sankarprasadpani@gmail.com

SYNOPSIS

That the present application is filed challenging the illegal and unscientific management of over Burden dumps by the Sukurangi Chromite Mines and South Kaliapani Chromite mines operated by the Odisha Mining Corporation limited. Further the direct discharge of untreated runoff water to the Damsala nala and thereby contamination of Surface water and Ground Water with Hexavalent Chromium, a carcinogenic substance leading to health hazards in the locality.

LIST OF DATES

- | | |
|------------|--|
| 18/02/2010 | Environmental clearance letter dated 18/02/2010 granted in favor of Respondent Company for expansion of Sukurangi chromite mining project |
| 30/07/2020 | Expansion of production capacity from 0.13 MTPA to 0.3 MTPA of Sukurangi Chromite Ore Mining Project [ML Area 382.709Ha] located at village (s) Sukurangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, Teshil Sukinda, District-Jajpur, Odisha by M/s Odisha Mining Corporation Ltd. |
| 23/01/2024 | Environmental clearance granted for South Kaliapani mine of M/s Odisha Mining Corporation Ltd for mining of Chromite Ore without change in production capacity of 1.40 MTPA of Chromite Ore [Total Excavation: 16.64 MTPA (Production: 1.40 MTPA (ROM) + Waste Rock: 15.24 MTPA)] along with an annual throughput capacity of 4,74,000 tonnes (0.47 million tonnes) of COB plant in the mine lease area of 552.457 ha [Forest land: 425.398 ha + Non-Forest land: 127.059 ha] out of 720.727 ha (DGPS)/ 721.405 ha (RoR), located at Villages Kaliapani, Gurujangpal, Sukurangi and Saruabi, Tehsil Sukinda, District Jajpur, Odisha |
| 21/01/2025 | Corrigendum in EC dated 30.07.2028 Granted for Sukurangi Chromite Ore Mining Project for enhancement in production |

capacity from 0.13 to 0.3 MTPA in ML Area of 382.709 Ha by M/s Odisha Mining Corporation Ltd. located at village (5) Sukrangi, Saruabli, Ostapal, Kamarda and Talangi, Teshil Sukinda, District Jajpur, Odisha.

- June 2025 REPORT ON Ground Water Quality in Sukinda Valley Jajpur District, Odisha prepared by CGWB
- 01/09/2025 News published in Odia news paper Sambad
- 10/12/2025 Show cause notice issued to Sukurangi Chromite Ore Mining Project of M/s Odisha Mining Corporation Ltd
- 12/12/2025 Show cause notice issued to South Kaliapani mine of M/s Odisha Mining Corporation Ltd
- 08/03/2026 News published in Odia newspaper Dharitri

BEFORE THE NATIONAL GREEN TRIBUNAL**EASTERN ZONE BENCH, KOLAKATA**

(Under Section 18(1) read with Section 14(1), 15, 20 of
the National Green Tribunal Act 2010)

Original Application No _____/2026

IN THE MATTER OF:

Kailash Chandra Nayak, C/o- Chakradhara Nayak, At/Po-
Nuadihi, PS- Sukinda, Dist- Jajpur, Odisha, 755018 ...

APPLICANT

VERSUS

- 1. State of Odisha** represented by Chief Secretary, Government of Odisha,
Lokaseva Bhawan, 751001 Bhubaneswar csori@nic.in
- 2. District Collector, JAJPUR**, At/Po/Dist-JAJPUR, Odisha, 755001,
dm-jajpur@nic.in
- 3. Divisional Forest Office**, Cuttack Forest Division, At/po- Balisahi,
Government Press Employee Quarters, Cuttack, Odisha 753012,
Email- dfo.cuttack@odisha.gov.in
- 4. Member Secretary**, Odisha State Pollution Control Board A/118, Unit-
VII, Nilakantha Nagar, Bhubaneswar, PIN-751012, Odisha Email:
paribesh1@ospcb.org
- 5. Deputy Director of Mines**, At/Po Jajpur Road, Dist-japur, Pin- 755019
Email:ddm.jajpurroad@orissaminerals.gov.in
- 6. Member Secretary, Central Pollution Control Board**, Parivesh
Bhawan, East Arjun Nagar, Delhi -110032 Email: mscb.cpcb@nic.in
- 7. UNION OF INDIA** Through the Secretary, Ministry of Environment,
Forests & Climate Change, Indira Paryavaran Bhawan, Jorbagh New
Delhi – 110003,Email- secy-moef@nic.in
- 8. Director General of Mine Safety**, Government of India, Dhanbad,
Jharkhand dgmsindia@gmail.com
- 9. Regional Director, Central Ground Water Board**, South Eastern
Region, Bhubaneswar Bhujal Bhawan, Khandagiri, Bhubaneswar,

Email: rdser-cgwb@nic.in

10. Odisha Mining Corporation, Though Managing Director, At/Po-
Odisha Mining Corporation Limited OMC House, Post Box No.: 34,
Bhubaneswar , KHORDHA, ODISHA, Adjacent to Odisha Legislative
Assembly, 751001 envcl.omc@gmail.com

RESPONDENTS

- I. The address of the Applicant is given above for the service of notices of this Application.
- II. The addresses of the Respondents are given above for the service of notices of this Application.
- III. The Present Application Challenges destructive activities and unscientific management of mines by the Chromite Mines leading to the obstruction of natural streams, nickel deposits in agricultural land because of the mines run off, depletion of ground water in nearby villages because of deep mining, underground water contamination with Hexavalent Chromium and the unscientific management of mines overburden causing severe environmental hazard in the locality.

IT IS MOST RESPECTFULLY SHOWETH:

1. The Applicants is a local inhabitant belonging to Sukinda Block where the chromite ore mines are operating. The applicant and his villagers are directly affected due to the pollution caused by the Respondent Company and default of regulatory authorities in ensuring the compliance of approvals such as Environment Clearance and Consent to Operate.
2. That Orissa **accounts for about 98% of the total proved chromite (chromium ore) reserves of the country, of which about 97% occur in the Sukinda Valley**, over an area covering approximately 200 sq. km, in the Jajpur district. Presently there are **17 chromite mines operating in Sukinda**. And 16 of these 17 units, practicing opencast mining, while one is underground (Facor, Kathpal). The **cumulative production of all the mines is around 10.8 Million Tons per Annum**.
3. **That** on dated **18/02/2010**, the Respondent Company got the expansion of Sukurangi Chromite Mining Project. That the total mine lease area of the project is 382.709ha, out of which 47.92ha is an agricultural land, 177.76ha

is forestland, 106.92ha is wasteland, 26.569ha is grazing land, 8.19ha is surface water bodies and 15.35ha is others (settlements). Area proposed for mining is 73.10ha, an area of 76.48ha is kept for OB dumps, 61.46ha: for mineral storage, 8.26ha for roads, 26.25ha for green belt, 19.96ha/ for township and 117.199ha is others. It is not out of place to mention here, that the **Damsal Nalla flows through the Northern part of the lease**. In addition, there are few additional seasonal drainage channels in the lease which drain into the Damsal Nallah. Copy of **the environmental clearance letter dated 18/02/2010** granted in favor of Respondent Company for expansion of Sukurangi chromite mining project is annexed here unto as **ANNEXURE-1**.

4. It is pertinent to mention here that in the environmental clearance letter dated 18/02/2010 under the heading of Specific conditions in **condition No. (viii)** it is categorically mentioned that, *“The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. The first order streams, the seasonal nallahs and Damsal Nallah passing through the mine lease shall not be disturbed and these shall be protected by providing garland drains.”* However in the present case the project proponent is not taking adequate measures so as to protect and preserve the Damsal Nallah on the contrary the project proponent is polluting the Damsal Nallah.
5. It is further submitted that in the environmental clearance letter dated 18/02/2010 in **condition No. (xi)** it is categorically mentioned that, *“Catch drains and siltation ponds of appropriate size shall be constructed for the working pits, soil, OB and mineral dumps to prevent run off of water and flow of sediments directly into the Damsal Nallah and other water bodies. The water so collected should be utilized for watering the mine area, roads, plantation etc. The drains should be regularly desilted and maintained properly.”* However in the present case the project proponent is not taking adequate steps to prevent the run off of water and flow of sediments directly into the Damsal Nallah and other water bodies for which the Damsal Nallah is getting polluted every day.
6. That again on dated **30th July 2020**, the project proponent got expansion of the production capacity from **0.13 MTPA to 0.3 MTPA of Sukurangi Chromite Ore Mining Project** [ML Area 382.709Ha] located at village (s)

Sukrangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, Teshil Sukinda, District-Jajpur. Copy of the environmental clearance dated 30/07/2020 is annexed here unto as **ANNEXURE-2**.

7. That in the environmental clearance letter dated 30/07/2020 under the heading of “Water quality monitoring and preservation” in condition No. 18 it is categorically mentioned that, *“Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department State Pollution Control Board”*, however in the present case project proponent is not taking adequate measures to protect the perennial nallahs, further the **water table of the area has gone down**.
8. It is not out of place to mention here that on dated 21/01/2025, the project proponent has amended the earlier environmental clearance dated 30/07/2020 for enhancement of the production capacity from 0.13 to 0.3 MTPA in ML Area of 382.709 Ha by M/s Odisha Mining Corporation Ltd. located at village (s) Sukrangi, Saruabli, Ostapal, Kamarda and Talangi, Teshil Sukinda, District Jajpur, Odisha. Copy of the environmental clearance letter dated 21/01/2025 is annexed here unto as **ANNEXURE-3**.
9. That the Sukrangi Chromite Mines of Odisha Mining Corporation was issued show cause Notice by OSPC Board on 10/12/2025 and the contents of the notice is reproduced as follows

“Consent to Operate was granted in favour of Sukarangi Chromite Mines with strict conditions for compliance. One of the major conditions was to channel entire surface runoff to the Effluent Treatment Plant (ETP) for necessary treatment prior to discharge. However, several non-compliances were observed with surface runoff management and effluent discharge standards **during inspection on 02.09.2025** as mentioned below.

1. Analysis of water samples collected from various discharge points, including the surface runoff of WD-5 OB dump, **drain near the wheel wash, settling pit discharge, and drain overflow near Saruabil village, showed concentrations of Hexavalent Cr significantly** exceeding the Board's prescribed standard.

2. Discharged water from the settling pit **near Koiposhi Bridge and the overflow drain near Saruabil village showed TSS levels** not meeting standards.

3. The **surface runoff water from OB dump (WD-5) was found to be entering adjacent households.**

4. The **RCC boundary wall around WD-5 OB Dump was found damaged, leading to dump spillage.** The garland drain around the dump was choked **and leaking outside the lease boundary through weep holes**

You are therefore directed herewith to take necessary corrective actions

a) To remove the above-mentioned lapses and have adequate surface runoff management

b) To treat Cr effluent uninterruptedly in the existing ETP of South Kalapani Chromite Mines

2) To **complete installation and commissioning of the new ETP** within the Mine lease of Sukarangi Chromite Mines within six months

Action plan for the above shall be submitted within 7 days". Copy of the show cause notice dated **10/12/2025** is annexed here unto as **ANNEXURE-4.**

10. That in the same sukinda valley the Respondent No. 10 is operating another chromite ore mine called as **South Kaliapani Chromite mine.** On dated 23/01/2024 the Respondent No. 10 got environment clearance for Expansion of Mine Lease Area. The Respondent No.10 is operating the South Kaliapani Mine having production capacity of 1.40 MTPA of Chromite Ore [Total Excavation: 16.64 MTPA (Production: 1.40 MTPA (ROM) + Waste Rock: 15.24 MTPA)] along with an annual throughput capacity of 4,74,000 tons (0.47 million tonnes) of Chrome Ore Benefication (COB) plant in the mine lease area of 552.457 ha [Forest land: 425.398 ha + Non-Forest land: 127.059 ha] out of 720.727 ha (DGPS)/ 721.405 ha (RoR), located at Villages Kaliapani, Gurujangpal, Sukurangi and Saruabi, Tehsil Sukinda, District Jajpur, Odisha. Copy of the environmental clearance dated 23/01/2024 is annexed here unto as **ANNEXURE-5.**

11. It is not out of place to mention here that in the environmental clearance letter dated 23/01/2024 under the heading of **Overburden** under **condition No. 3.1** it is categorically mentioned that *“The Project Proponent needs to make provision for proper collection arrangement of runoff water from the OB dump area and mineral storage area.”* However in the present case the project proponent has not made any provisions for proper collection and arrangement of runoff water from the OB dump area **for which the runoff water is entering into the nearby Nallah and agricultural lands.**
12. It is further submitted that in the same environmental clearance letter dated 23/01/2024 in **condition No. 8.3** it is specifically mentioned that *“Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off”* however in the instant case the runoff water is directly getting merged with the Damsal Nallah and also to the nearby agricultural lands, for which the **water of the Nallah is getting polluted.**
13. It is pertinent to mention here that in **condition No. 8.5** it is categorically mentioned that *“Adhere to 'Zero Liquid Discharge”*. However, in the present case the project proponent is not adhering to the zero liquid discharge policy and **directly discharging** the polluted mine water and surface runoff water into the **nearby perennial Nallah.**
14. That the South Kaliapani Chromite Mines of Odisha Mining Corporation was issued show cause Notice by OSPC Board on 12/12/2025 and the contents of the notice is reproduced as follows

“The Consent to Operate was granted in favour of **South Kaliapani Chromite Mines** with strict conditions for compliance. One of the major conditions was to **channel entire surface runoff to the Effluent Treatment Plant (ETP) for necessary treatment prior to discharge.** However, several non-compliances were observed with **surface runoff management and effluent discharge standards during inspection on 02.09.2025 as mentioned below.**

1. The analysis reports of water samples collected from settling pits, embankments, and discharge points revealed that **TSS and Cr concentrations exceeded the prescribed standards of the Board.**
2. **Overflow of settling tank near ore plot leading to discharge outside Mining Lease area with Cr and TSS above limits.**
3. **Breach of settling pit near DECO vehicle parking causing contaminated runoff into agricultural land.**

4. **Discharge from settling pit near Koipasi bridge into Damsala Nala** not meeting standards.

5. **OB dump near Chiruguda Sahi observed to be collapsing**, with inadequate retaining wall and garland drain.

You are therefore directed herewith to take necessary corrective actions

a) To remove the above-mentioned lapses and have adequate surface runoff management.

b) To treat Cr effluent uninterruptedly in the existing ETP.

Action plan for the above shall be submitted within 7 days.” Copy of the show cause notice dated 12/12/2025 is annexed here unto as **ANNEXURE-6**.

15. It is pertinent to mention here that in the month of June 2025, the Ministry of Jal Shakti conducted an inspection of Ground Water Quality in Sukinda Valley, Jajpur District, Odisha and **higher concentration of chromium was found in ground water**. The Sukinda Valley area has **phreatic aquifer up to a depth of 30 meter below ground level followed by fractured deeper aquifer**. A total number of **233 samples were collected** from the study area and analysed. The samples were collected from hand pumps, dug wells, Effluent Treatment Plant (ETP) mine pits, Damsala Nala and Brahmani River. In addition to these groundwater samples, samples were also collected from surface water body (pond, spring and river), to assess the quality. **Out of 233 samples, 37 samples have shown higher concentration of chromium (VI) above 0.05 mg/l during pre-monsoon and 28 locations have shown chromium (VI) above 0.05 mg/l during post-monsoon season**. Copy of the inspection report of June 2025 is annexed here unto as **ANNEXURE-7**.
16. That in the inspection report of June 2025 in conclusion and recommendation under point No. 7 it is specifically recommended that “Effluent treatment systems in the mining areas must be strictly maintained to ensure effective treatment and compliance with discharge standards. This is crucial to prevent contamination of nearby surface water bodies”. However, in the present case the recommendation made by the Ministry is not followed by the project proponent and on the contrary the project proponent is directly discharging the contaminated waste water into the perrinial nallahs and also to the agricultural lands.

17. That on dated **08/03/2026** a news article is published in an Odia new Paper namely Dharitri wherein the headline was 'DAMSALA WILL GET VANISHED', highlighting the forest land diversion proposal filed by OMC for diversion of 513c Ha. of land will have serious irreversible consequence. Copy of the news article published in Dharitri dated 08/03/2025 is annexed here unto as **ANNEXURE-8**.
18. It is pertinent to mention here that 01/09/2025 a new article was published in one leading Odia newspaper namely SAMBAD wherein it is published that mud water entered into home after breach of Overburden dump. Copy of the news article published on Sambad on dated 01/09/2025 is annexed here unto as **ANNEXURE-9**.
19. In September 2007, the Blacksmith Institute had listed **Sukinda as one of the 10 most polluted places in the world**. The valley is abundant in the deposits of chromite and has the **largest open cast chromite ore mines in the world**. The mines operate in the area without proper environmental controls, and pollution caused by the mines is a major health hazard. 60% of the drinking water contains hexavalent chromium at levels more than double the international standards and as per an Indian health group estimations 84.75% of deaths in the mining areas, where regulations are non-existent are due to chromite-related diseases. There has been virtually no attempt to clean up the contamination
20. Presence of Cr (VI) in mine drainage water as the **Opencast chromite mining generates huge volumes of seepage water**. Even though chromium in chromite is in the trivalent state, some hexavalent Cr(VI) is always formed due to certain complex reactions. If Cr(VI) containing mine drainage water is released untreated, can severely contaminate the nearby water bodies. Many mines have chrome ore beneficiation (COB) plants, where chromium content in the ore is concentrated through washing and sorting. Washings from the COB plants can also be a source of Cr(VI).
21. **Water Quality Status in Sukinda Valley Area:** Damsala nallah, a small rivulet flows through the valley and meets the Brahmani River. There are seventeen chromite mines in valley which discharge their effluent into Damsala Nallah. The water from these mines naturally contains hexavalent chromium as a pollutant. In order to control Hexavalent Chromium concentration in Damsala Nallah, the State Pollution Control Board had conducted a study in the year 2012, through IIT, **Kharagpur to make an**

assessment of the then prevailing treatment system. The study by IIT, Kharagpur found that the treatment plants were inadequate to treat hexavalent chromium to maintain the water quality of Damsala Nallah below the tolerance limit of 0.05 mg/l. Accordingly, it was suggested to upgrade the treatment plants of all the mines.

22. **Overburden generation:** Opencast chromite mining generates enormous quantities of overburden (OB). The stripping ratio varies from 1:5 to 1:10 and in some cases overburden ratio having the maximum output of **14.55 Metric Tons of waste generated against 1.0 Metric Tons of Ore.** Unless managed properly, run offs from the OB dumps have the dual potential of polluting the water bodies by siltation and leaching of Cr(VI). Dust generation: Huge amounts of dust are released during mining, stacking and loading. The dust is, though mostly, chromite particles, may also contain traces of Cr(VI). Unfortunately, chromite bearing mines occur mostly in forest areas, thus an inevitable loss of huge forest cover due to mining.
23. **The Damsala rivulet** crosses the mining belt along the length. This being the main source of water (at least during the earlier days), settlements and villages have developed around this rivulet. Damsala, carries the mine drainage water from almost all the mines. Water samples collected from various points of the river, starting from the site with no mining activity to the downstream of all the mines, show marginal increase in Cr(VI) concentration, but is still within the stipulated standards for drinking and bathing water. It should, however, be borne in mind that the water quality of Damsala river with respect to Cr(VI) is governed by the quality of discharge of the treated mine drainage water
24. That because of the obstruction of nallah, the streams got dried and facing a silent death. The streams used to irrigate 500 acres of agricultural land and because of the streams dried, now most of the land could not be irrigated.
25. That because of the large number of vehicles transporting the minerals, the roads become more polluted with dusts and the local commuters are suffering as sprinkling on roads are not being done regularly. That even though no improvement in the situation has taken place on ground, but the pollution control board remain a mute spectator and allowing the unit to operate in violation of the environment norms.

26. That because of the discharge of untreated water by the Respondent Company to the Damsala Nallah, the water has been contaminated and people bathing in the Damsala nalla water are complaining of the skin diseases
27. That the Open cast chromite mining generates huge volumes of seepage water. This water seeps into the ground of the quarry. It dissolves the chromium. The chromium inC trivalent stage Cr (III) turns into the hexavalent Cr(VI) form due to complex reactions (including oxidation). Hexavalent chromium is more soluble in water than any other form. It is also the most toxic form of chromium. Studies have shown that Cr (III) in minerals can get oxidised to Cr(VI) and its problems are exacerbated. It is submitted that the threat of hexavalent chromium in the region is quite imminent and an independent study can dig out more information on the impact of hexavalent chromium in the locality
28. It is further submitted that the local people are also complaining of Kidney related disease and persistent cold in bodies and the reasons are attributed to the polluted water in the locality.
29. That because of deep mining the water level in the locality have depleted and no when local people make hue and cry the Respondent Company makes available water in tankers at its whims. It is humbly submitted that there is need for necessary corrective measures so as to address the water depletion issue which is also a condition in environment clearance letter and no such long-term corrective measures like supply of treated water from any of the nearby river needs to be done and has not been done even after mining of more than thirty years.

Grounds

- a) Unscientific Dumping of Over Burden in Private Agriculture and Community Forest Land is causing serious damage to land.
- b) Discharge of Untreated Mine Water directly to the Damsala Nallah and there by polluting the water bodies,
- c) Blockage/Obstruction of 1st and 2nd order natural streams by overburden of the respondent company.
- d) The mines run off water discharged to the natural streams during rainy season making the entire water source unfit for use.

- e) That the Ongoing Mining Operation by the Respondent Company is in gross violation of the conditions of Environment Clearance, Consent to Operate and Principles of Sustainable Development, Precautionary Principle and Polluters Pay Principle.

LIMITATION

That there is a subsisting cause of action because of the show cause notice issued by SPCB in December 2025, hence the application is not barred by limitation.

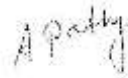
PRAYER

- A. That the Environment Clearance granted in favor of Respondent No.10 may be suspended till full compliance of all the conditions imposed in Environment Clearance letter.
- B. Direct the Opposite Parties to remove the overburden material and allow free flow of natural streams and Restrain the Mines from discharging the mine water/run off water to the natural streams and nallas.
- C. Direct the respondent No.10 to remove the nickel sediments from private agricultural lands that has damaged the agricultural land due to overburden and other mining related activities of the Company Respondent.
- D. Constitute an independent factfinding committee to assess the damages caused to the agricultural lands and streams/nallas because of the obstruction by the Respondent No.10.

The Hon'ble Tribunal may pass any other order deems fit in the interest of justice

Applicant Through





ADVOCATE

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA

ORIGINAL APPLICATION NO. - of 2026/EZ

IN THE MATTER OF:

KAILASH CHANDRA NAYAK

APPLICANT

VERSUS

STATE OF ODISHA AND Others ...

RESPONDENTS

AFFIDAVIT

08 MAR 2026

I, Kailash Chandra Nayak, C/o- Chakradhar Nayak, aged about- 48 years, At/Po- Nuadihi, Dist- Jajpur, Pin- 755018, Odisha do hereby solemnly affirm, and declare as under.



That I am the Applicant in the above mentioned Application and fully conversant with the facts and circumstances of the case and therefore competent to swear this affidavit

- 2. That I have read over the contents of the accompanying Affidavit and the same is true and correct and is drafted on my instruction.

Kailash chandra Nayak
DEPONENT

VERIFICATION

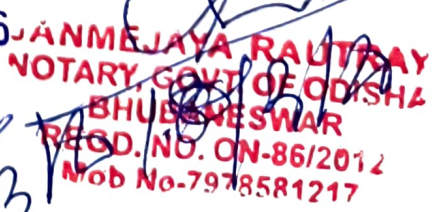
Verified on this 08 day 2026.....2026 at BBSR that the contents of the above affidavit are true and correct. No part of it is false and nothing material has been concealed there from.

Identified By *[Signature]* 08/03/26
Advocate



The above named deponent(s) being duly identified by Sr. *[Signature]* Advocate *[Signature]* Bhubaneswar appears before me on 08/03/2026 at BBSR States on oath the contents of this affidavit are true to the best of his/her / their knowledge and belief

Kailash chandra Nayak
DEPONENT



Notary, Bhubaneswar

No. J-11015/409/2008-IA.II(M)
 Government of India
 Ministry of Environment and Forests
 IA Division

Paryavaran Bhawan
 CGO Complex, Lodhi Road,
 New Delhi-110 003

Dated the 18th February, 2010

To

M/s The Orissa Mining Corporation Ltd.
 P.O. Jajpur Road,
 District Jajpur,
 Orissa-758 036
 E-mail; info@orissamining.com

Subject: Expansion of Sukurangi Chromite Mining Project of M/s The Orissa Mining Corporation Ltd. located in Village(s) Sukurangi, Saruabil and village limits of Ostapal, Kamarda and Talangi, Tehsil Sukinda, District Jajpur, Orissa- environmental clearance regarding.

Sir,

This has reference to your letter No. 18921/OMC/F&E/09 dated 31.10.2009 and subsequent letters dated 10.12.2009 and 23.12.2009 on the subject mentioned above. The Ministry of Environment and Forests had prescribed additional Terms of Reference (TORs) to the project on 22.12.2008 for incorporating in the already prepared EIA report. The proposal is for renewal of mine lease which fall due since 2000 and enhancement of production of chrome ore to 1,30,000 tonnes per annum (TPA). The total mine lease area of the project is 382.709ha, out of which 47.92ha is an agricultural land, 177.76ha is forestland, 106.92ha is wasteland, 26.569ha is grazing land, 8.19ha is surface water bodies and 15.35ha is others (settlements). Area proposed for mining is 73.10ha, an area of 76.48ha is kept for OB dumps, 61.46ha for mineral storage, 8.26ha for roads, 26.25ha for green belt, 19.96ha for township and 117.199ha is others. The Damsal Nalla flows through the Northern part of the lease. In addition, there are few additional seasonal drainage channels in the lease which drain into the Damsal Nallah. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the mine. In support of this a letter from the DFO cum Wildlife Warden, Cuttack dated 04.11.2008 provided along with a duly authenticated map. According to the Wildlife Warden, the lease area adjoins the elephant movement area (elephant corridor) of Mahagiri DPF, which is about 3km towards East from the mine lease. The mine working will be opencast by semi-mechanized method involving drilling and blasting. The targetted production capacity of the mine is 1,30,000 TPA of chromite and the life of mine is 30 years. Approximately 400 TPD of mineral will be transported through the road. The mine lease is located at the foot of the Mahagiri hill range and slopes from South-East to

..2/-

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 4/2/10

North-West. The South-East corner of the lease hold is marked by a steep hill rising up to 254m RL. Subsequently, the slope becomes gentler. The North-Western corner of the lease is at about 130m RL. In the North-Western part of the lease, there is a small mound rising to 154m RL. In general, lease area has more or less flat topography ranging from 140m-160m RL and slopes from North to South. The mine has three quarries namely Quarry AC, Quarry DE and Quarry F. It has been mentioned that quarry AC and DE will merge into one pit and thus only two pits will remain finally. The ultimate working depth of mine will be 62m AMSL in quarry AC, 64m AMSL in Quarry DE and 102m AMSL in Quarry F. The groundwater table reported to vary between 111m-126m AMSL. The mine working will intersect the groundwater table. It has been envisaged that about 1000m³ per day will be mine discharge during the lean period, out of which 47m³ per day will be re-used. Hydro-geological report for South Kaliapani, Kaliapani and Sukurangi Chromite Mine has been provided combinedly. The peak water requirement of the project is estimated as 306m³ per day, out of which 80m³ per day will be obtained from the ground water, 147m³ per day from mine discharge water and 79m³ per day from the recycled water. It has been reported that one village comprising a population of 720 people is in the core zone of the mine, however, displacement of population and R&R has not been envisaged. It is estimated that 15.332million m³ of over burden will be generated during the expansion phase. About 4.487million m³ of over burden has already been accumulated in the over burden dumps. The Dump-1 is active now and will continue till 2020. The Dump-2 will merge with dump-1 during the year 2019 and cease in 2024. The dump-3 will commence in 2024 and will continue till end of the project. The maximum height of dump-3 will be 60m having 3 lifts. Out of the total excavated area of 73.1ha, an area of 57.21ha will be developed as water body and in remaining 15.89ha of the upper benches of the quarry plantation will be carried out. Plantation will be raised in an area 204.7ha at the end of the mine life and an area of 57.21ha will be developed as water body during the post mining stage. The State Pollution Control Board, Orissa had issued Consent to Establish to the project on 05.11.2008 for enhancing production from 36,000TPA to 1,27,000TPA over an area of 382.709ha. The public hearing of the project was held on 09.09.2009 as per the EIA Notification, 2006 for enhancement of chromite production from 63,226TPA to 0.13million TPA over an area of 382.709ha. The Ministry of Environment and Forests conveyed its approval under Section-2 of Forest (Conservation) Act, 1980 for diversion of 41.34ha of already broken up forestland for renewal of mining lease for a period of ten years on 05.02.2001. Subsequently, the Ministry of Environment and Forests had agreed in principle for diversion of 104.79ha (including 18.94ha of broken up forestland and 23.85ha of fresh forestland) of forestland on 29.03.2006. The Indian Bureau of Mines had approved the scheme of mining including progressive mine closure plan of the project on 28.07.2006 for lease area of 382.709ha. The capital cost of the project is Rs.3000Lakhs. The capital cost for environmental protection measures is proposed as Rs.63.72lakhs and the annual recurring cost towards the environmental protection measures is proposed as Rs.38Lakhs. It has been stated by the proponent that there is no litigation pending against the project.

1031-

2. The Ministry of Environment and Forests has examined the application in accordance with the EIA Notification, 2006 and hereby accords environmental clearance under the provisions thereof to the above mentioned Sukurangi Chromite Mining Project of M/s The Orissa Mining Corporation Ltd. for an annual production capacity of 1,30,000 tonnes of chrome ore by the opencast semi-mechanised method involving total mining lease area of 382.709ha, subject to implementation of the following conditions and environmental safeguards.

A. Specific conditions

- (i) The project proponent shall obtain fresh Consent to Establish for envisaged production capacity of 1,30,000TPA of chrome ore and Consent to Operate from the State Pollution Control Board, Orissa and effectively implement all the conditions stipulated therein.
- (ii) Necessary forestry clearance under the Forest (Conservation) Act, 1980 for an area of 177.76ha forestland involved in the project shall be obtained before starting mining operation in that area. Till such time mining activities shall be restricted to an area of 41.34ha already broken up forestland for which approval under Section-2 of the Forest (Conservation) Act, 1980 was granted by the Ministry of Environment and Forests on 05.02.2001. Environmental clearance is subject to grant of forestry clearance.
- (iii) The environmental clearance is subject to approval of the State Land Use Department, Government of Orissa for diversion of agricultural land for non-agricultural use.
- (iv) The project proponent shall develop fodder plots in the non-mineralised area in lieu of use of grazing land.
- (v) Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 460 of 2004, as may be applicable to this project.
- (vi) Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project.
- (vii) The project proponent shall obtain prior clearance from the Chief Wildlife Warden due to proximity of mine to the elephant corridor.
- (viii) The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. The first order streams, the seasonal nallahs and Damsal Nallah passing through the mine lease shall not be disturbed and these shall be protected by providing garland drains.

80.4/-

- (ix) The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for a period more than 3 years. The topsoil should be used for land reclamation and plantation.
- (x) The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and their phase-wise stabilization shall be carried out. The project proponent shall carry out slope stability study through an expert organization like Central Institute of Mining and Fuel Research, Dhanbad for attaining the proposed height of dump as 60m in three lifts of 20m each and submit report to the Ministry and its Regional Office, Bhubneswar within three months. The proponent shall ensure that the overall slope of dumps be maintained to 28 degree. OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. The waste dumps shall be stabilized using coir matting or any similar mechanism to avoid gully formation in the waste dumps. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis.
- (xi) Catch drains and siltation ponds of appropriate size shall be constructed for the working pits, soil, OB and mineral dumps to prevent run off of water and flow of sediments directly into the Damsal Nallah and other water bodies. The water so collected should be utilized for watering the mine area, roads, plantation etc. The drains should be regularly desilted and maintained properly.

Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the Damsal Nallah and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.

Storm water return system should be provided. Storm water should not be allowed to go to the effluent treatment plant during high rainfall / super cyclone period. A separate storm water sump for this purpose should be created.

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

85/-

- (xiii) Mine water discharge and/or any waste water shall be properly treated to meet the prescribed standards before reuse/discharge. The run off from OB dumps and other surface run off should be analyzed for Cr^{+6} and in case its concentration is found higher than the permissible limit, the waste water should be treated before discharge/reuse.
- (xiv) Effluents containing Cr^{+6} shall be treated to meet the prescribed standards before reuse/discharge. Effluent Treatment Plant shall be provided for treatment of mine water discharge and wastewater generated from the workshop and mineral separation plant.
- (xv) Separate impervious concrete pits for disposal of sludge shall be provided for the safe disposal of sludge generated from the mining operations.
- (xvi) Regular monitoring of water quality upstream and downstream of Damsal nallah shall be carried out and record of monitoring data should be maintained and submitted to Ministry of Environment and Forests, its Regional Office, Bhubneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.
- (xvii) The project proponent shall ensure that the quality of decanted effluents from the tailing pond, if any, conform to the prescribed standards before discharge. The decanted water from the tailing pond shall be re-circulated within the mine and there shall be zero discharge from the mine.
- (xviii) The project proponent shall explore the possibility to reduce concentration of Cr^{+6} in the tailing pond, if any, in consultation with an expert scientific institution like NEERI.
- (xix) Plantation shall be raised in an area of 204.7ha including a 7.5m wide green belt in the safety zone around the mining lease by planting the native species around ML area, over burden dumps, mine benches, roads etc. in consultation with the local DFO/Agriculture Department. The tree density should be two thousands trees per hectare. At least 1500 trees per year shall be planted. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.
- (xx) The void left unfilled in an area of 57.21ha shall be converted into the water body. The higher benches of excavated void/mining pit shall be terraced and plantation done to stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out all along the excavated area.

26/-

- (xxi) Effective safeguard measures including metalling of haul road shall be undertaken for control of dust level in the area. Other safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (xxii) The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.
- (xxiii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Bhubneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.
- (xxiv) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained.
- (xxv) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) required for the project.
- (xxvi) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
- (xxvii) Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral from mine face to the beneficiation plant. The vehicles shall be covered with a tarpaulin and shall not be overloaded.
- (xxviii) No blasting shall be carried out after the sunset. Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented....

271-

- (xxix) Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to the Ministry of Environment and Forests and its Regional Office located at Bhubneswar.
- (xxx) Drills shall either be operated with dust extractors or equipped with water injection system.
- (xxxi) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- (xxxii) Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.
- (xxxiii) Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.
- (xxxiv) The critical parameters such as RSPM (Particulate matter with size less than 10micron i.e., PM₁₀), NO_x in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The Circular No. J-20012/1/2006-IA,II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.
- (xxxv) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.

B. General conditions

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral chrome ore and waste should be made.
- (iii) Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife department and effectively implemented.

88/-

- (iv) Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10micron i.e., PM₁₀), NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.
- (v) Data on ambient air quality RSPM (Particulate matter with size less than 10micron i.e., PM₁₀), & NOx should be regularly submitted to the Ministry of Environment and Forests including its Regional office located at Bhubneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.
- (vi) Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
- (vii) Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
- (viii) Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.
- (ix) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- (x) A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
- (xi) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Bhubneswar.
- (xii) The project authorities should inform to the Regional Office located at Bhubneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

9/5/-

- (xiii) The Regional Office of this Ministry located at Bhubneswar 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.
- (xiv) The project proponent shall submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Bhubneswar, the respective Zonal Office of Central Pollution Control Board the State Pollution Control Board. The proponent shall upload the status of compliance of the EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Bhubneswar, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board.
- (xv) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
- (xvi) The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ Tehsildar's Office for 30 days.
- (xvii) The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the Regional Office of the Ministry of Environment and Forests, Bhubneswar by e-mail.
- (xviii) The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubneswar.
3. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

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

5. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made thereunder and also any other orders passed by the Hon'ble Supreme Court of India/High Court of Orissa and any other Court of Law relating to the subject matter.

6. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997.


18/12/2010
(SATISH C. GARKOTI)
Additional Director (S)

Copy to:

- (i) The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
- (ii) The Secretary, Department of Environment, Government of Orissa, Secretariat, Bhubaneswar.
- (iii) The Secretary, Department of Mines and Geology, Government of Orissa, Secretariat, Bhubaneswar.
- (iv) The Secretary, Department of Forests, Government of Orissa, Secretariat, Bhubaneswar.
- (v) The Chief Wildlife Warden, Government of Orissa, Bhubaneswar.
- (vi) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- (vii) The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests, A-3 Chandrasekharpur, Bhubaneswar-751023.
- (viii) The Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/118 Nilkantha Nagar, Unit-VIII, Bhubaneswar-751012.
- (ix) The Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.

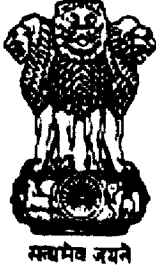
..11/-

- (x) The District Collector, Jajpur District, Orissa.
- (xi) EI Division, Ministry of Environment & Forests, EI Division, New Delhi.
- (xii) Monitoring File.
- (xiii) Guard File.
- (xiv) Record File.

EDCFSE)

F. No. J-11015/348/2015-IA. II (M)
Government of India

Ministry of Environment, Forest and Climate Change



3rd Floor, Vayu Block,
Indira Paryavaran Bhawan,
Jor Bagh Road, Aliganj,
New Delhi-110003

Dated: 30th July, 2020

To,

M/s Odisha Mining Corporation Ltd.
OMC House, Bhubneswar-751001
Email:

Subject: Expansion of production capacity from 0.13 MTPA to 0.3 MTPA of Sukurangi Chromite Ore Mining Project [ML Area 382.709 Ha] located at village (s) Sukurangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, Teshil - Sukinda, District-Jajpur, Odisha by M/s Odisha Mining Corporation Ltd.-EC Regarding

Ref: Online application No: IA/OR/MIN/8903/2007

Sir,

This has reference to your online application for Environmental Clearance (EC) for Expansion of production capacity from 0.13 MTPA to 0.3 MTPA of Sukurangi Chromite Ore Mining Project [ML Area 382.709 Ha] located at village (s) Sukurangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, Teshil - Sukinda, District-Jajpur, Odisha. The latitude and longitude of the mine lease area lie between 21°02'18.85" N to 21°03'46.98" N and 85°47'43.77" E to 85°49'21.74" E and the Survey of India Topo-sheet number is 73 G/16, 73H/9 & 73H/13.

2. The project falls under Schedule 1(a) of mining and is a Category- "A" project as per EIA notification 14th September 2006 (as amended) as the mining lease area is 382.709 Ha. PP submitted that previously the Environmental Clearance for expansion of Sukurangi Chromite Mining Project of M/s The Orissa Mining Corporation Ltd. for the capacity of 0.13 MTPA was granted by MoEF vide Letter No. J-11015/409/2008-IA. II(M) dated 18th February, 2010.

3. The Project Proponent applied online for grant of TOR for expansion in chromite production from 0.13 MTPA to 0.3 MTPA vide proposal No IA/OR/MIN/30726/2015 on 18.09.2015 and submitted Form-1 and Pre-Feasibility Report. The proposal was considered in 38thEAC meeting held on October 26-28, 2015 wherein the committee recommended for grant of TOR. Ministry granted the TOR Vide letter no. J-11015/348/2015-IA. II (M), dated 30.11.2015. Further, Project Proponent requested the

extension of Validity of TOR as the Public Hearing for the Project was delayed. The Proposal was considered in the EAC in its meeting held during 23-24 October, 2018 wherein the EAC granted the extension of validity of TOR for one year i.e. from 30.11.2018 to 29.11.2019. The extension in validity of ToR was issued vide letter No. J-11015/348/2015-IA. II (M) dated 13.11.2018.

4. The Project Proponent applied online vide proposal no. IA/OR/MIN/8903/2015 on 27th April 2019 for grant of EC and submitted EIA/EMP Report after conducting public hearing and the proposal was placed in EAC meeting held during May 29-30, 2019 wherein the committee deferred the proposal due to some shortcomings. The PP submitted the information on 13.11.2019 as sought by EAC/Ministry. Accordingly, the proposal was considered in the EAC in its meeting held during 19-20 December, 2019 wherein the Committee recommended the proposal for grant of EC. The proposal examined in the Ministry and project was sent for re-consideration by EAC and the proposal is placed in EAC meeting held during 28-29 May 2020 & 1st June, 2020 wherein the Committee recommended the proposal for grant of EC and prescribed the specific conditions for the project.

5. PP submitted that the Sukurangi **Mining Lease** was granted and executed in favor of M/s Sirajuddin & Co. for a period of 20 years from 26.03.1959 to 26.03.1979. After 4 years of operations, it was determined on 05.04.1963, Odisha Mining Corporation (OMC) was then allowed by the State Government vide their letter no. III(G) M, 13/70-5592-MG, dated 20.07.1970 to operate the said lease to OMC in 1971 by expanding the area broken by M/s Sirajuddin & Co. Govt. of Odisha in their erstwhile Mining & Geology Dept. Proceeding No. III (G)-MG-10/78-7924 dated 05.08.1978 granted a Mining Lease for exploration of Chromites in Sukurangi chromites mines over an area of 382.709 Ha for a period of 20 years. The mining lease was executed on 20.09.1980 for a period of 20 years and the application for renewal of the mining lease was made on 19.09.1999. Subsequently, as per MMDR Amendment Act 2015, the lease period has been extended upto 31.03.2020 by steel and Mines Department, Govt. of Odisha vide letter No. III(CR) SM-10/2006/SM Bhubaneswar dated 26.03.2015 and the supplementary lease deed has been executed for the same on 03.10.2015. Further PP submitted that the validity of the lease has been extended from 20.09.1980 to 19.09.2030. PP in its reply dated 13.11.2019 submitted the letter No. III(CR) SM-10/2006-296/SM. Bhubaneswar, dated 08.01.2020 issued by the Steel & Mines Department, Government of Odisha stating that the lease has been extended from 20.09.1980 to **19.09.2030**. PP submitted the State Government made OMC as agent to operate the mine vide order letter No. III(G)M, 13/70-5592-MG, dated 20.07.1970 and granted formal lease vide Proceeding No. III (G)- MG-10/78-7924 dated 05.08.1978.

6. The PP submitted the **Scheme of Mining** was approved by IBM vide letter No. MS/FM/31-ORI/BHU/2013-14 dated 22.08.2014. Modification in review of mining plan with progressive mine closure plan for the period from 01.04.2018 to 31.03.2019 under rule 17(3) of MCR 2016 & 23 of MCDR 2017 has been approved vide letter MPM/FM/08-ORI/BHU/2018-19/583 dated 04.06.2018 and valid until 31.03.2019. Followed by the Review of Mining plan for Sukurangi Chromite mines along with progressive mine closure plan was approved by IBM vide letter No. Ms/FM/37-ORI/BHU/2018-19 dated 23.01.2019 and valid until 31.03.2024. As per Modification in

review of mining plan the Mining operations are carried out by fully mechanized open cast method, utilizing Heavy Earth Moving Equipment (HEME) with drilling and blasting. PP submitted that ground water is not likely to be encountered during the present mining scheme period as the ultimate pit limit at the end of the present scheme period shall be at 146 m AMSL. PP reported that the around 3,45,515m³ of Top Soil will be generated from the freshly broken area which will be utilized for current afforestation over the dumps & also for the avenue plantation. PP vide its letter dated 29.05.2020 submitted that the mining lease over 382.709 ha has been executed on 20.09.1980 in favour of OMC to produce chromite ore. The total mineable reserve of chromite ore as per the Modification of Review of Mining Plan (RMP) approved by IBM on 23.01.2019 is estimated at 6.55 million tons and the average stripping ratio is computed to be 1:6.18 (tonne/cu.m). Therefore, in order to produce the total mineable reserve. of chromite ore the quantity of overburden to be generated from Sukurangi ML area as per the RMP approved by IBM shall be [OB generation (2019 - 2024) = 9.270 Mm³; 2024 -Conceptual = 34.965 Mm³; Total OB generation = 44.235 Mm³]. 17.85 Mm³ can be accommodated inside Sukurangi ML. **The remaining 26.385 Mm³ of waste will be hauled out of the quarries to the designated external dumping areas, located in a non-mineralized zone outside the ML.** Regarding dumping of waste outside the ML area, the Ministry of Mines, Govt. of India has given clarification vide their letter No.16/67/2016-M.VI dt 25.05.2016 and subsequently advised by the Department of Steel & Mines, Govt. of Odisha vide letter No.5042/SM dt 16.06.2016. In accordance with the orders of Supreme Court of India, OMC has initiated the process for amalgamation of the earmarked dump area over 168.948 ha with its adjoining SouthKaliapani and Sukurangi chromite ML vide letter No.5675/OMC/2010 dt 16.05.2020. The dump area will receive the overburden to be generated from both the mining leases. To comply the pre-condition of amalgamation, OMC has obtained Stage-I forest clearance over 168.948 ha of forest land as a first step and the conditions stipulated therein are under compliance by OMC and State Forest Department for grant of stage-II forest clearance. Considering the average stripping ratio, dumping of waste inside Sukurangi ML can be accommodated up to FY 2026-27 (i.e. during next plan period 2024-2029). Thus, hauling of 26.385 Mm³ of overburden from Sukurangi ML to the earmarked dump site (now outside the ML) will be needed after FY 2026-27. The amalgamation is expected within this period to continue the operation. After amalgamation, all statutory clearances shall be obtained for continuation of mining operations from the composite amalgamated ML. Further, as per Hon'ble Supreme Court's order dated 8.01.2020 in W.P. (Civil) No 114/2014 and subsequent O.M. No 22-34/2018-IA.III dated 16.01.2020 by MoEF & CC the condition of re-grassing the mining area and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. shall be undertaken by OMC. An undertaking by OMC to abide by the order of Hon'ble Supreme Court of India and Ministry's Office Memorandum dt 16.01.2020 is also submitted. Chromite ore body as per the exploration results continues even up to a depth of more than 1000 m. Mining by opencast method is not economically and technically feasible due to incompetent strata. The ore is not getting exhausted as a result of which IBM is not permitting any backfilling. The page No.91 of the RMP document approved vide letter No. MS/ FM/37-ORI/ BHU/2018-19 dt 23.01.2019 may kindly be referred for clarity. PP in its reply dated 29.05.2020 submitted that the Modified Review of Mining Plan (MRMP) for the plan period 2018-19 approved by IBM on 04.06.2018 was placed before the Public Hearing meeting conducted on 09.11.2018. In any Mining Plan the land use is approved till the

conceptual period and at every five-year span there is a scheme of mining duly approved by IBM. In our case the Review of Mining plan (RMP) for Sukurangi Chromite mines along with Progressive Mine Closure Plan was approved by IBM vide letter No. Ms/FM/37-ORI/BHU/2018-19 dated 23.01.2019 for the period of 2019-24. In both the cases the land use in conceptual stage remains unchanged.

7. PP submitted that there is no National Park, Wildlife Sanctuary, Biosphere Reserve, Wildlife Corridors, Tiger/Elephant Reserves within 10 Km radius of the mine site. PP submitted that ML area comprises of 267.21 ha of **forest land** out of which permission for diversion of 104.79 ha of forest land has already been accorded by MoEFCC vide letter No. letter No F.NO.-8-104/2000-FC dated 21.7.2011. The stage-1 forest clearance for remaining forest area of 162.42 ha of forest land was obtained vide letter no. F.NO.-8-22/2016-FC dated 14.09.2017. The PP submitted the list of Flora and fauna obtained by the Office of the Divisional Forest Officer Cuttack that there are 10 schedule-1 species viz. Mellivora Carpensis (Ratel), Panthera Pardus (leopard), Melursus ursinus (Sloth Bear), Elephasmaximus (Indian elephant), Moschiolaindica Synonym Tragulusememinna (Mouse Deer), Maniscrassicaudata (Pangolin), Canis lupus pallipes (Wolf), Varanusbengalensis (Bengal Monitor Lizard), Python molures (Python), and Pavocristatus (Peacock) is present in the study area. The PP has submitted memo no. 4415/1WL-C-FC-270/09 dated 21.07.2009 issued by the Principle Chief Conservator of Forests (Wildlife) thereby submitting the authenticated map and conservation plan to MoEF&CC. PP submitted the wild life conservation plan approved in 2009. As the conservation plan is not include all the schedule-1 species the PP vide letter dated submitted an undertaking to prepare and submit the same for the approval of chief wildlife warden.

4 8. PP submitted that the average **Water Consumption** for domestic and industrial use is 249 m³/day (peak 353 m³/day) whereas 60 m³/day (peak 80 m³/day) for drinking water, 70 m³/day (peak 115 m³/day) for Drilling and spraying, 20 m³/day for equipment/vehicle washing, 59 m³/day for Pit head bath and 40 m³/day (peak 54 m³/day) for Green belt. PP submitted the NOC vide letter no CGWA/NOC/MIN/ORIG/2017/2840 dated 20.11.2017 from CGWA, Odisha for ground water withdrawal for 60 m³/day (and not exceeding 21900 m³/year) of ground water through one existing and one proposed bore well and 1000 m³/day through dewatering of mine seepage. The NOC is valid from 02.11.2017 till 01.11.2019. Further PP submitted the application has been submitted for the renewal of NOC to dewater ground water vides application no 21-4/1156/OR/MIN/2017 dated 04.09.2019. PP submitted that the Damsal Nala (within the ML) is nearest streams/river/water body. PP has applied for NOC from CGWA on 04.09.2019 and it is yet to be obtained.

9. PP submitted that the total area of the **green belt** or green areas in project area (including waste dump site, mining benches, safety zones) and camp area will be about 281.287 ha. (i.e.~75% of the ML area). Out of which only 4.660 ha has been afforested till now and remaining 276.627 Ha plantation is proposed on 7.5m along the ML boundary & 10 m on either side of the road (7.8 Ha), 100m on either side of Damsal nala (32.30 Ha) , Area kept as additional safety zone in southern side of the ML

(12.757 Ha), Upper benches of exhausted quarries (141.090 ha), Mineral storage (18.910) and 64.32 ha on dumps. In order to supply seedlings for the proposed green belt and green cover development a small nursery will be developed with the help of the state forest department. In this nursery, saplings will be developed from seeds or seedlings collected from nearby forest areas / other nurseries. PP proposed that in the next 5 years (2019-24) proposed block plantation on 12.269 ha with the budget of Rs 1, 33,397 Rs. /ha, Plantation as ANR (Assisted Natural Regeneration) with gap plantation (200 plant/ha) on 12.875 Ha of with the budget of 36,974 Rs./ha and plantation as ANR(Assisted Natural Regeneration) with gap plantation (200 plant/ha) 28.163 ha with the budget of 24,486 Rs./ha. The Committee prescribed the specific condition for early plantation.

10. PP reported that the **baseline data** on Air, Water, Noise and Soil quality in the core and buffer zones of the defined study area was carried out for one full season covering three months of winter, 2015-16 (December-2015, January-16 and February-16). PP in its reply dated 13.11.2019 submitted that Additional one Month AAQ was collected in June 2019 and compared with the results of AAQ monitoring data collected during Dec-Jan-Feb 2015 and results are, the results when compared with National Ambient Air Quality Standards (NAAQS) of Central Pollution Control Board (CPCB) indicate that air quality is within norms for all of the monitoring locations. AAQ stations A1 and A2 have recorded maximum values of PM₁₀ however the same is within norms the increment may be the AAQ stations are located in the core zone of the mining site. A large number of heavy goods carrier ply in large volume from the mining site. The free silica was noted in the range of 1.5-2.5 µg/m³ and PM_{2.5} results have been included from the regular monitoring/analysis was carried out during Dec 2015-Feb 2016. The results of metals show that for Lead, Arsenic and Nickel the observed values are well within the National Ambient Air Quality Standards, 2009. Where as in June 2019 the AAQ values in all the stations are less than that of the data collected during winter season 2015-16. PP also submitted that though the above data cannot be compared as both seasons since the base line data was collected in two different seasons, however, when compared with National Ambient Air Quality Standards (NAAQS) of Central Pollution Control Board (CPCB), the data indicates that air quality during June 2019 is within norms for all of the monitoring locations. PP also carried out the air quality modeling. PP submitted the test results conducted on 1.07.2019 for presence of Cr⁺⁶ in PM₁₀ and PM_{2.5} which is < 0.3 µg/m³ & <0.2 µg/m³ respectively.

11. The Project Proponent reported that the Odisha State Pollution Control Board conducted **Public consultation/hearing** for the proposed project of M/s. Orissa Corporation Ltd for chromite ore from 0.13 MTPA to 0.3 MTPA from Sukurangi Chromite [ML Area 382.709 Ha] located at village (s) Sukurangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, Teshil - Sukinda, District-Jaipur, Odisha on 09.11.2018 at 10.00 AM at Kaliapani, Khata No.55, Plot No. 736, patharabani in Mining Conference Hall in Jajpur District . The advertisement for public hearing was published in "Times of India (English)" & "Sambad (Odiya) " on 05-10-2018 and 06-10-2018. The Public hearing was conducted under the chairmanship of Shri Santosh Kumar Mishra, ADM, Kalinganagar, District. The issues raised during public hearing were also deliberated during the meeting which includes employment, Environment, Education, skill development, health care, infrastructure facility, employment to local people, vocational

training, waste water treatment, pollution control, etc. The PP earmarked a budget of ₹ 2130 Lakh (Capital) & ₹ 190 Lakh (recurring/annum) under EMP, ₹ 32.02 Lakhs under CER, Rs 4.0 (Capital) & Rs 3 Lakh (Recurring) for Occupational Health.

12. PP submitted the Environmental Clearance compliance report submitted by Regional Office vide letter No 101-280/07/EPE/84 dated 15.04.2019. PP in its reply dated 13.11.2019 submitted the compliance of EC conditions with photographs.

13. The Project Proponent reported that the mine was in operation upto January 2010 without prior EC. In this regard, **demand notice** was served by DDM, Jajpur, Govt. of Odhisa, vide letter dated 15.12.2012 of Rs. 26,38,5,073/- against 100271.399 tonnes of chromite ore raised in excess of the approved quantity of mining plan/scheme, EC & OSPCB under section 21(5) of the MMDR Act, 1957. Followed by demand notice for Rs.3,90,64,416/- against 15474.096 tonnes of Chromite ore raised by DDM, Jaipur, Govt. of Odisha vide letter No. 547 dated 10.04.2018 in excess of the approved quantity of EC under section 21(5) of MMDR Act, 1957. PP further submitted that the said demand notice raised by DDM was stayed by the Revisionary Authority (RA), Ministry of Mines on 10.05.2018. The case was further heard before RA on 06.03.2019, wherein it has been directed to the Lessee to file re-joinder and till such period the interim order was directed to be continued. PP also submitted the past production details from Directorate of Mines, Odisha, Bhubaneswar vide letter no. III(s) 17/1999/6806/DM dated 05.10.2018 which reveals that PP did not enhance the production beyond the EC capacity. Further, reply of the State Government in the above RA was submitted to the Ministry of Mines vide memo no. 4654/SM, Bhubaneswar dated 03.07.2019.

14. The Consultant submitted a declaration that they are fully accountable for any misleading information in EIA/EMP Report. PP submitted the undertaking by way of affidavit on 9th August 2018 as per the Ministry's OM dated 30.05.2018. PP has undertaken that the OMC shall comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August 2017 in the matter of Common Cause Vs Union of India & Ors in Writ Petition (Civil) No. 114 of 2014. PP vide letter No. 6877/OMC/F&E/2020 dated 9th June 2020 submitted an undertaking wherein it has mentioned that i) To prepare the revised Site Specific Wildlife Conservation Plan with inclusion of the entire Schedule-I species as mentioned by the DFO, Cuttack in his letter dt.19.02.2018 along with their conservation plan and shall be submitted to Principal Chief Conservator of Forest (WL) & Chief Wildlife Warden, Odisha for approval, ii) The information provided by OMC in EIA/EMP report and other submission made to the EAC & Ministry is factually correct, iii) No mining has been carried out in the forest area without obtaining the Forest Clearance, iv) Any change in land use pattern in future will be reported to MoEF & CC and necessary amendment will be obtained in EC, v) In case at any stage if any information provided by Project Proponent is found to be incorrect or misleading then the EC granted may be revoked forthwith at the risk & cost of OMC, and Ministry may take necessary action as per law.

15. PP reported that the total **Project Cost** is 32.02 Crore and shall give direct employment to 308 persons (108 permanent & 200 contractual). In addition to this PP also provided the composition of Environmental Management Cell.

16. Based on the discussion held and document submitted the Committee **recommended** the proposal of M/s. Orissa Corporation Ltd for grant of Environmental Clearance for enhancement of production capacity of chromite ore from 0.13 MTPA to 0.3 MTPA Sukurangi Chromite Ore Mining Project (ML Area 382.709 Ha) located at village(s) Sukrangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, Teshil - Sukinda, District-Jaipur, Odisha subject to submission of i) undertaking as proposed above and submission of conservation plan for all schedule-1 species with proof of submission to chief wildlife warden. In addition Standard EC conditions in pursuant to Ministry's O.M No. No. 22-34/2018-IA.III dated 08.01.2019 & 16.01.2020 (Sl. No. 17 B) the Committee also prescribed the following Specific conditions (Sl. No. 17 A) for this project:

17. The Ministry of Environment, Forest & Climate Change has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto and hereby **accords the Environmental Clearance** under the provisions thereof to the above mentioned proposal of M/s. Orissa Corporation Ltd for enhancement of production capacity of chromite ore from 0.13 MTPA to 0.3 MTPA Sukurangi Chromite Ore Mining Project (ML Area 382.709 Ha) located at village(s) Sukrangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, Teshil - Sukinda, District-Jaipur, Odisha subject to compliance of the terms & conditions and the environmental safeguards mentioned below: -

A. Specific Conditions:

- 1) Waste should be dumped on the earmarked sites within the mining lease area and no waste should be dumped outside the lease area. The quantity of waste to be dumped inside the mining lease area should not be more than 17.85 million M³. In case due to change in stripping ratio or any other reason, if sufficient space remains available within the mining lease area on non-mineralized zone, then PP may obtain amendment in EC for dumping waste quantity above 17.85 Million M³ or PP may apply afresh after amalgamation of mining lease for grant of EC.
- 2) PP shall start the plantation and cover at least 50% of the proposed area (i.e. 111.66 Ha) under plantation in the next 5 years. The density of the plantation should not be less than 2500 saplings/Ha. The species to be selected for the plantation should be in consultation with local forest department or any other expert agency engaged for the same. The PP shall keep the record of saplings planted, survival rate, area covered under plantation, location etc. In addition to this gap filling needs to be done to as and when require for maintaining the density of plantation. The PP shall submit the drone images of area before and after the plantation. PP shall carry out pilot study for phytoremediation of hexavalent chromium through IMMT, CSIR, Bhubaneswar. The budget earmarked for the plantation shall be kept in separate bank account and audited annually. PP shall submit the detail such as photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation and

outcome of the pilot study etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 3) Approval/permission of CGWA/SGWA shall be obtained before drawing ground water for the project activities. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.
- 4) PP shall fulfill the Commitment made during PH within next 5 years which includes i) providing direct & indirect employment as per requirement in phased wise manner (budget Rs 2.5 lakh), ii) Batches of 20-30 persons will be trained on regular interval (budget Rs 2.5 Lakh), iii) construct the Model schools as per the CBSE standard + 2 college with the budget of 4 crore, iii) scholarship programmes shall be taken up in regular basis (budget Rs 2.4 Lakh), iv) Arranging specialist doctor to the local CHC (Budget Rs 5.0 Lakh), v) 2% of profit will be spent under CSR for peripheral development, vi) development of local market (budget Rs 8 Lakh), vii) increasing frequency of water spraying in Tomka-Mangalpur road (budget Rs 10 Lakh), Plantation activities (Budget 54.73 Lakh), Solar Street lighting and distribution of LED bulbs to villages (Budget Rs 5.0 Lakh), Drinking water and mobile toilet facility for truck drivers (Budget Rs 5.0 Lakh), to build a sport complex for youth (budget 71.25 Lakh) and Nodel village will be established at Kaliapani and Sukrangi (227.02 Lakh).
- 5) Budget proposed for **Corporate Environment Responsibility (CER)** shall be ₹ 32.02 Lakhs, which includes a) ₹ 2.5 Lakhs for Employment to locals (₹ 0.5 Lakh from 2019-20 to 2023-24) , b) ₹ 2.50 Lakhs for Skill development for local SHGs (₹ 0.5 Lakh from 2019-20 to 2023-24), c) ₹ 2.50 Lakhs for Computer training, Scholarships (₹ 0.5 Lakh from 2019-20 to 2023-24), d) ₹ 4.50 Lakhs for Creation of employment opportunity (₹ 1.0 Lakh from 2019-20 to 2022-23 & ₹ 0.5 Lakh for 2023-24), e) ₹ 5.0 Lakhs for Health care services Medical camps, ambulance (₹ 1.0 Lakh from 2019-20 to 2023-24), f) ₹ 2.50 Lakhs for Pollution Control (₹ 0.5 Lakh from 2019-20 to 2023-24), g) ₹ 2.50 Lakhs for Plantation (₹ 0.5 Lakh from 2019-20 to 2023-24), h) ₹ 2.50 Lakhs for Solar Street lighting, distribution of LED, bulbs to villagers (₹ 0.5 Lakh from 2019-20 to 2023-24), i) ₹ 2.50 for Drinking Water & sanitation (₹ 0.5 Lakh from 2019-20 to 2023-24), and j) ₹ 5.02 for Peripheral development (₹ 1.0 Lakh from 2019-20 to 2022-23 & ₹ 1.02 Lakh for 2023-24). The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of CER activities along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, photographs & Geo-location of the infrastructures/facilities developed, etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 6) Budget proposed under **Environmental Management Plan (EMP)** shall be ₹ 2130 Lakh (Capital) & ₹ 190 Lakh (recurring/annum) which includes i) Rs 25.0 Lakh (Capital) & Rs 30.0 Lakh (recurring) for Surface drainage (garland drains, settling its, retaining wall etc.) & dust suppression system (timeline 1st year), ii)

Rs 7.0 Lakh (recurring) for Environment Monitoring, iii) Rs 4 Lakh (Capital) (time line 1 year) & Rs 3 Lakh (recurring) for **Occupational safety which includes Procurement of safety appliances**, iv) Rs 4 Lakh (recurring) for Green Belt Development, v) Rs 1794 (Capital) for Net Present Value (NPV) Payment, vi) Rs 153.0 Lakh (Capital) for Compensatory Afforestation, vii) Rs 154.0 Lakh (capital) (timeline 10 years) Wildlife Conservation Plan, and viii) Rs 146.0 Lakh (Recurring cost) for Socio-economic welfare measures in nearby village which is likely to be revised every year. The amount (except occupational health) proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 7) Budget earmarked under **Occupational Health plan** is Rs 4.0 (Capital) & Rs 3 Lakh (Recurring) which includes Procurement of safety appliances. The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 8) PP shall set up an Environmental Management Cell comprises of persons having qualification and experience in the field of environment along with supporting staff. The details of the same needs to be submitted to the Ministry within 3 months of the grant of EC.
- 9) The project proponent shall give an undertaking by way of affidavit to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. before grant of ToR/ EC. The undertaking inter-alia include commitment of the PP not to repeat any such violation in future.
- 10) In case of violation of above undertaking, the ToR/Environmental Clearance shall be liable to be terminated forthwith.
- 11) The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

- 12) State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- 13) The PP shall implement the short term and long term measures proposed to be taken in order to get rid from the adversity of Cr (VI) contamination, needs to be implemented and status report of the same along with benefit occurred needs to be submitted to Regional Office of MoEF&CC annually.
- 14) Budget earmarked for **Corporate Environment Responsibility (CER)** shall be ₹ 28.7 Lakhs, which includes a) ₹ 1.20 Lakhs for construction of rainwater harvesting structures at shallow areas of village Kannnappakunta (4pit) and Kamalapuram (2 pits) [time line 1st year], b) ₹ 4.5 Lakh for repairing & deepening of the non-working bore wells and construction of bore well to the nearby village as per their requirement (budget ₹ 2.00 Lakhs; time line 1st year & ₹ 2.50 Lakhs time line 2nd year), c) ₹ 15.00 Lakh for strengthening of road (connecting Kannnappakunta and Kamalapuram-3.5 km) [timeline ₹ 3.00 Lakhs/annum 1st to 4th year and ₹ 2.00 Lakhs during 5th year], d) ₹ 3.00 Lakhs for distillation of village ponds, providing bus shelter [budget ₹ 1.00 Lakhs/annum; time line 1st-3rd year], e) ₹ 5.0 Lakh for provision of computer to the school [Budget ₹ 1.0 Lakh/annum; time line 1st to 5th year] and g) ₹ 1.00 Lakhs for supporting sanitary needs for girls students (napkins) [budget ₹ 0.2 Lakh/annum, timeline 1st to 5th year]. The amount proposed under these heads should be kept in a separate bank account and should be audited annually. PP should annually submit the audited statement along with proof of activities carried to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 15) Total budget for implementation of **Environmental Management Plan (EMP)** shall be ₹ 19.9 Lakh (capital) and ₹ 15.50 Lakh (recurring) which includes a) ₹ 11.0 Lakhs (Capital) & ₹ 4.0 Lakh (recurring) for deploying of water tanker for dust suppression- 5 kl capacity, b) ₹ 1.05 Lakh (Capital) & ₹ 0.85 Lakh (recurring) pre-medical examination of 21 persons, ₹ 0.63 Lakh (Capital) & ₹ 0.65 Lakh (recurring) for providing personnel protection equipment to 21 persons), ₹ 0.50 Lakh for construction of septic tank followed by soak pit (3 kl capacity), and ₹ 0.12 Lakh for rainwater harvesting pit (storm trenches and pit within ML area), environmental monitoring ₹ 6.28 Lakh/annum (recurring) and ₹ 5.89 (capital) and ₹ 3.72 (recurring) for blast vibration monitoring as per DGMS norms & calibration of equipment. In addition to this budget for plantation & green belt development (@ 2500 sapling/ha) should be at least ₹ 30.81 Lakh (Capital) & Rs 96.96 Lakh (recurring) (₹ 73.956 Lakh for five years and ₹ 23.004 Lakh for remaining period). The location and frequency of monitoring shall be i) for PM₁₀, PM_{2.5}, NO_x and CO (at 5 locations, once in a month, 60 samples/annum), ii) Ground water (at 3 locations, once in six months, 6 samples/annum), Noise Level (4 locations, once in a month, 48 samples/annum), and vibration study (1 location, 1 sample/year).

Amount proposed under EMP shall be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

- 16) PP shall keep a record of each blasting viz. location, number of holes, delay assigned of each hole, explosive quantity of each hole, blasting pattern etc.
- 17) Capital cost earmarked for **occupation health** shall be ₹ 1.05 Lakh pre-medical examination of 21 persons, 0.63 Lakh providing personnel protection equipment to 21 persons), and recurring cost for occupation health shall be ₹ 0.85 Lakh premedical examination, 0.65 Lakh for wear and tear replacement of personnel protection equipment of 21 persons. The capital cost shall be spent before commencement of mining operation and recurring cost annually. The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed report along with proof of activities viz. photographs (with geo-location date & time), purchase documents, test reports, photographs & Geo-location of the infrastructures/facilities developed etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.
- 18) PP shall ensure that water required for the mining operations will be sourced from private water tankers suppliers drawing water from legal source during first year of mine operation and from 2nd year of mining operations, the water will be sourced from working pit and also from the proposed water spread area as depicted on Environmental Management Plan.

B: Standard Conditions: (As Ministry's O.M No 22-34/2018-IA.III dated 8.01.2019 & 16.01.2020)

I. Statutory compliance

- 1) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
- 2) The Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
- 3) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August,

2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.

- 4) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.
- 5) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.
- 6) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board/Committee.
- 7) The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.
- 8) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.
- 9) The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-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) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.
- 11) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
- 12) State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
- 13) The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the

State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.

- 14) The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

II. Air quality monitoring and preservation

- 15) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.
- 16) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

III. Water quality monitoring and preservation

- 17) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

- 18) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- 19) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- 20) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.
- 21) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-

IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.

- 22) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.
- 23) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
- 24) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

IV. Noise and vibration monitoring and prevention

- 25) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
- 26) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.
- 27) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

V. Mining plan

- 28) The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining

technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management , O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.

- 29) The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.
- 30) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

VI. Land reclamation

- 31) The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.
- 32) The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.
- 33) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.
- 34) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in

adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.

- 35) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC.
- 36) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
- 37) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.
- 38) The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

VII. Transportation

- 39) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load.

The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.

- 40) The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

VIII. Green Belt

- 41) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.
- 42) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
- 43) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

- 44) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.
- 45) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

IX. Public hearing and human health issues

- 46) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/preventive measures be taken. A status report on the same may be sent to MoEFCC Regional Office and DGMS on half-yearly basis.
- 47) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.
- 48) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of

the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).

- 49) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities ,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1),Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having above indications.
- 50) The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
- 51) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.
- 52) The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

X. Corporate Environment Responsibility (CER)

- 53) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure

developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

- 54) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEFCC and its concerned Regional Office.

XI. Miscellaneous

- 55) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEFCC.
- 56) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- 57) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.
- 58) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEFCC.
- 59) The concerned Regional Office of the MoEFCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officer(s) by furnishing the requisite data / information / monitoring reports.
- 60) In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

18. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.


19. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may

result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

20. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.

21. 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.


Yours faithfully,


(Sharath Kumar Paleria)
Director/Scientist 'F'

Copy to:

- 1) The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
- 2) The Secretary, Department of Environment, Government of Odisha, Secretariat, Bhubaneswar.
- 3) The Secretary, Department of Mines and Geology, Government of Odisha, Secretariat, Bhubaneswar.
- 4) The Secretary, Department of Forests, Government of Odisha, Secretariat, Bhubaneswar.
- 5) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- 6) The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (EZ), A/3, Chandrasekharpur, Bhubaneswar – 751023.
- 7) The Chairman, Odisha State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
- 8) The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- 9) The Member Secretary, Central Ground Water Authority, 18/11, Jam Nagar House, Man Singh Road, New Delhi-110011.

- 10) The District Collector, Keonjhar District, State of Odisha.
- 11) Guard File.
- 12) MoEFCC website (Parivesh Portal)


26/7/2020
(Sharath Kumar Patterla)
Director/Scientist 'F'



सत्यमेव जयते

File No: J-11015/348/2015-IA.II(NCM)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division



Date 21/01/2025



To,

Mr. Debendra Kumar Nanda
M/s. ODISHA MINING CORPORATION LIMITED
OMC House, Post Box No. 34, Bhubaneswar

Subject: Sukurangi Chromite Ore Mining Project for enhancement in production capacity from 0.13 to 0.3 MTPA in ML Area of 382.709 Ha by M/s Odisha Mining Corporation Ltd. located at village (s) Sukurangi, Saruabli, Ostapal, Kamarda and Talangi, Teshil Sukinda, District Jajpur, Odisha. [Online Proposal No. IA/OR/MIN/468292/2024, File No. J-11015/348/2015-IA. II(M)] - For Corrigendum in EC dated 30.07.2020 - reg.

Sir/Madam,

This is in reference to your application for a Corrigendum to the Environmental Clearance (EC) submitted to the Ministry under proposal number IA/OR/MIN/468292/2024 dated 03/04/2024 for the Project Sukurangi Chromite Ore Mining Project for enhancement in production capacity from 0.13 to 0.3 MTPA in ML Area of 382.709 Ha by M/s Odisha Mining Corporation Ltd. located at village (s) Sukurangi, Saruabli, Ostapal, Kamarda and Talangi, Teshil Sukinda, District Jajpur, Odisha.

2. The particulars of clearance granted against which the corrigendum is sought are as under:

(i) Unique Identification No.	
(ii) File No.	J-11015/348/2015-IA.II(NCM)
(iii) Clearance Type	Application of corrigendum- EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals Expansion of production capacity from 0.13 MTPA to 0.3 MTPA of Sukurangi Chromite Ore Mining Project [ML Area 382.709 Ha] located at village (s) Sukurangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, Teshil - Sukinda, District- Jajpur, Odisha by M/s Odisha Mining Corporation Ltd.
(vii) Name of Project	
(viii) Name of Company/Organization	ODISHA MINING CORPORATION LIMITED

(ix) Location of Project (District, State)

JAJPUR, ODISHA

(x) Issuing Authority

MOEF&CC

3. The Ministry had granted environmental clearance vide letter dated 30.07.2020 for mining of chromite of 0.3 MTPA in the ML area of 382.709 ha by M/s Orissa Corporation Ltd located at village(s) Sukrangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, Teshil Sukinda, District-Jajpur, Odisha.

4. The instant proposal is for Corrigendum in EC dated 30.07.2020 for Sukurangi Chromite Ore Mining Project for enhancement in production capacity from 0.13 to 0.3 MTPA in ML Area of 382.709 Ha by M/s Odisha Mining Corporation Ltd. located at village (s) Sukrangi, Saruabli, Ostapal, Kamarda and Talangi, Teshil Sukinda, District Jajpur, Odisha.

5. Details of corrigendum sought vide aforesaid proposal are as under:-

a) Specific Condition No.14 on Page No. 10 of 23 needs to be deleted, as the specified locations mentioned in the said Condition (Kannappakunta and Kamalapuram) is in the State of Andhra Pradesh and not within Odisha. Also, the similar specific condition pertaining to the site-specific location already exists as Specific Condition No. 5.

b) Specific Condition No.15 on Page No. 10 of 23 needs to be deleted as this condition is not in line with the project specific EMP propositions and is over and above the specific condition no.6 (which had been recommended by EAC during the 17th EAC Meeting).

c) Specific Condition No. 17 on Page No. 11 of 23 needs to be deleted, as this condition is not in line with the project specific EMP propositions and is over and above the specific condition no.7 (which had been recommended by EAC during the 17th EAC Meeting).

6. The above-mentioned proposal has been considered by Expert Appraisal Committee of EAC in the 37th meeting held on 12-13th December, 2024. The minutes of the meeting and all the Application and documents submitted (viz. Form-1, Form 13) are available on PARIVESH portal which can be accessed by scanning the QR Code above.

7. The EAC during deliberations noted the following:

Earlier, the Committee considered the proposal in the 29th EAC Meeting held during 9-10th May 2024, for Corrigendum due to typographical error in EC issued by MoEF&CC vide dated 30.07.2020 (prescribed in the EAC minutes dated 28-29th May & 1st June, 2020) wherein the existing specific EC condition no. 14, 15 and 17 were to be deleted. The EAC had inadvertently, replaced those EC conditions with the already existing specific condition no. 5, 6 and 7 respectively, which were already prescribed in the 17th EAC Meeting.

Further, Committee issued the corrigendum in the 36th EAC meeting wherein an inadvertent error was noticed that the specific conditions no. 5, 6, and 7 were deleted in place of deleting specific EC conditions no. 14, 15 and 17.

8. In view of the above, the EAC has recommended the proposal for corrigendum to the Environmental Clearance (EC) dated 30.07.2020, specifically deleting conditions 14, 15, and 17. These conditions were found to be redundant, as they were already covered by the prescribed conditions for the mining of chromite, including the enhancement of chromite production to 0.3 MTPA in the ML area of 382.709 ha by M/s Orissa Corporation Ltd. The project is located in the villages of Sukrangi, Saruabli, and the village limits of Ostapal, Kamarda, and Talangi, Tehsil Sukinda, District Jaipur, Odisha, in accordance with the EIA Notification, 2006 and its subsequent amendments.

9. The Ministry has examined the proposal as per the provisions of EIA Notification 2006 and its subsequent amendments thereto and based on the recommendation of the Expert Appraisal Committee, the Ministry hereby accords Corrigendum in the Environmental Clearance dated 30.07.2020 to the Sukurangi Chromite Ore Mining Project for enhancement in production capacity from 0.13 to 0.3 MTPA in ML Area of 382.709 Ha by M/s Odisha Mining Corporation Ltd. located at village (s) Sukrangi, Saruabli, Ostapal, Kamarda and Talangi, Teshil Sukinda, District Jajpur, Odisha, that the Specific

Conditions 14, 15 and 17 be considered as deleted.

10. All other terms and conditions of the EC dated 30.07.2020 shall remain unchanged.

11. The Corrigendum in the Environmental Clearance dated 30.07.2020 to the aforementioned project is under provisions of EIA Notification, 2006, as amended. 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.

12. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

13. The conditions stipulated in the EC dated 30.07.2020 will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 read with subsequent amendments therein.

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

15. General Instructions:

a. 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/ SEIAA website where it is displayed.

b. 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.

c. 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.

d. 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.

e. 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.

f. 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.

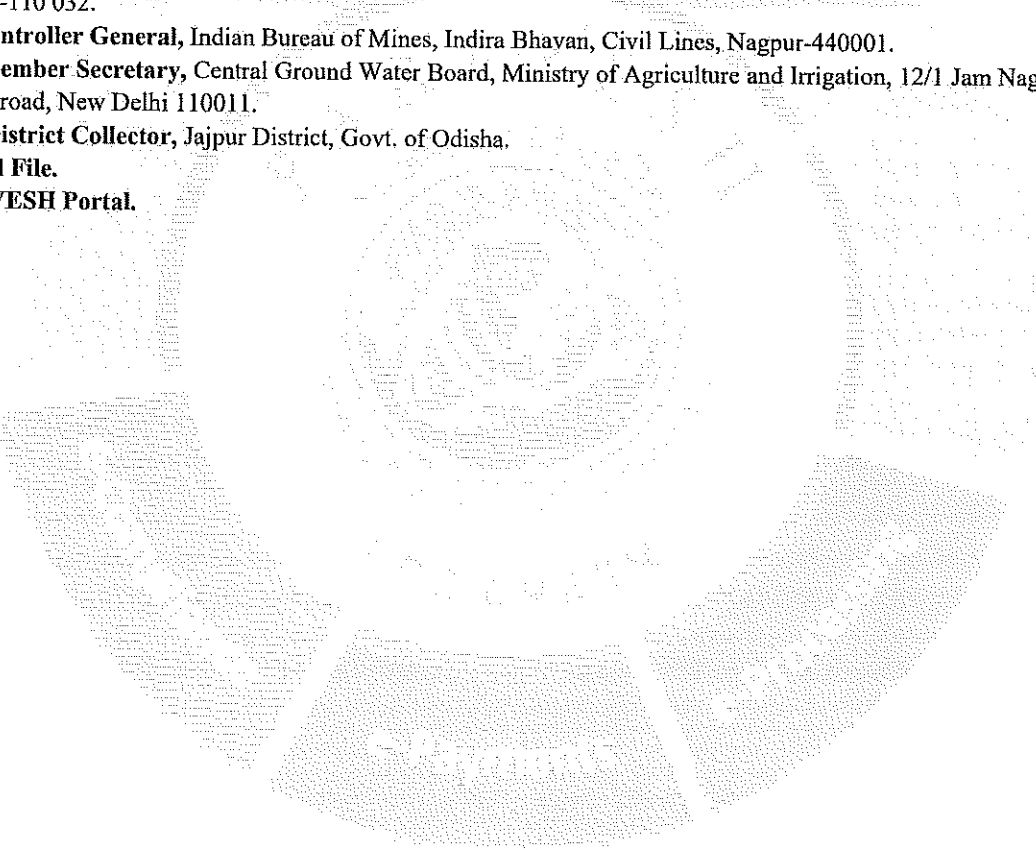
g. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

h. PP needs to comply the OM dated 24.07.2024 of MoEFCC, where it is stated that the plantation of saplings shall be carried out in the earmarked 33% greenbelt areas part of the tree plantation campaign " EK Ped Ma ke Naam " (एक पेड़ माँ के नाम) (and the details of the same shall be uploaded in the MeriLife portal (<https://merilife.nic.in>)).

16. This issues with the approval of the Competent Authority.

Copy To

- i. **The Secretary**, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
- ii. **The Chief Secretary**, Government of Odisha, Secretariat, Bhubaneswar.
- iii. **The Secretary**, Department of Environment, Government of Odisha, Secretariat, Bhubaneswar.
- iv. **The Secretary**, Department of Mines and Geology, Government of Odisha, Secretariat, Bhubaneswar.
- v. **The Secretary**, Department of Forests, Government of Odisha, Secretariat, Bhubaneswar.
- vi. **The Secretary**, Department of Steel and Mines, Government of Odisha, Secretariat, Bhubaneswar.
- vii. **The Member Secretary**, Odisha Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
- viii. **The Deputy Director General of Forests (C)**, Ministry of Environment, Forest and Climate Change, Regional Office, A/3, Chandrasekharpur, Bhubaneswar – 751023.
- ix. **The Chief Wildlife Warden**, Prakurti Bhawan, 5th floor, BDA Apartment, Nilakanthanagar, Nayapalli, Bhubaneswar-751012, Odisha.
- x. **The Chairman**, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
- xi. **The Controller General**, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440001.
- xii. **The Member Secretary**, Central Ground Water Board, Ministry of Agriculture and Irrigation, 12/1 Jam Nagar House, Shahjahan road, New Delhi 110011.
- xiii. **The District Collector**, Jajpur District, Govt. of Odisha.
- xiv. **Guard File.**
- xv. **PARIVESH Portal.**



**STATE POLLUTION CONTROL BOARD, ODISHA**

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

No. 21912 /

Ind-I-Con- 388

Date: 10-12-2025

To

Sri Nigamananda Sethi, Mines Manager,
Sukarangi Chromite Mines of M/s OMC Ltd.
At/PO- Kaliapani, Sukinda
Dist.- Jajpur-755047

Sub: Non-compliance observed during Inspection of Sukarangi Chromite Mines

Sir,

Consent to Operate was granted in favour of Sukarangi Chromite Mines with strict conditions for compliance. One of the major condition was to channel entire surface runoff to the Effluent Treatment Plant (ETP) for necessary treatment prior to discharge. However, several non-compliances were observed with surface runoff management and effluent discharge standards during inspection on 02.09.2025 as mentioned below.

1. Analysis of water samples collected from various discharge points, including the surface runoff of WD-5 OB dump, drain near the wheel wash, settling pit discharge, and drain overflow near Saruabil village, showed concentrations of Cr^{+6} significantly exceeding the Board's prescribed standard.
2. Discharged water from the settling pit near Koiposhi Bridge and the overflow drain near Saruabil village showed TSS levels not meeting standards.
3. The surface runoff water from OB dump (WD-5) was found to be entering adjacent households.
4. The RCC boundary wall around WD-5 OB Dump was found damaged, leading to dump spillage. The garland drain around the dump was choked and leaking outside the lease boundary through weep holes.

You are therefore directed herewith to take necessary corrective actions

- a) To remove the above-mentioned lapses and have adequate surface runoff management.
- b) To treat Cr^{+6} effluent uninterruptedly in the existing ETP of South Kaliapani Chromite Mines.
- c) To complete installation and commissioning of the new ETP within the Mine lease of Sukarangi Chromite Mines within six months.

Action plan for the above shall be submitted within 7 days.

Yours Faithfully,

Member SecretaryMemo No. 21913 Dt. 10-12-2025

Copy forwarded to the Regional Officer, SPCB, Kalinganagar for information.

Chief Env. Engineer



सत्यमेव जयते

File No.: J-11015/407/2008-IA.II(M)
 Government of India
 Ministry of Environment, Forest and Climate Change
 IA Division



Dated 23/01/2024



To,

M/s ODISHA MINING CORPORATION LIMITED
 Odisha Mining Corporation Limited OMC House, Post Box No.: 34, Bhubaneswar , , KHORDHA,
 ODISHA, Adjacent to Odisha Legislative Assembly, 751001
 envcl.omic@gmail.com

Subject: South Kaliapani mine of M/s Odisha Mining Corporation Ltd for mining of Chromite Ore without change in production capacity of 1.40 MTPA of Chromite Ore [Total Excavation: 16.64 MTPA (Production: 1.40 MTPA (ROM) + Waste Rock: 15.24 MTPA)] along with an annual throughput capacity of 4,74,000 tonnes (0.47 million tonnes) of COB plant in the mine lease area of 552.457 ha [Forest land: 425.398 ha + Non-Forest land: 127.059 ha] out of 720.727 ha (DGPS)/ 721.405 ha (RoR), located at Villages Kaliapani, Gurujangpal, Sukurangi and Saruabi, Tehsil Sukinda, District Jajpur, Odisha - Environmental Clearance – reg.

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/OR/MIN/434336/2023 dated 23/06/2023 for grant of Environmental Clearance (EC) to the project for South Kaliapani mine of M/s Odisha Mining Corporation Ltd for mining of Chromite Ore without change in production capacity of 1.40 MTPA of Chromite Ore [Total Excavation: 16.64 MTPA (Production: 1.40 MTPA (ROM) + Waste Rock: 15.24 MTPA)] along with an annual throughput capacity of 4,74,000 tonnes (0.47 million tonnes) of COB plant in the mine lease area of 552.457 ha [Forest land: 425.398 ha + Non-Forest land: 127.059 ha] out of 720.727 ha (DGPS)/ 721.405 ha (RoR), located at Villages Kaliapani, Gurujangpal, Sukurangi and Saruabi, Tehsil Sukinda, District Jajpur, Odisha, 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.	EC23A0000OR5151912N
(ii) File No.	J-11015/407/2008-IA.II(M)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals,2(b) Mineral beneficiation
(vi) Sector	Non-Coal Mining

(vii) Name of Project	Expansion of Mine Lease Area of South Kaliapani Chromite mines
(ix) Location of Project (District, State)	JAJAPUR, ODISHA
(x) Issuing Authority	MoEF&CC
(xii) Applicability of General Conditions	No

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1(Part A, B and C)/ EIA & EMP Reports were submitted to the MoEF&CC for an appraisal by the EAC under the provision of EIA notification 2006 and its subsequent amendments.

4. The above-mentioned proposal has been considered by EAC in the meeting held on 11-12 July, 2023 and 5-7 December, 2023. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed from the PARIVESH portal by scanning the QR Code above.

5. Details of the minerals to be mined along with production capacity and the brief on the salient features of the project as submitted by the project proponent in Form 1 (Part A and B) in the reports and as presented during EAC are annexed to this EC.

6. The EAC, in its meeting held on 05/12/2023, based on information submitted viz: Form 1 (Part A, B and C), EIA/EMP report etc & clarifications provided by the project proponent and after detailed deliberations on all technical aspects and public hearing issues and compliance thereto furnished by the Project Proponent, recommended the proposal for grant of Environment Clearance to the project for South Kaliapani mine of M/s Odisha Mining Corporation Ltd for mining of Chromite Ore without change in production capacity of 1.40 MTPA of Chromite Ore [Total Excavation: 16.64 MTPA (Production: 1.40 MTPA (ROM) + Waste Rock: 15.24 MTPA)] along with an annual throughput capacity of 4,74,000 tonnes (0.47 million tonnes) of COB plant in the mine lease area of 552.457 ha [Forest land: 425.398 ha + Non-Forest land: 127.059 ha] out of 720.727 ha (DGPS)/ 721.405 ha (RoR), located at Villages Kaliapani, Gurujangpal, Sukurangi and Saruabi, Tehsil Sukinda, District Jajpur, Odisha, under the provision of EIA Notification, 2006 and as amended thereof subject to stipulation of Specific and Standard EC conditions.

7. 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 Environment Clearance to the project for South Kaliapani mine of M/s Odisha Mining Corporation Ltd for mining of Chromite Ore without change in production capacity of 1.40 MTPA of Chromite Ore [Total Excavation: 16.64 MTPA (Production: 1.40 MTPA (ROM) + Waste Rock: 15.24 MTPA)] along with an annual throughput capacity of 4,74,000 tonnes (0.47 million tonnes) of COB plant in the mine lease area of 552.457 ha [Forest land: 425.398 ha + Non-Forest land: 127.059 ha] out of 720.727 ha (DGPS)/ 721.405 ha (RoR), located at Villages Kaliapani, Gurujangpal, Sukurangi and Saruabi, Tehsil Sukinda, District Jajpur, Odisha, under the provisions of EIA Notification, 2006 and as amended thereof subject to compliance of the Specific and Standard EC conditions as given in Annexure 1.

8. The Ministry reserves the right to stipulate additional conditions, if found necessary.

9. 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.

10. The details of the project is at Annexure 2.

11. The Ministry's Forest Conservation (FC) Division vide OM dated 31.05.2023, clarified that in respect of existing mining leases having forest land in part or full and where the State Governments have considered the grant of GA as per the provisions of the para 7.3 (iv) of the Handbook of Forest (Conservation) Act, 1980, the existing mining operations will be restricted to the forest land already approved under section 2(ii) of the FC Act, 1980. In existing leases where approval under the FC Act, 1980 is available only for part of forest land, the non-availability of approval under the section 2 (ii) of

the Act in respect of remaining forest land will not be a deterrent to undertake mining in the already approved area provided the user agency has complied all conditions, as stipulated under para 7.3(iv) of the Handbook of Forest (Conservation) Act, 1980.

12. This issue with an approval of the Competent Authority.

Copy To

1. **The Secretary**, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
2. **The Chief Secretary**, Government of Odisha, Secretariat, Bhubaneswar.
3. **The Secretary**, Department of Environment, Government of Odisha, Secretariat, Bhubaneswar.
4. **The Secretary**, Department of Mines and Geology, Government of Odisha, Secretariat, Bhubaneswar.
5. **The Secretary**, Department of Forests, Government of Odisha, Secretariat, Bhubaneswar.
6. **The Secretary**, Department of Steel and Mines, Government of Odisha, Secretariat, Bhubaneswar.
7. **The Member Secretary**, Odisha Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
8. **The Deputy Director General of Forests (C)**, Ministry of Environment, Forest and Climate Change, Regional Office, A/3, Chandrasekharpur, Bhubaneswar – 751023.
9. **The Chief Wildlife Warden**, Prakurti Bhawan, 5th floor, BDA Apartment, Nilakanthanagar, Nayapalli, Bhubaneswar-751012, Odisha.
10. **The Chairman**, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
11. **The Controller General**, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440001.
12. **The Member Secretary**, Central Ground Water Board, Ministry of Agriculture and Irrigation, 12/1 Jam Nagar House, Shahjahan road, New Delhi 110011.
13. **The District Collector**, Jajpur District, Govt. of Odisha.
14. **Guard File.**
15. **PARIVESH Portal.**

Annexure 1

Specific EC Conditions for (Mining Of Minerals)

1. Dust Suppression

S. No	EC Conditions
1.1	The Project Proponent shall undertake adequate control measures in areas such as loading and unloading points.
1.2	The Project Proponent needs to make provision for permanent water sprinklers instead of mobile tankers all along the haul road. About, 10 nos. of fog canon/mist sprayer of atleast 40 m throw shall be installed at various locations in the mine lease area. Effective dust suppression system shall also be adopted at other parts of the mining lease to arrest the fugitive dust emission.

S. No	EC Conditions
1.3	The air pollution control equipment's like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, and other areas prone to air pollution. PP shall take necessary measures to avoid generation of fugitive dust emissions. The dense plantation shall be carried out in the vicinity of the crusher. The Stack emission monitoring of the Crusher shall be carried out at periodic intervals.

2. Ec Validity

S. No	EC Conditions
2.1	The instant Environmental Clearance (EC) will be valid up to the mine lease period i.e., 21.01.2030.

3. Overburden

S. No	EC Conditions
3.1	The Project Proponent needs to make provision for proper collection arrangement of runoff water from the OB dump area and mineral storage area.
3.2	The Project Proponent needs to take up works for cleaning of the garland drains, stabilizing the retaining wall regularly and also shall take necessary steps for proper terracing the OB dumps.
3.3	The Project Proponent shall dump only the overburden of this instant mine in the allocated of area of 168.948 ha which is a part of the mine lease area.
3.4	The over burden dumps should be stabilized by plantation and ankering with coir nets / blankets. Plantation program needs to be scientifically planned.
3.5	The Project Proponent needs to implement the recommendations of Comprehensive Geo-Technical Study on Dump Slope Stability carried out by Indian Institute of Technology (IIT), Kharagpur. The implementation status of the same shall be submitted to the Regional Office, MoEF&CC.

4. Monitoring

S. No	EC Conditions
4.1	The Project Proponent shall monitor the air quality, noise level, water quality, water level and ground vibration during drilling and blasting at the edge of the mine, near the village, crusher and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Regional Office.

5. Public Hearing Concerns

S. No	EC Conditions
5.1	The budget of Rs 1690.63 Lakhs to address the concerns raised by the public in the public consultation to be completed within 3 years from the date of start of mining operations. PP shall

S. No	EC Conditions
	comply with all action plans made for public hearing concerns and make regular maintenance and record the progressive activity outcomes. The Project proponent shall ensure that the activities proposed under the public hearing is different from the CSR activities.

6. Single Use Plastic

S. No	EC Conditions
6.1	The Project Proponent shall create awareness among the local people working within the project area as well as its surrounding area on the ban of Single Use Plastic (SUP) in order to ensure the compliance of Notification published by MoEF&CC on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report.

7. Emp

S. No	EC Conditions
7.1	The Project Proponent should adopt the proper mitigation measures as proposed under EMP with budgetary provision of Rs 5297.6506 Lakhs. The adoption of mitigation measures and monitoring of the same as proposed in the EMP shall be done under the supervision of the qualified environmental personnel. The implementation status of the same shall be submitted to the Ministry's Regional Office.
7.2	The Project Proponent should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment management shall be setup at site which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environment monitoring laboratories/consultants. Any non-compliance or infringement should be reported to the concerned authority.

8. Clean Energy

S. No	EC Conditions
8.1	The Project Proponent shall explore the possibility of using atleast 20% of Electric vehicles/CNG/Solar instead of diesel operation within three years.

9. Groundwater

S. No	EC Conditions
9.1	NoC from the Central Ground Water Authority (CGWA)/ Concerned Local authority, as the case may be, shall be obtained before drawing the ground water 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 (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission.

10. Regrassing

S. No	EC Conditions
10.1	The mining lease holders shall, after ceasing mining operations, undertake regrassing 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. The implementation report of the above said condition shall be submitted to the Ministry's Regional Office.

11. Skill Development/employment

S. No	EC Conditions
11.1	The Project Proponent shall also organize employment-based apprenticeship/ internship training program every year with appropriate stipend for the youth and other programs to enhance the skill of the local people. The data should be maintained for the training imparted to the persons and the outcome of the training, for the assessment of the training program should be analyzed periodically and improved accordingly. The preference shall be given to the local people for the purpose of employment.

12. Court Case

S. No	EC Conditions
12.1	The instant EC is subject to the outcome of the court case No 2(C)C.Case No.11 of 2014 pending in the JMFC Court, Barbil, Odisha.

13. Mining Activity

S. No	EC Conditions
13.1	No mining activity shall be carried out in the forest land for which the Stage-II FC is not available.
13.2	Mining activity is restricted to the forest land (425.398 ha) for which the Stage II FC is available plus the non-forest land (127.059 ha).

14. Medical Checkup

S. No	EC Conditions
14.1	The Project Proponent needs to undertake a periodical health check up once in six months to prevent from the occupational health exposure on mine workers/local people, land, water bodies and biological environment due to mining activity with respect to hexavalent chromium and total chromium. All the health records need to be maintained digitally.

15. Conservation Of Wildlife

S. No	EC Conditions
15.1	The Project Proponent needs to use modern equipment's such as Camera Traps for ensuring presence and movement of wild animals in the vicinity of the mine lease area as well as in study area in consultation with Wildlife Wing of Forest Department. Appropriate interventions shall be taken to minimise stress conditions for wild animals and to avoid Man-Animal conflict.
15.2	The Project Proponent should follow-up the status of implementation on Wildlife Conservation Plan from the Forest Officials and the same shall be submitted to the Ministry's Regional Office in the six monthly compliance report.

Standard EC Conditions for (Mineral beneficiation)

1. Corporate Environment Responsibility

S. No	EC Conditions
1.1	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 I wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
1.2	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.
1.3	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.
1.4	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
1.5	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Mineral Beneficiation plants shall be implemented.
1.6	The Project Proponent shall submit the time bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of environmental clearance for undertaking the activities committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF&CC Office Memorandum No.22-65/2017-IA.III dated 30 September, 2020. The action plan shall be implemented within three years of commencement of the project.

2. Miscellaneous

S. No	EC Conditions
2.1	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.
2.2	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.
2.3	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.
2.4	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) 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.
2.5	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.
2.6	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.
2.7	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
2.8	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.
2.9	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
2.10	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

3. Energy Conservation Measures

S. No	EC Conditions
3.1	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
3.2	Provide LED lights in their offices and residential areas.

4. Public Hearing And Human Health Issues

S. No	EC Conditions
4.1	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
4.2	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.
4.3	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP. Safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
4.4	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

5. Green Belt And Emp

S. No	EC Conditions
5.1	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
5.2	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

6. Waste Management

S. No	EC Conditions
6.1	The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
6.2	Kitchen waste shall be composted or converted to biogas for further use.(to be decided on case to case basis depending on type and size of plant)

7. Noise Monitoring And Prevention

S. No	EC Conditions
7.1	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
7.2	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

8. Water Quality Monitoring And Preservation

S. No	EC Conditions
8.1	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
8.2	The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
8.3	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
8.4	The project proponent shall provide the slime disposal facility with impervious lining and collection wells for seepage. The water collected from the slime pond shall be treated and recycled.
8.5	Adhere to 'Zero Liquid Discharge'
8.6	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
8.7	The project proponent shall practice rainwater harvesting to maximum possible extent.
8.8	The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.
8.9	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

9. Air Quality Monitoring And Preservation

S. No	EC Conditions
9.1	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. Monitor fugitive emissions in the plant premises.
9.2	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986. 9) The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM10 and PM2.5 in

S. No	EC Conditions
	reference to PM emission, and SO ₂ and NO _x in reference to SO ₂ and NO _x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each). covering upwind and downwind directions.
9.3	The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM ₁₀ and PM _{2.5} in reference to PM emission, and SO ₂ and NO _x in reference to SO ₂ and NO _x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each). covering upwind and downwind directions.
9.4	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
9.5	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
9.6	The project proponent use leak proof trucks/dumpers carrying ore and other raw materials and cover them with tarpaulin.
9.7	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.
9.8	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

10. Statutory Compliance

S. No	EC Conditions
10.1	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.
10.2	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
10.3	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.
10.4	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of Schedule-I species in the study area).
10.5	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

S. No	EC Conditions
10.6	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.

Standard EC Conditions for (Mining of minerals)

1. Statutory Compliance

S. No	EC Conditions
1.1	This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
1.2	The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
1.3	The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
1.4	The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-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".
1.5	A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
1.6	State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
1.7	The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.
1.8	The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred. PP needs to apply for transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

2. Air Quality Monitoring And Preservation

S. No	EC Conditions
2.1	The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.
2.2	Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

3. Water Quality Monitoring And Preservation

S. No	EC Conditions
3.1	In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
3.2	Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
3.3	The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease including upstream and downstream. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly

S. No	EC Conditions
	basis.
3.4	Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
3.5	Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.
3.6	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
3.7	The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

4. Noise And Vibration Monitoring And Prevention

S. No	EC Conditions
4.1	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
4.2	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.
4.3	The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

5. Mining Plan

S. No	EC Conditions
5.1	The Project Proponent shall adhere to approved mining plan, inter alia, including, total excavation (quantum of mineral, waste, over burden, inter burden and top soil etc.); mining technology; lease area; scope of working (method of mining, overburden & dump management, O.B& dump mining, mineral transportation mode, ultimate depth of mining, concurrent reclamation and reclamation at mine closure; land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life; etc.).
5.2	The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

6. Land Reclamation

S. No	EC Conditions
6.1	The Overburden (O.B.), waste and topsoil generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB / waste dumps / topsoil dump like height, width and angle of slope shall be governed as per the approved Mining Plan and the guidelines/circulars issued by D.G.M.S. The topsoil shall be used for land reclamation and plantation.
6.2	The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.
6.3	Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
6.4	Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.

7. Transportation

S. No	EC Conditions
7.1	No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers. [If applicable in case of road transport].
7.2	The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

8. Green Belt

S. No	EC Conditions
8.1	The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

9.

S. No	EC Conditions
9.1	The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
9.2	The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State

S. No	EC Conditions
	Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/protected against felling and plantation of such trees should be promoted.

10. Public Hearing And Human Health Issues

S. No	EC Conditions
10.1	Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

11. Corporate Environment Responsibility (Cer)

S. No	EC Conditions
11.1	The Project Proponent shall submit the time- bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of environmental clearance for undertaking the activities committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF&CC Office Memorandum No.22-65/2017-IA.III dated 30 September, 2020. The action plan shall be implemented within three years of commencement of the project.

12. Miscellaneous

S. No	EC Conditions
12.1	The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.
12.2	The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
12.3	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.
12.4	A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.

S. No	EC Conditions
12.5	The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.
12.6	In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake regrassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
12.7	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
12.8	Concealing factual data failure to comply with any or submission of false/ fabricated data and of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
12.9	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court of Law relating to the subject matter.
12.10	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Additional EC Conditions

N/A

Annexure 2

Details of the Project

S. No.	Particulars	Details	
a.	Details of the Project	Expansion of Mine Lease Area of South Kaliapani Chromite mines	
b.	Latitude and Longitude of the project site	21.01378907158101,85.77387993082976 21.03253296989312,85.80088576491168	
c.	Land Requirement (in Ha) of the project or activity	Nature of Land involved	Area in Ha
		Non-Forest Land (A)	0

S. No.	Particulars	Details	
		Nature of Land involved	Area in Ha
		Forest Land (B)	425.398
		Total Land (A+B)	552.457
d.	Date of Public Consultation	Public consultation for the project was held on	
e.	Rehabilitation and Resettlement (R&R) involvement	NO	
f.	Project Cost (in lacs)	101000	
g.	EMP Cost (in lacs)	5297.6506	
h.	Employment Details		

Details of Minerals Products & By-products

Name of the Mineral to be mined	Classification of mineral [Major/Minor]	Production capacity in MTPA	Remarks
Chromite	Major	1.4	



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ANNEXURE-6

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

STATE POLLUTION CONTROL BOARD, ODISHA

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

No. 22065 /

Ind-I-Con- 253 (A)

Date: 12-12-2025

To

Sri Ganeswar Bhuyan, Sr. Manager (Mining),
South Kaliapani Chromite Mines of M/s OMC Ltd.
At/PO- Kaliapani, Sukinda
Dist.- Jajpur-755028

Sub: Non-compliance observed during Inspection of South Kaliapani Chromite Mines

Sir,

Consent to Operate was granted in favour of South Kaliapani Chromite Mines with strict conditions for compliance. One of the major condition was to channel entire surface runoff to the Effluent Treatment Plant (ETP) for necessary treatment prior to discharge. However, several non-compliances were observed with surface runoff management and effluent discharge standards during inspection on 02.09.2025 as mentioned below.

1. The analysis reports of water samples collected from settling pits, embankments, and discharge points revealed that TSS and Cr⁺⁶ concentrations exceeded the prescribed standards of the Board.
2. Overflow of settling tank near ore plot leading to discharge outside Mining Lease area with Cr⁺⁶ and TSS above limits.
3. Breach of settling pit near DECO vehicle parking causing contaminated runoff into agricultural land.
4. Discharge from settling pit near Koipasi bridge into Damsala Nala not meeting standards.
5. OB dump near Chiruguda Sahi observed to be collapsing, with inadequate retaining wall and garland drain.

You are therefore directed herewith to take necessary corrective actions

- a) To remove the above-mentioned lapses and have adequate surface runoff management.
- b) To treat Cr⁺⁶ effluent uninterruptedly in the existing ETP.

Action plan for the above shall be submitted within 7 days.

Yours Faithfully,


Member Secretary 12-12-25Memo No. 22066 Dt. 12-12-2025

Copy forwarded to the Regional Officer, SPCB, Kalinganagar for information.


Chief Env. Engineer



Government of India
Ministry of Jal Shakti
D/O Water Resources, River Development & Ganga Rejuvenation

REPORT ON

Ground Water Quality in Sukinda Valley
Jajpur District, Odisha

For Submission before the

Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata



Central Ground Water Board
South Eastern Region, Bhubaneswar
June 2025



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**Central Ground Water Board
South Eastern Region, Bhubaneswar**

Ground Water Quality in Sukinda Valley, Jajpur District, Odisha

**Report Preparation
by**

**Smt. Mausumi Sahoo, Scientist-D
Sh. Bibhuti Bhushan Sahoo, Scientist-C
Sh. Sinosh P K, Scientist-B**

**Supervision & Guidance
Dr. B K Sahoo, Regional Director**

June 2025



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GROUND WATER QUALITY IN SUKINDA VALLEY, JAJPUR DISTRICT, ODISHA

1.0 Introduction

In pursuant to the OA No.73/2024/EZ filed before the Hon'ble National Green Tribunal (NGT), Eastern Zone Bench, Kolkata; the Hon'ble NGT has constituted a joint committee vide its hearing dated 21.03.2024 comprising of the following members to enquire into the allegations made in the said OA related to water pollution in Sukinda Valley and submit a fact finding report:-

- i. Senior Scientist, Odisha Pollution Control Board,
- ii. Senior Scientist, Central Pollution Control Board,
- iii. Senior Officer, Central Ground Water Board, and
- iv. Collector & District Magistrate, Jajpur, or his representative not below the rank of Additional District Magistrate.

The joint committee has submitted the fact finding report before the Hon'ble NGT with finding of the Chromium (VI) contamination at nine sampling points and also gave the suggestion that the extent of contamination of ground water in the different regions of Sukinda Valley and surrounding area is a matter of further investigation by the competent agency. The Hon'ble NGT vide its hearing dated 04.07.2024 directed the Central Ground Water Board to further investigate the matter on its own and to file affidavit showing what action has been taken on the Report of the Joint Inspection Committee.

Following the directions of the Hon'ble NGT, the Central Ground Water Board, Bhubaneswar has taken up a study to establish the extent of Cr (VI) contamination in ground water in Sukinda Valley area. The study area covers the Sukinda Chromite Valley along with its buffers having a geographical area of around 180 square kilometres and is located in Sukinda block, Jajpur district of Odisha state. The area falls between north latitudes 21.0540 & 21.1120 and east longitudes 85.9000 & 85.6860 (Plate-1). The area receives good amount of rainfall with an annual average precipitation of 1800 mm.

The area known as Sukinda ultramafic field is famous for its Chromite reserve which accounts for around 95% of the chromite reserve of the country which are associated with the ultramafic complexes. The Chromite ore is mined in the area through mostly opencast method by various private and public sector companies.

The Sukinda ultramafic field is confined to an east-west trending valley lying between the Daitari hill range in the north and the Mahagiri range in the south. The area has a width of 2 to 5 km and extends for a length of nearly 25 km in an ENE-WSW direction with general slope from north east to south west. The drainage or natural water channels in the area is towards North West and it finally joins the Damsala Nalla which is flowing NE-SW and is the main



drainage in the area. The Damsala Nala crosses the valley along the length and joins the River Brahmani that finally meets the Bay of Bengal.

2.0 Geology and Hydrogeology

Geologically the area is underlain by quartzites, ultramafics- mainly dunite, peridotite & pyroxenites, schists & phyllites and younger granites of Iron Ore Super Group. The Iron Ore Super Group possesses schists, phyllites and quartzites which were later intruded by ultramafic complex consisting of dunite, peridotite & pyroxenites in the Sukinda Valley. These ultramafics have been extremely weathered into a mass of talc, serpentinite and limonite which have been subsequently lateritised during quaternary period. The chromite ores occur as bands within the ultramafic body.

The occurrence and distribution of ground water in an area are governed by the underlying geological formations and hydrogeological characteristics of the surroundings. The hydrogeology of the area broadly describes the disposition of water bearing formations, occurrence of ground water and their yield potentials, ground water regime conditions in terms of depth to water levels.

Hydrogeologically the area is having two aquifers, the upper phreatic (unconfined) and the deeper semi-confined aquifer. Ground water in the area occurs both in phreatic and semi-confined conditions. The upper weathered portion of the crystalline rocks forms the phreatic aquifer. Phreatic aquifer occurs in entire area except rocky outcrops and has formed by the weathering of crystalline formations. This aquifer generally occurs down to a depth of 20 meter below ground level (mbgl) with maximum depth of up to 30 mbgl in certain areas and ground water is extracted from this aquifer mostly through dug wells (DW). The depth of the dug wells goes up to maximum of 15 mbgl.

Below the phreatic aquifer, ground water occurs in the fractures and joints within the crystalline rocks which form the semi-confined aquifer in the area. Ground water from this aquifer is extracted mainly through hand pumps (HP) and bore wells (BW). The depth of the hand pumps usually goes up to 60 mbgl and bore wells up to 120 mbgl. Ground water in the area has been extracted through dug wells, hand pumps and bore wells for both domestic as well as agricultural purpose by the local public.

To study the hydrogeology of the area, water levels in the area have been measured through 26 nos. of dug wells and 27 nos. of hand pumps during both pre-monsoon and post-monsoon seasons in the year 2024. The water levels measured through dug wells represent the phreatic aquifer and the water levels measured through hand pumps represent the deeper semi-confined aquifer in the area. The analysis of water levels measured in the area show that in the phreatic aquifer, the depth to water level during pre-monsoon season varies from 2.26 meter to 12.12 meter below ground level with an average water level of 6.8 mbgl (plate-2). Similarly depth to water level during post-monsoon season in this aquifer varies from 0.51

meter to 8.65 meter below ground level with an average water level of 4.28 mbgl (plate-3) in the area.

Similarly, in the semi-confined aquifer, the depth to water level during pre-monsoon season varies from 2.8 meter to 18.4 meter below ground level with an average water level of 9.4 mbgl (plate-4) and during post-monsoon season the depth to water level varies from 1.65 meter to 16.1 meter below ground level with an average water level of 7.1 mbgl (plate-5) in the area.

The depth to water levels in the semi-confined aquifer remain deeper as compared to the phreatic aquifer during both pre- and post-monsoon seasons. There has been a rise of water levels during post-monsoon season as compared to the pre-monsoon season in both phreatic as well as in the semi-confined aquifers as a result of recharge due to rainfall in the area. The ground water flow direction in the area is towards south-west. The Damasala Nala gets its flow from ground water system which is effluent in nature. The hydrogeology of the study area is shown in plate-6.

3.0 Water Sampling and Analysis

In order to study the quality of water in Sukinda Valley, 233 water samples were collected from different locations in the study area during field investigation in the year 2024. Out of 233 samples, 183 were collected during pre-monsoon season and 50 were collected during post-monsoon season. Post-monsoon sampling was primarily conducted at locations that showed elevated Cr(VI) concentrations exceeding 0.05 mg/l during the pre-monsoon season, along with a few additional sites in the surrounding areas. Spatially, the samples were collected both from areas in close proximity to the mines and from locations up to 6 km away. The samples were collected from hand pumps, bore wells, dug wells, effluent treatment plants (ETP) and mine pits of different mining companies. The location of the samples is presented in plate-7. In addition to these groundwater samples, samples were also collected from surface water bodies like pond, Damasala Nala and Bramhani River to assess the quality. Multiple samples were collected from different sources from the same village to study the quality of water during both pre- and post-monsoon seasons. The collections of samples were also carried out from both dug wells as well as from hand pumps to ascertain the quality of water in two different aquifers available in the area.

All samples were collected in accordance with the standard procedure and analysed for the parameters like, pH, Electrical Conductivity (EC), Total Dissolved Solids (TDS), Hardness, Total Alkalinity, Calcium, Magnesium, Sodium, Potassium, Carbonate, Bicarbonate, Chloride, Sulphate, Nitrate and Fluoride by following the standard procedures laid down in "Standard Methods for the Examination of Water and Wastewater, 23rd Edition, American Public Health Association (APHA), 2017 in CGWB's Regional Chemical Laboratory. The samples were also analysed for concentration of chromium (VI) and were determined colorimetrically using the

diphenylcarbazine method, as per EPA Method 7196. The location and source of sampling sites are given in table-1.

Table-1: Location and source of samples collected from Sukinda Valley

Sl. No.	Village	Number of Sources	Ground Water Source			Surface Water Source			Mine			Spring
			DW	TW/BW	HP	River	Pond	Mine Pit	ETP Inlet	ETP Outlet	WTP	
1	Aradapal	3	1		2							
2	Badakhaman	1			1							
3	Balipada	17			15	2						
4	Balipura	4			2							2
5	Benagadia	7	2		5							
6	Bhimanagar	15	1		14							
7	Chingudipal	6	2		3	1						
8	Chirgunia	5	1	1	2	1						
9	Chrome nagar	1			1							
10	Dhabahali	4	1		3							
11	Ghagiasahi	3			1	2						
12	Guakata	1			1							
13	Gurujang	3			3							
14	Gurujangpal	3	1		1	1						
15	Hatihudi	4			2	1						1
16	Kakudia	3	1		2							
17	Kalarangi	1		1								
18	Kalarangiata	6			4			2				
19	Kaliapani	18	2	2	5	2	2	2	2	1		
20	Kamarda	7		2	2				2	1		
21	Kansa	8	3	2	3							
22	Katapurti	4	1		2	1						
23	Kendubani	3	1		2							
24	Kendupura	1				1						
25	Koipasi	1			1							
26	Kuchilabanka	2				2						
27	Mahagiri	7		3					2	1	1	
28	New kamarda	2			2							
29	Ostopal	22		4	13	1	1		2	1		
30	Patna	4			4							
31	Podaora	1			1							
32	Ragada	7	1		5		1					
33	Raighat	2	1		1							
34	Rangamatia	4	2		2							
35	Sarubabil	16	2		9	2			2	1		
36	Sukinda	6		1	2				2	1		
37	Sukrunji	2	1		1							

Sl. No.	Village	Number of Sources	Ground Water Source			Surface Water Source			Mine			Spring
			DW	TW/BW	HP	River	Pond	Mine Pit	ETP Inlet	ETP Outlet	WTP	
38	Talangi	7			7							
39	Tungeisuni	6	1		3	1	1					
40	Bherubania	2	1			1						
41	Dayanabil	1				1						
42	Jaypur	1				1						
43	Koriapal	3	1		1	1						
44	Kuchilabanka	1			1							
45	Kusumaguta	3	1		1	1						
46	Mathanugaon	2			1	1						
47	Nilakanthapur	1				1						
48	Palaspitha	1	1									
49	Purusottampur	1				1						
	Total	233	29	16	131	26	5	4	12	6	1	3

4.0 Results and Discussion

The groundwater quality in Sukinda Valley is assessed in accordance with test results of the physico-chemical characteristics and chromium (VI) concentration of analyzed samples and is discussed below.

4.1 Physico-Chemical Parameters

All analyzed samples were within the permissible limits for drinking water based on basic parameters such as pH, electrical conductivity, Sulphate, Nitrate, Chloride, Fluoride, and total dissolved solids (TDS). The TDS ranged from 19.6 to 611.1 mg/l, indicating mostly fresh to slightly mineralized water. This suggests limited mineral dissolution under natural aquifer conditions.

Notably, there were no significant water quality changes observed in the post-monsoon in comparison to pre-monsoon periods. Almost all parameters remained static without much significant variation. The minimum, maximum and mean of physico-chemical characteristics of groundwater samples, collected from the study area are presented in the table-2.

Table-2: Minimum, maximum and mean of Physico-chemical parameters of water samples of the Sukinda Valley area

Parameters	Permissible Limit (BIS, IS 10500:2012)	Maximum	Minimum	Mean
pH	6.5-8.5	8.34	6.3	7.4
Electrical Conductivity $\mu\text{S}/\text{cm}$ at 25°C	---	1411	32.0	283.4
Total Dissolved Solids, mg/l	2000	611.1	19.6	151.3
Hardness, as CaCO_3 , mg/l	600	415.7	12.3	130.9

Parameters	Permissible Limit (BIS, IS 10500:2012)	Maximum	Minimum	Mean
Total Alkalinity, as CaCO ₃ , mg/l	600	335.3	15.0	129.4
Calcium, mg/l	200	91.19	2.5	16.9
Magnesium, mg/l	100	71.28	1.5	21.5
Sodium, mg/l	---	97.4	0.3	8.2
Potassium, mg/l	---	48.3	0.1	3.0
Carbonate, mg/l	---	0	0.0	0.0
Bicarbonate, mg/l	---	409.1	18.3	157.9
Chloride, mg/l	1000	180.5	0.8	9.6
Sulphate, mg/l	400	181.2	0.1	9.3
Nitrate, mg/l	45	40.3	0.1	5.8
Fluoride, mg/l	1.5	0.55	0.0	0.1

Perusal of the analysis results of the ground water samples show that all the physicochemical parameters are well within the maximum permissible limit for drinking water as per IS 10500:2012.

4.2 Chromium (VI) concentration

Chromium mostly exists in two stable states in nature, i.e. hexavalent chromium Cr(VI) and trivalent chromium Cr(III).

In natural water systems, Cr(III) usually appears as Cr³⁺, Cr(OH)²⁺, Cr(OH)₂⁺, or Cr(OH)₄⁻. It is poorly soluble and tends to precipitate as Cr(OH)₃, especially at pH values between 6 and 12, limiting its mobility (Rai et al., 1987).

Cr(VI) is more hazardous. It exists in forms like HCrO₄⁻, CrO₄²⁻, and Cr₂O₇²⁻, depending on pH and redox conditions. Cr(VI) is highly soluble, mobile, and toxic, and although often associated with industries like tanning and electroplating, it can also form naturally via oxidation of Cr(III) by manganese oxides (Godgul & Sahu, 1995). Laboratory experiments confirm that alkaline and oxidizing conditions, which are common in Sukinda's lateritic overburden, favour the conversion of Cr(III) to Cr(VI) (Godgul, 1994; Godgul & Sahu, 1995).

The toxicity and mobility of Cr depends on its speciation. The Cr(III) is mostly immobile; however, Cr(VI) is highly toxic as it is easily soluble and mobile and adversely affect the environment beyond its permissible limit. The permissible limit of Cr(VI) has been set by different organizations for different media viz. soil, drinking water, industrial sewage etc. According to Bureau of Indian standards (BIS) permissible limit of Cr(VI), for drinking water is 0.05 mg/l.

Sukinda Valley receives an annual rainfall of around 1,800 mm, with nearly 80% occurring during the monsoon (June–September). When rainwater interacts with exposed chromite ore, hexavalent chromium [Cr(VI)] can leach into open mine pits. Cr(VI) concentrations in

these mine pits water generally shows value, which is well above the safe limit of 0.05 mg/litre for drinking water set by the BIS.

A total of 233 water samples, collected from various sources during both pre- and post-monsoon seasons, were analyzed for hexavalent chromium [Cr(VI)]. Of these, 39 samples showed Cr(VI) concentrations exceeding 0.05 mg/l in at least one of the seasons. The test results of samples with chromium (VI) above 0.05 mg/l, collected from the Sukinda Valley are given in the Table-3. All the ground water samples collected from dug wells in the area have Cr (VI) concentration below detection limit (BDL).

Table-3: Location of samples showing concentration of Cr(VI) more than 0.05 mg/l

Sl. No.	District	Block	Village	Source	Longitude	Latitude	Concentration of Cr(VI) in mg/l	
							Pre-monsoon	Post-Monsoon
1	Jajpur	Sukinda	Kamarda Mines Inlet	ETP Inlet	85.82639	21.06333	0.079	0.1247
2	Jajpur	Danagadi	Mahagiri Inlet	ETP Inlet	85.77588	21.03115	0.1022	0.111
3	Jajpur	Sukinda	Ostopal Inlet	ETP Inlet	85.79042	21.05996	1.861	0.7217
4	Jajpur	Sukinda	S. Kaliapani mine Inlet	ETP Inlet	85.77843	21.04663	0.601	0.3058
5	Jajpur	Sukinda	Saruabil Inlet	ETP Inlet	85.82075	21.05867	0.875	0.4608
6	Jajpur	Sukinda	Sukinda Mine TATA Inlet	ETP Inlet	85.74322	21.02156	0.91	0.7915
7	Jajpur	Sukinda	Balipada 3	HP	85.83184	21.06969	0.0705	0.0601
8	Jajpur	Sukinda	Balipada 4	HP	85.82621	21.06893	0.2921	0.0456
9	Jajpur	Sukinda	Balipada 5	HP	85.82558	21.06732	0.0809	0.0601
10	Jajpur	Sukinda	Balipada 6	HP	85.82574	21.06763	0.133	0.1194
11	Jajpur	Sukinda	Balipura Village	HP	85.83441	21.06996	0.0734	0.0553
12	Jajpur	Sukinda	Bhingtangar	HP	85.73725	21.01972	0.139	0.1522
13	Jajpur	Sukinda	Bhingtangar 4	HP	85.73688	21.01974	0.0445	0.094
14	Jajpur	Sukinda	Bhingtangar 5	HP	85.73718	21.0206	0.0423	0.1404
15	Jajpur	Sukinda	Bhingtangar 1	HP	85.73825	21.01975	0.1568	0.0116
16	Jajpur	Sukinda	Bhingtangar 2	HP	85.73582	21.01974	0.085	0.0648
17	Jajpur	Sukinda	Bhingtangar 3	HP	85.73535	21.02021	0.094	0.0648
18	Jajpur	Sukinda	Bhingtangar 6	HP	85.73656	21.02009	0.0804	0.0744
19	Jajpur	Sukinda	Bhingtangar 7	HP	85.73656	21.02009	0.0862	0.0812
20	Jajpur	Sukinda	Bhingtangar 8	HP	85.73578	21.02001	0.112	0.0841
21	Jajpur	Sukinda	Kamarda	HP	85.83567	21.06035	0.1551	0.1404
22	Jajpur	Sukinda	New kamarda	HP	85.83798	21.0612	0.0815	0.0965
23	Jajpur	Sukinda	Ostopal	HP	85.79572	21.06553	0.688	0.6715
24	Jajpur	Sukinda	Ostopal 2	HP	85.7876	21.0579	0.3545	0.3122
25	Jajpur	Sukinda	Ostopal 3	HP	85.80096	21.06154	0.3546	0.2765
26	Jajpur	Sukinda	Patna 2	HP	85.7695	21.06582	0.4105	0.3993
27	Jajpur	Sukinda	Saruabil	HP	85.81069	21.05721	0.1365	0.0482
28	Jajpur	Sukinda	Saruabil	HP	85.81056	21.05806	0.0962	0.0466
29	Jajpur	Sukinda	Kalarangiatta Mine Pit	Mine Pit	85.74167	21.01892	0.6037	0.59
30	Jajpur	Sukinda	S Kaliapani Quarry F	Mine Pit	85.79981	21.0412	0.6543	0.6205

Sl. No.	District	Block	Village	Source	Longitude	Latitude	Concentration of Cr(VI) in mg/l	
							Pre-monsoon	Post-Monsoon
31	Jajpur	Sukinda	Chingudipal	Damsala Nala	85.77329	21.05104	0.7313	0.0417
32	Jajpur	Sukinda	Chirgunia	Damsala Nala	85.75855	21.0434	0.09	0.0302
33	Jajpur	Sukinda	Ghagiasahi	Damsala Nala	85.74094	21.03551	0.067	0.19
34	Jajpur	Sukinda	Kallapani	Damsala Nala	85.77226	21.04578	0.1984	0.032
35	Jajpur	Sukinda	Kaliapani	Damsala Nala	85.77229	21.04584	0.1986	0.0374
36	Jajpur	Sukinda	Katapurti	Damsala Nala	85.73861	21.03059	0.4502	0.035
37	Dhenkanal	Kankadahada	Kuchilabanka	Damsala Nala	85.72455	21.01722	0.06	0.0703
38	Dhenkanal	Kankadahada	Kusumaguta	Damsala Nala	85.72075	21.00532	0.12	0.0383
39	Jajpur	Sukinda	Oastapal	Damsala Nala	85.7841	21.05401	0.0884	0.0442

Out of 183 samples collected during pre-monsoon period from different sources, 37 samples have Cr (VI) concentration more than 0.05 mg/l. Out of these 37 samples having Cr (VI) above permissible limit (>0.05 mg/litre), 20 are from hand pumps (HPs), 6 are from effluent treatment plant (ETP) inlets, 2 are from mine pits and 9 are from Damsala river. Similarly out of 50 samples collected from different sources during post-monsoon period, 28 samples have Cr (VI) concentration more than 0.05 mg/l. Out of these 28 samples having Cr (VI) above permissible limit (>0.05 mg/litre), 18 number are from hand pumps (HPs), 6 number are from ETP inlets, 2 number are from mine pits and 2 number are from Damsala river. The samples collected from surface water source (Damsala river) show concentration of Cr (VI) > 0.05 mg/l during pre-monsoon season, whereas the concentration in most of the samples is within the permissible limit during post-monsoon season.

Table-4: Source wise samples analysed vs samples with Cr(VI)>0.05 mg/l

Sl. No.	Source	Pre-monsoon		Post-monsoon	
		No. of Samples Analysed	Samples with Cr(VI)>0.05 mg/l	No. of Samples Analysed	Samples with Cr(VI)>0.05 mg/l
1	DW	28	0	1	0
2	BW	11	0	5	0
3	HP	99	20	31	18
4	Damsala Nala	23	9	4	2
5	Mine pit	2	2	2	2
6	Pond	5	0	0	0
7	ETP-Inlet	6	6	6	6
8	ETP-outlet	6	0	0	0
9	WTP	1	0	0	0
10	Spring	2	0	1	0
	Total	183	37	50	28

The water collected in the mine pits through rainfall and seepage of ground water is pumped out for facilitation of mining activities. These pumped water have been treated in ETPs of different mining companies before release in the Damsala Nala. The Cr (VI) concentration in water samples collected from the outlets of these ETPs is below detection limit (BDL).

The Damsala Nala, the stream draining the valley, receives treated effluent from the Effluent Treatment Plants (ETPs) and is frequently used by local villagers for purposes other than drinking like bathing and recreational activities. Water samples were collected from various locations during the study period revealed that chromium concentration was exceeding 0.05mg/l in many places there by exceeding the Bureau of Indian Standards acceptable limit (0.05mg/l). However, elevated chromium concentrations exceeding 0.05 mg/l in Damsala Nala are restricted to its stretch within the Sukinda Valley area. Beyond the valley, both at upstream and downstream, the concentration does not exceed the permissible limit. The samples collected from Bramhani River downstream the valley area show total Chromium concentration below detection limit (BDL).

At most monitoring sites, chromium levels in groundwater remained relatively stable across both daily and seasonal timescales. In locations where consecutive-day sampling was carried out, no significant variations were detected. Overall, the fluctuations observed were minimal. This consistent pattern in chromium concentration suggests the presence of a steady, naturally occurring (geogenic) source.

Chromium (VI) contamination was absent in shallow, unconfined (phreatic) aquifers, indicating that the phreatic zone remain relatively free from contaminations. This suggests that deeper semi-confined aquifers in the area are more vulnerable due to longer residence time and deeper oxidation mechanisms.

5.0 Conclusion and Recommendations

The Sukinda Valley area has phreatic aquifer up to a depth of 30 meter below ground level followed by fractured deeper aquifer. A total number of 233 samples were collected from the study area and analysed. The samples were collected from hand pumps, dug wells, Effluent Treatment Plant (ETP) mine pits, Damsala Nala and Brahmani River. In addition to these groundwater samples, samples were also collected from surface water body (pond, spring and river), to assess the quality. Out of 233 samples, 37 samples have shown higher concentration of chromium (VI) above 0.05 mg/l during pre-monsoon and 28 locations have shown chromium (VI) above 0.05 mg/l during post-monsoon season.

The findings and recommendations to prevent the ground water contaminations in the area are as follows.

1. The upper phreatic aquifer (up to 30 mbgl) is free from Cr (VI) contamination, this zone may be tapped for drinking and domestic water supply purpose after ensuring quality of every individual source.

2. While the shallow phreatic aquifers are free from chromium contamination, determining the precise extent of contamination in the deeper aquifers remains challenging. Wells drilled to similar depths in close proximity exhibiting vastly different levels of Cr(VI) results in an unpredictable spatial pattern. This variability, coupled with the absence of consistent anthropogenic sources, suggests that the natural oxidative mobilization of Cr(VI) from chromite-bearing strata is the primary mechanism driving the contamination and is suggestive of the geogenic origin.
3. It is essential to expand and strengthen the safe drinking water supply schemes to ensure the provision of safe water to the local population.
4. Contaminated wells should be permanently closed to prevent public exposure to unsafe water sources.
5. If new wells are constructed, they must be subject to periodic water quality monitoring to ensure the safe quality of the water.
6. The Cr (VI) concentration in water samples collected from the outlets of the ETPs of different mining companies is below detection limit (BDL).
7. Effluent treatment systems in the mining areas must be strictly maintained to ensure effective treatment and compliance with discharge standards. This is crucial to prevent contamination of nearby surface water bodies.
8. Elevated chromium concentrations exceeding 0.05 mg/l in Damsala Nala are restricted to its stretch within the Sukinda Valley area. Beyond the valley, both at upstream and downstream, the concentration of Cr (VI) does not exceed the permissible limit. Samples collected from Bramhani River downstream the Sukinda Valley area show Chromium concentration below detection limit (BDL).
9. Ultramafic, chromite-rich regions like the Sukinda Valley require rigorous and continuous water quality management to mitigate environmental degradation and associated public health risks.



Plate-1: Location map of Sukinda valley, District-Jajpur, Odisha

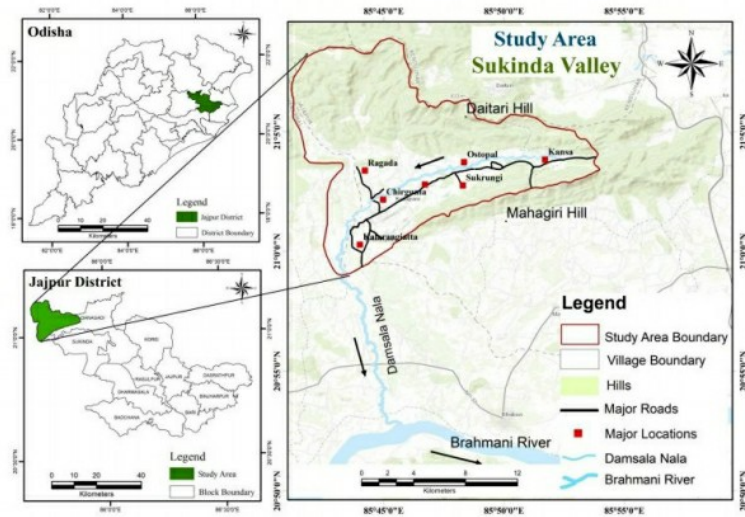


Plate-2: Depth to water level map (Pre-monsoon, 2024) of phreatic aquifer of Sukinda Valley, District-Jajpur, Odisha

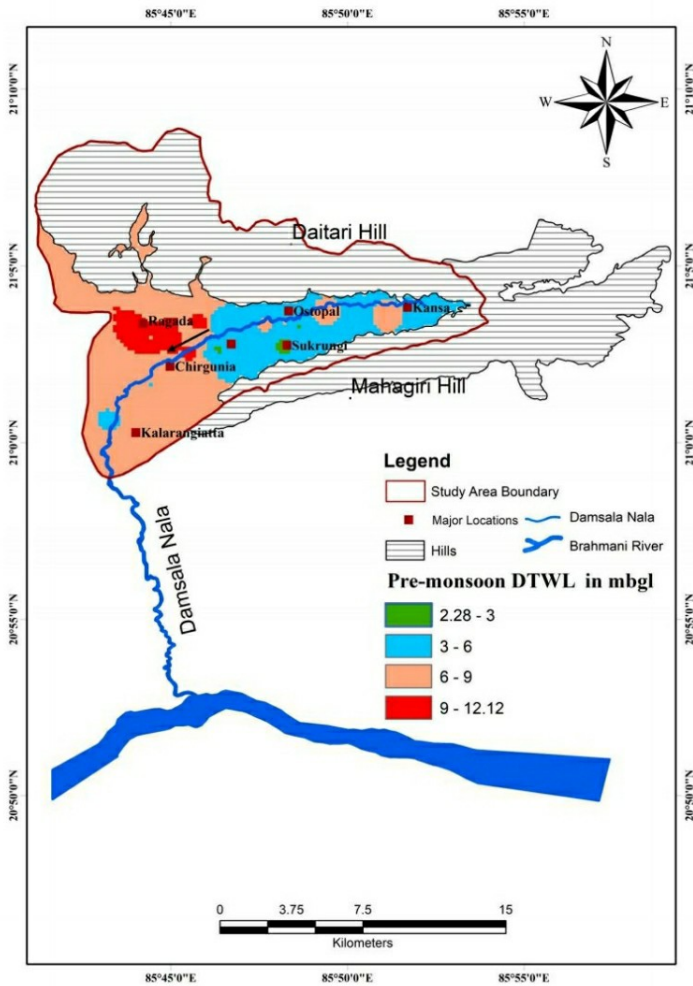


Plate-3: Depth to water level map (Post-monsoon, 2024) of phreatic aquifer of Sukinda Valley, District-Jajpur, Odisha

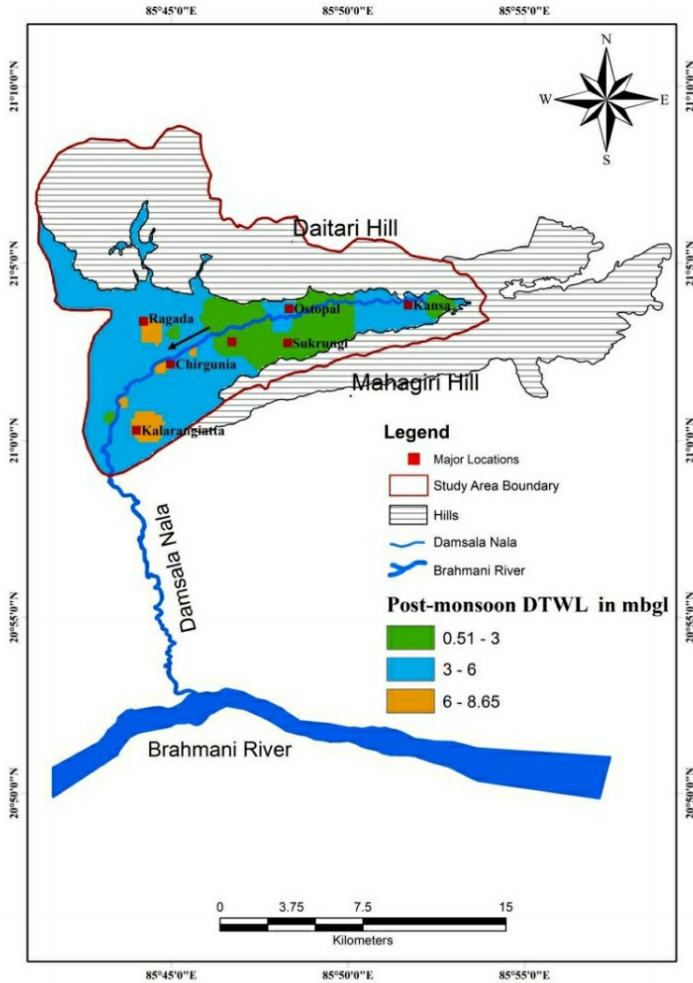


Plate-4: Depth to water level map (Pre-monsoon, 2024) of deeper aquifer of Sukinda Valley, District-Jajpur, Odisha

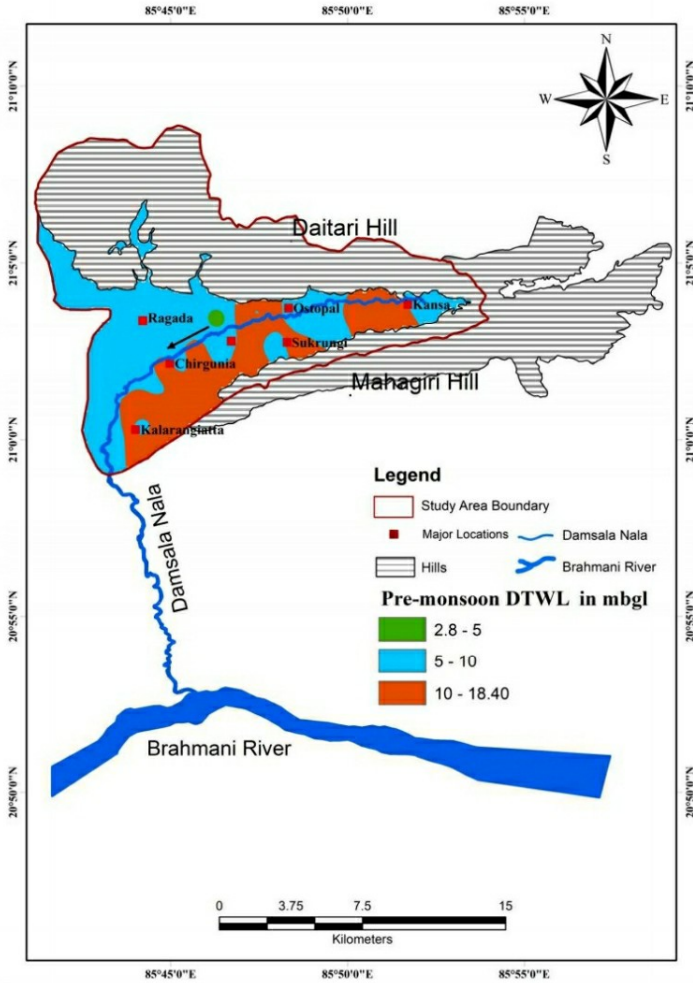


Plate-5: Depth to water level map (Post-monsoon, 2024) of deeper aquifer of Sukinda Valley, District-Jajpur, Odisha

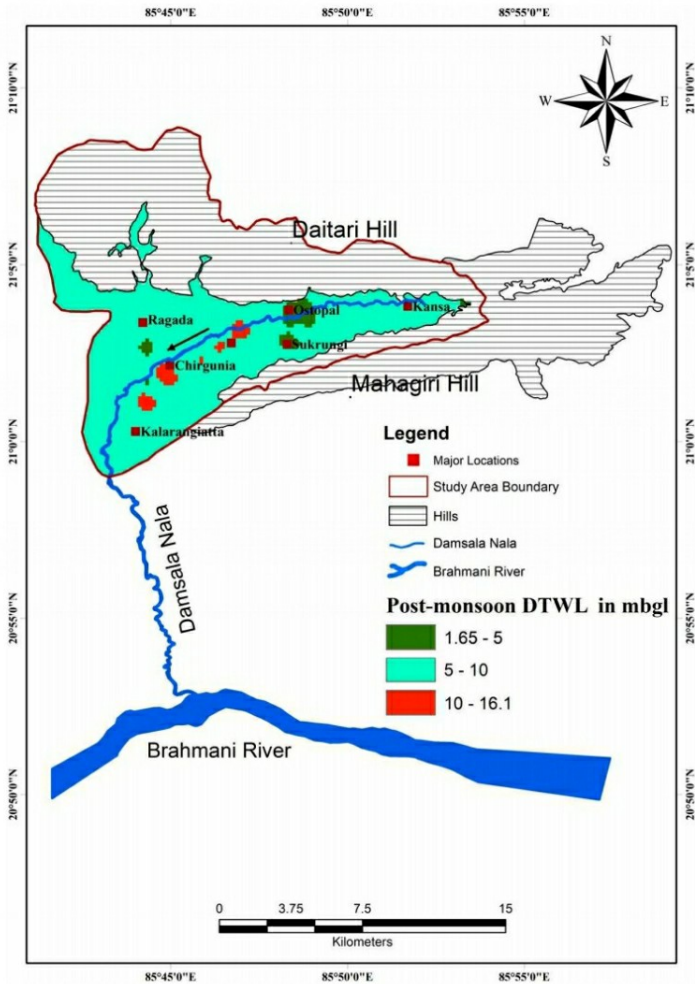


Plate-6: Hydrogeological map of Sukinda Valley, District-Jajpur, Odisha

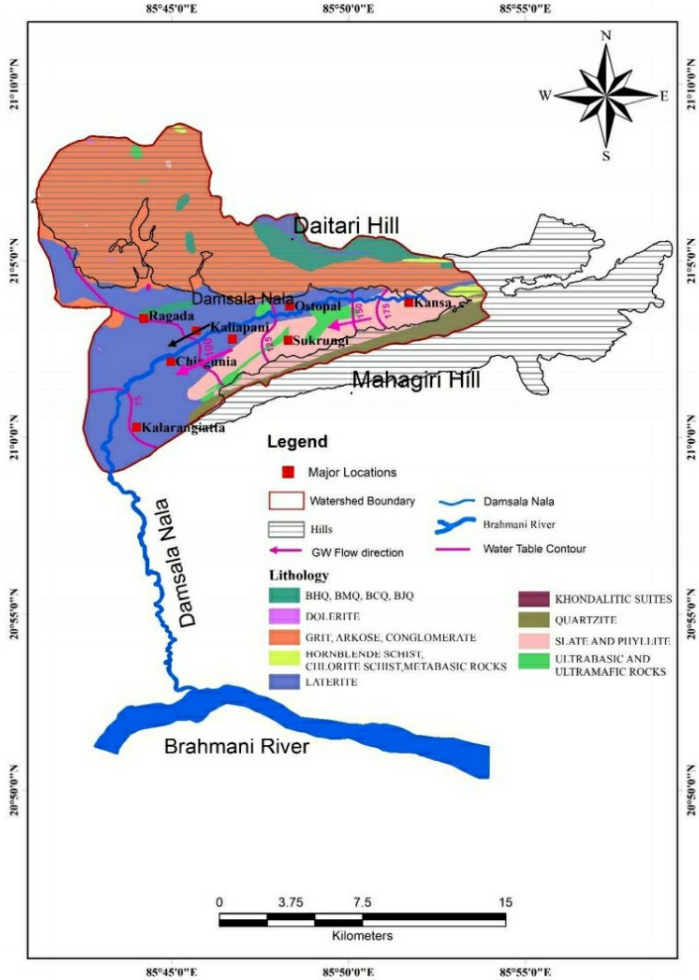


Plate-7: Sample location map of Sukinda Valley, District-Jajpur, Odisha

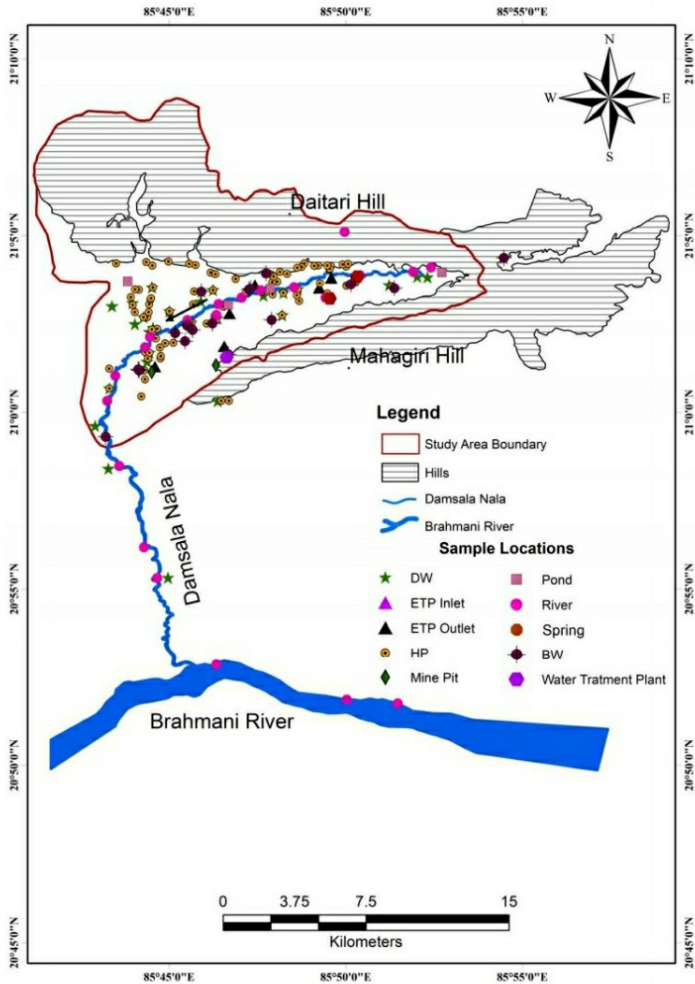
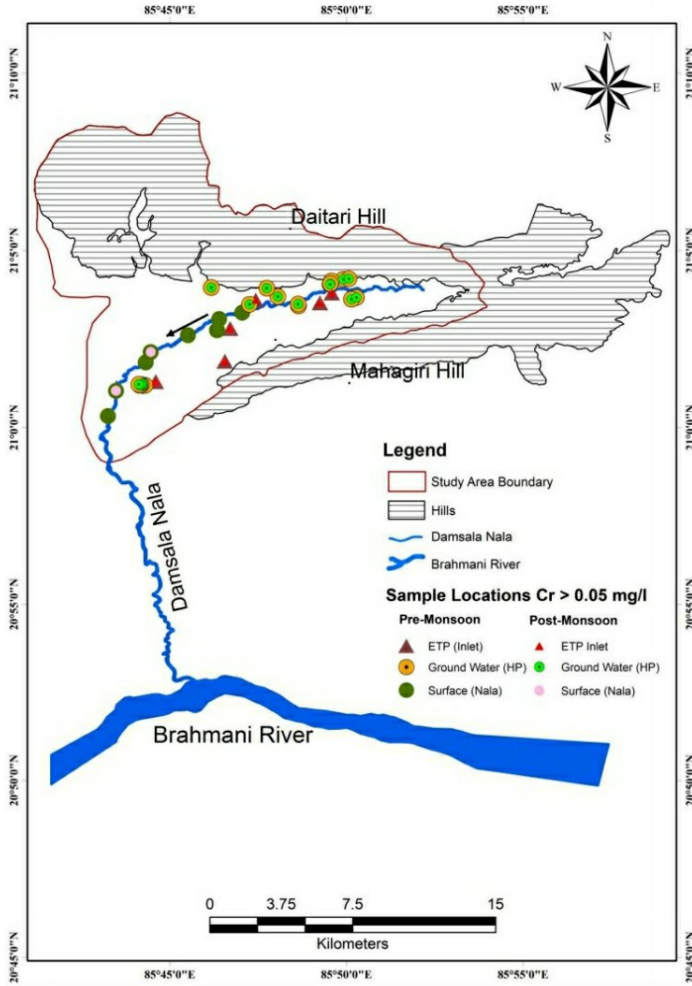


Plate-8: Spatial distribution of samples with Chromium (VI) above permissible limit





Bhubaneswar, Sunday,
March 8, 2026

Dumshala will be Vanished

OMC proposes to convert 513 hectares of land



Jajpur, 7/3 (Harshvardhan Behera)

Out of the total 623,394 hectares of mining lease area of Odisha Mining Corporation (OMC), 513,889 hectares have been proposed to be converted to forest land. This proposal was discussed in the 87th Project Screening

Committee (PSC) meeting held at 11/02/2026.

If this forest land is converted, it is expected that Dumshala Chirsrota Nala in the north-eastern part of the district area will be merged with OMC mining. On the other hand, since Tamshala Nala is a part of the mining lease area, a No Objection Certificate (NOC) can be obtained from the Movable Property Department and included in the forest conversion proposal.

It was decided in the PAC meeting.

In this regard, the Secretary of the Water Resources Department, Satya Mishra, is writing to the Divisional Engineer-in-Chief to submit a detailed report on the OMC's proposal on 26/2/2026. On the other hand, it has been revealed by the residents of the area that about 30,000 valuable trees and shrubs in the above forest land will be destroyed and various species of animals will lose their stability! The OMC's mining plan and progressive mine closure plan have been approved by the Indian Bureau of Mines (IBM) on 37/2024. According to the approved mining plan, the original course of the Tamshala Nala will be changed.

A safety zone of up to 50 meters will be provided on the upstream side of the Nila Nala. Along with this, the original course of the Nala will be kept intact and will not be used for any purpose. This has been confirmed by the DFO of Cuttack, Sulinda Tehsildar and Jajpur Road Mines Deputy Director, OMS, stated in the proposal letter.

It is noteworthy that in 2018, OMC had cleared 162.42 hectares of dense forest land for the expansion of Purungi mine for use as non-cultivated land. The felling of 9499 trees worth Rs. 100 crore in this cleared land was mentioned in the MC's Environmental Management Plan. In this regard, the land was cleared at that time.

After the factual news was published, the people of the area strongly opposed the genocide. Later, with the help of the OMC, the genocide was successful. Exactly 8 years later, there has been a proposal to convert 513889 hectares of forest land into uncultivated land!

According to the survey conducted, the proposed forest has a wide canopy and dense forest. It is full of trees like Shaal, Mai, Gar, Kendu, Asan, Mango, Bhurei, Mahul etc. Apart from this, various species of birds, reptiles and mammals are present. Among them are elephant, bear, jackal, thunderbird, donkey, Shaaliyapatri, peacock, python, Chandanboda, Abhira, Naga,

You can see snakes, etc. In this regard, if mining is carried out here, the forest will be destroyed and the above-mentioned animals will die. On the other hand, the lives of the tribal forest dwellers who depend on the forest are certain to be miserable. Villagers like Masahi, Oppal, Gurjang, Saguatil, Otriya, Kaliapani, Dhwati Chingudipal, Rangamatiya, Rangankar, Jalrangi, Ghagi Aasthi, Bansahi etc. depend on this Mashala. This drain, which merges with Brahmani, is used for irrigation in the area through small irrigation projects and other means. Earlier, the High Court and ITM have issued orders to keep the water of Tamshala drain clean and pure. Therefore, the OMC proposal has expressed the opinion that if this Tamshala drain becomes polluted, the residents of the area will cry for water!

OFFICE OF THE SUPERIOR POTTERU IRRIGATION I

At/Po-Balimela, Dist: N
e-mail id :- eepid@

QUOTATION CALL NO

No.32901/167/2026 - Sealed quotations
Tender Agencies/ Tour operators / Private
registration number, PAN card, last leg to
AGIAC deest driven vehicle or BPS-IV com
(Bans Gold) (single) having lifting capacity
which shall conform to the Terms & Conditions
official use of different offices of Potteru in
rent basis for the period from 04/2026 to 01

1. Date and time of availability of quote 12/03/2026 to 05/23/03/2026 (office only)
2. Date and time of receipt of quotation- 05/23/03/2026 (during office hours)
3. Date and time of opening of quotation A.M. in the office chamber of the Super Division, Balimela.
Please visit the office of the undersigned

ଖଣି ତମ୍ବ ଭୁଣ୍ଡୁଡ଼ି ଘରେ ମାଡ଼ିଗଲା କାଦୁଅପାଣି

କାଳିଆପାଣି, ୩୧/୮(ଇମିସ) : ଯାଜପୁର ଜିଲ୍ଲା ସୁକିନ୍ଦା ତହସିଲ ଅଧୀନ କାଳିଆପାଣି-କଅଁସ ପଞ୍ଚାୟତ ସୀମାନ୍ତ ଚିରିଗୁଡ଼ା ବସ୍ତିରେ ରବିବାର ସନ୍ଧ୍ୟାରେ ଘଟିଛି ଅଭାବନୀୟ ଘଟଣା। ବସ୍ତି କଡ଼ରେ ଥିବା ଖଣି ମାଟି ତମ୍ବ ଭୁଣ୍ଡୁଡ଼ି ପଡ଼ିବାରୁ ଏକାଧିକଙ୍କ ଘରେ କାଦୁଅପାଣି ପଶିଯାଇଛି। ଛାତିଏ ଡଳ ପର୍ଯ୍ୟନ୍ତ କାଦୁଅ ମାଡ଼ିଯିବାରୁ ଲୋକେ ଅକଥନୀୟ ହତହତା ହୋଇଛନ୍ତି। ମୂଷଳ ଧାରାରେ ବର୍ଷା ଲାଗି ରହିବାରୁ ସ୍ଥିତି ଅଣାୟତ୍ତ ହୋଇ ପଡ଼ିଥିବା ଜଣାପଡ଼ିଛି। ବସ୍ତିର ଗଗନ ବିହାରୀ ନାୟକ ଓ ବିନୋଦ ବାରିକଙ୍କ ଘରେ ଭିତରେ ଆଣ୍ଟୁଏ ଡଳରେ କାଦୁଅପାଣି ଲହଡ଼ି ମାରୁଥିବା ଅଭିଯୋଗ ହୋଇଛି। ବିନୋଦ ଘରୁ ବାହାରକୁ ଆସୁଥିବା ବେଳେ ଛାତିଏ ପର୍ଯ୍ୟନ୍ତ କାଦୁଅରେ ବୁଡ଼ିଯାଇଥିଲେ। ବସ୍ତି ପାଖରେ ଥିବା ଟ୍ରକ୍ ପାର୍କିଂୟାର୍ଡର



କଂକ୍ରିଟ୍ ଚଟାଣରେ ଫୁଟେ ବହଳରେ କାଦୁଅପାଣି ମାଡ଼ିଥିବା ବସ୍ତିବାସିନ୍ଦା କହିଛନ୍ତି। ଏଠାରୁ କଲଭର୍ଟ ବାଟରେ ନିଷ୍କାସିତ କାଦୁଅ ମିଶା ଦୂଷିତ ଜଳ ତଳମୁଣ୍ଡରେ ଥିବା ଲକ୍ଷ୍ମଣ ମୁଣ୍ଡା ଓ ଭୈରବ ବେହେରାଙ୍କ ଘର ଭିତରେ ପଶିଥିଲା। ଦୁଇ ପରିବାର ଲୋକଙ୍କ ଅବସ୍ଥା ଦୁର୍ବିଷହ ହୋଇପଡ଼ିଥିବା ସରପଞ୍ଚ ବିକାଶ କୁମାର ପାତ୍ର କହିଛନ୍ତି।

ENGLISH TRANSLATION OF ANNEXURE-9

A mine dump collapsed, sending mudslides into houses.

Kaliapani, 31/8 (EMIS): A landslide occurred on Sunday evening in the Kaliapani-Kansas

Panchayat border under Sukinda Tehsil of Jaipur district.

ଘଟଣା। The mud dam of a mine in Nawabani

Bakkar collapsed, injuring many people. The mud reached up to their chests and caused indescribable suffering. The situation

has become critical due to the continuous rain. It has been alleged that the mud water was knee-high inside the house of Gagan Bihari Nayak and Vinod Barik of the village. Vinod was drowned in mud up to his chest while coming out of the house. The truck parking yard near the village



The residents said that the mud was flowing on the concrete floor in a thick layer. From here, the contaminated water mixed with the mud drained from the culvert road entered the houses of Laxman Munda and Bhairav Behera located at the bottom. The condition of the two families is dire, said Sarpanch Vikas Kumar Patra.

VAKALATNAMA
BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, EASTERN
ZONE BENCH, KOLKATA

Original Application No.- of 2026

In re:

Kailash Chandra Nayak

APPLICANT

Versus

State Of Odisha & Ors

... **RESPONDENTS**

KNOW ALL to whom these present shall come I, Kailash Chandra Nayak, C/o- Chakradhar Nayak, aged about- 48 years, At/Po- Nuadihi, Dist- Jajpur, Pin- 755018. Applicant in the above mentioned matter, do hereby appoint (herein after called the advocate/s) to be my/our Advocate in the above noted case authorized him :-**Sankar Prasad Pani**, Advocates, Plot No 2132/4814 B, Nageswartangi, Bhubaneswar, 751002, Mob-no.9437279278, Email- sankarprasadpani@gmail.com Enrollment no. O-785/07 and **Ashutosh Padhy**, Enrollment no. O-1018/23.

To act, appear and plead in the above-noted case in this Court or in any other Court in which the same may be tried or heard and also in the appellate Court including High Court subject to payment of fees separately for each Court by me/ us. To sign, file verify and present pleadings, appeals cross objections or petitions for execution review, revision, withdrawal, compromise or other petitions or affidavits or other documents as may be deemed necessary or proper for the prosecution of the said case in all its stages. To file and take back documents to admit and/or deny the documents of opposite party.

To withdraw or compromise the said case or submit to arbitration any differences or disputes that may arise touching or in any manner relating to the said case. To take execution proceedings. The deposit, draw and receive money, cheques, cash and grant receipts thereof and to do all other acts and things which may be necessary to be done for the progress and in the course of the prosecution of the said case. To appoint and instruct any other Legal Practioner, authorizing him to exercise the power and authority hereby conferred upon the Advocate whenever he may think it to do so and to sign the Power of Attorney on our behalf.

And I/We the undersigned do hereby agree to ratify and confirm all acts done by the Advocate or his substitute in the matter as my/our own acts, as if done by me/us to all intents and purposes.

And I/We undertake that I / we or my /our duly authorized agent would appear in the Court on all hearings and will inform the Advocates for appearance when the case is called.

And I /we undersigned do hereby agree not to hold the advocate or his substitute responsible for the result of the said case. The adjournment costs whenever ordered by the Court shall be of the Advocate, which he shall receive and retain himself.

And I /we the undersigned do hereby agree that in the event of the whole or part of the fee agreed by me/us to be paid to the Advocate remaining unpaid he shall be entitled to withdraw from the prosecution of the said case until the same is paid up. The fee settled is only for the above case and above Court. I/We hereby agree that once the fee is paid. I /we will not be entitled for the refund of the same in any case whatsoever. If the case lasts for more than three years, the advocate shall be entitled for additional fee equivalent to half of the agreed fee for every addition three years or part thereof.

IN WITNESS WHEREOF I/We do hereunto set my /our hand to these presents the contents of which have been understood by me/us on this 8th day of March 2026.

Accepted subject to the terms of fees.


Advocate


Client