



M/S. HINDALCO INDUSTRIES LIMITED

**Executive Summary for Enhancement of
Production capacity by putting up Coating
Line, Cast House, Cold Rolling Mill and
Associated Machineries at Plot No. 2, MIDC,
Taloja AV, Dist. Raigad, Maharashtra**

1 EXECUTIVE SUMMARY

1.1 Identification of project proponent

Hindalco Industries Limited is a listed public company established on 15-December-1958. The company was founded by Mr. Ghanshyam Das Birla and is a subsidiary of the Aditya Birla Group.

Hindalco Industries Limited is the metals flagship company. With a consolidated turnover of US\$18.7 billion, Hindalco is an industry leader in aluminium and copper. Hindalco's acquisition of Aleris Corporation in April 2020, through its subsidiary Novelis Inc., has cemented the company's position as the world's largest flat-rolled products player and recycler of aluminium.

Hindalco's State-Of-Art copper facility comprises a world-class copper smelter and along with a captive jetty. The copper smelter is among Asia's largest custom smelters at a single location. In India, the company's aluminium units across the country encompass the gamut of operations from bauxite mining, alumina refining, coal mining, captive power plants, and aluminium smelting to downstream rolling, extrusions, and foils. Today, Hindalco ranks among the global aluminium majors as an integrated producer and has a footprint in 9 countries outside India. The Birla Copper unit produces copper cathodes and continuous cast copper rods, along with other by-products, including gold and silver. It is India's largest private producer of gold.

Hindalco has been accorded Star Trading House status in India. Its aluminium is accepted for delivery under the High-Grade Aluminium Contract on the London Metal Exchange (LME), while its copper quality is also registered on the LME with Grade A accreditation.

The industry was established (15.12.1958) before the EIA Notification 2006, so the application for the unit is considered as fresh EC application. Hindalco Industries Limited has obtained consent to operate from MPCB which is valid up to 31.01.2027. The certified compliance of which is also submitted on 18.04.2022 to Maharashtra Pollution Control Board (MPCB).

1.2 Identification of project

M/s. Hindalco Industries Limited, is located at Plot No. 2, MIDC, Taloja AV, Dist. Raigad, Maharashtra. The project is spread over an area of about 4,13,965 m². The existing capacity of the plant is 6600 MT/Month.

The project is termed under Schedule 3(a) – Metallurgical Industries (ferrous & non-ferrous) Category 'B', as per the EIA notification dated September 14, 2006 and its amendments.

Table 1-1: Production Details

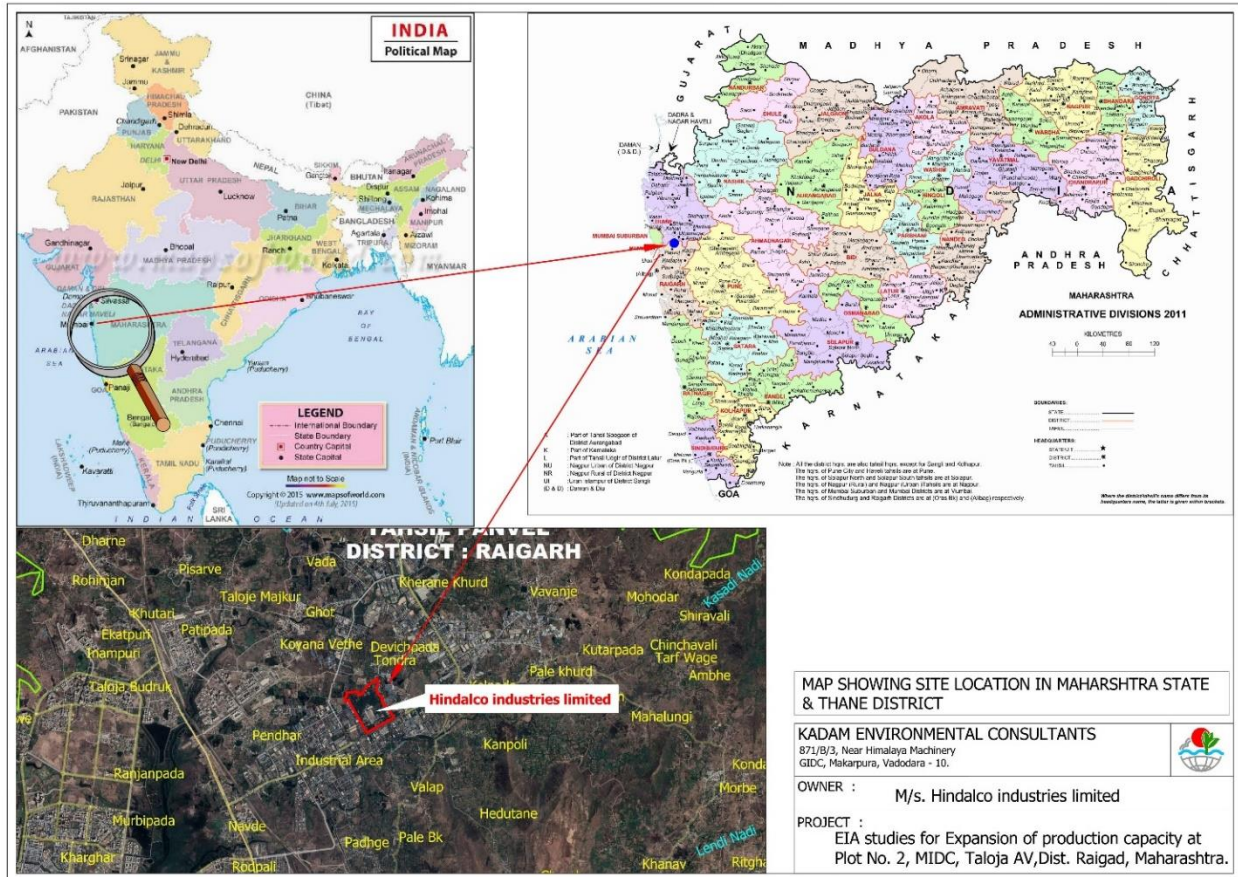
S. No.	Name of Product	Quantity in MT/Month		
		Existing	Proposed	Total
1	Aluminium sheet, coil, plate, molten metal and alloy pigs/ingots	6600	0	6600
2	Coated coil	0	2100	2100
Total (Aluminium sheet, coil, plate, molten metal and alloy pigs/ingots and Coated Coil)		6600	2100	8700

1.3 Importance of project to country and region

To facilitate domestic AC manufactures, substitute the import, and to support the government's "Atma-Nirbhar Bharat" policy, Hindalco Management has decided to produce coated AC fin stock indigenously. For this, Hindalco is looking forward to putting up a new Colour Coating line, Cast House, Cold Rolling Mill and associated Machineries at its Taloja manufacturing facility

1.3.1 Site Location Map

The site location map is shown as in below figure.



1.3.2 Important features of the Project

S. No	Details	Description
1	Nature	Metallurgical Industry (Secondary)
2	Size	Plot Area 4,13,965 m ²
3	Location	Plot No. 2, MIDC, Taloja AV, Dist. Raigad, Maharashtra
4	Cost of the project	INR 712 Crore

S. No	Details	Description				
		S. No.	Name of Product	Quantity in MT/Month		
Existing	Proposed			Total		
5	Proposed Capacity	1	Aluminium sheet, coil, plate, molten metal and alloy pigs/ingots	6600	0	6600
		2	Coated coil	0	2100	2100
		Total (Aluminium sheet, coil, plate, molten metal and alloy pigs/ingots and Coated Coil)		6600	2100	8700
6	Time Completion for Project	24 months after receipt of all statutory permissions				

1.4 Regulatory Framework

As per the Schedule attached to the EIA Notification 2006, as amended till date, the proposed project is covered under Project or Activity, 3(a), namely, Metallurgical Industries (ferrous & non-ferrous) Category 'B' under the said Notification, requiring prior Environment Clearance (EC) from the SEIAA, Maharashtra prior to commencement of construction at site.

The status of the progress of the EC application is provided in **Table 1-2**.

Table 1-2: Project Status

S. No.	Process	Date
1	Online Submission of Form-1 with proposed ToR and Prefeasibility Report for proposed project	25 th January 2022
2	Receipt of ToR	27 th January 2022
3	Baseline Monitoring	15 th Nov 2021 to 15 th Feb 2022
4	EIA report submission for Public hearing	May 2022

1.5 Estimated Cost of the Project

Total Cost of the expansion project is INR 712 Crore.

1.6 Water Consumption and Waste Water Generation

Water is available from MIDC water supply system.

Existing water requirement is 328 KLD and will be increased up to 625 after proposed expansion.

Existing capacity of ETP is 58 KLD which will be expanded up to 180 KLD after proposed expansion.

Existing capacity of STP: 45 KLD which will be expanded up to 55 KLD after proposed expansion.

Existing Domestic waste water is treated in the STP and then reused for Gardening. Existing industrial effluent generated from process is treated in ETP and discharge to CETP. After expansion 158 KLD industrial effluent will be treated in ETP followed by RO system, MEE & ATFD and treated water will be reused in process again.

1.7 Solid and Hazardous Waste Management Plan

TSDF Membership has been taken for collection, storage, treatment, transportation and ultimate disposal of Hazardous wastes at Transport, Storage and Disposal Facility (TSDF) and Common Hazardous Waste Incineration operated by Mumbai Waste Management Limited, Mumbai.

1.8 Power Requirement and Source

Power requirement shall be met from the Maharashtra State Electricity Distribution Company Limited (MSEDCL). The estimated maximum demand will be 7 MW. The existing power requirement is 15 MW. Total power requirement after proposed expansion will be 22 MW.

1.8.1 Manpower Requirement

Existing

Direct: 522 nos.

Indirect: 240 nos.

During Construction Phase:

Manpower requirement: 700 nos.

Additional During Operation Phase

Direct: 110 nos.

Indirect: 50 nos.

1.9 DESCRIPTION OF ENVIRONMENT

Primary data collected include:

- Ambient air quality
- Noise
- Ground Water
- Surface water quality
- Soil quality
- Land use pattern
- Flora and Fauna
- Socio economics

Secondary Data Collection

This includes review of secondary/published information on:

- Socio-economic profile
- Sensitive areas such as biosphere reserve, forests, sanctuaries, places of historical, archaeological, tourist importance, etc.

1.10 Study Area

The study area is considered 10 km around the proposed project located at Plot No. 2, MIDC, Taloja AV, Dist. Raigad, Maharashtra.

1.11 Study Period

The baseline data were collected from 15th Nov 2021 to 15th Feb 2022. Baseline data collection and analysis for all environmental parameters for proposed project was carried out by Goldfinch Engineering Systemstm Private Limited which is MoEF accredited Laboratory.

1.11.1 Ambient Air Quality

The Ambient Air Quality Monitoring was carried out for Post monsoon season 2020 (15th Nov 2021 to 15th February 2022). Ambient Quality Monitoring was taken at 8 different locations

Code No.	AAQM Station	Area Category	Dist. (km)	Dir.	Justification
AA01	At Site	Industrial	0.0	---	Core Area
AA02	Padgha	Residential	2.45	S	2nd Downwind
AA03	Mahanagar	Industrial	0.6	SE	1st Downwind
AA04	Koyana Velhe	Residential	2.3	NW	1st Upwind
AA05	Usatane	Residential	5.7	N	2nd Upwind
AA06	Kondale	Residential	6.2	E	Crosswind
AA07	Kharghar (Sector-18)	Residential	4.9	SW	3rd Downwind
AA08	Turbhe (MIDC area)	Industrial area	9.7	W	Crosswind

The average concentration of PM₁₀ is between 33-67.4 ug/m³. The results are within the specified norms of CPCB.

The average concentration of PM_{2.5} is between 20.8-39.7 ug/m³. The results are within the specified norms of CPCB.

The average concentration of SO_x is between 15-38.2 ug/m³.

The average concentration of NO_x is between 23-56.4 ug/m³.

The average concentration of CO is between 1.4-2.3 mg/m³.

AS, Hg and F is recorded below detection limit at all locations.

1.11.2 Noise Environment

The ambient noise quality monitoring was carried out for post monsoon season (Mid Nov 2021 to Mid Feb 2022).

Loc. Code	Location	Date	Category	Distance w.r.t site (km)	Direction (from site)
NL01	At Site Main gate	18.01.2022	Industrial	-	SE
NL02	At Site NE Corner	18.01.2022	Industrial	-	NE
NL03	At Site NW corner	18.01.2022	Industrial	-	NW

Loc. Code	Location	Date	Category	Distance w.r.t site (km)	Direction (from site)
NL04	At Site (Nr Utility Area)	18.01.2022	Industrial	-	-
NL05	At Site (West boundary)	18.01.2022	Industrial	-	W
NL06	Valap village	18.01.2022	Residential	0.8	S
NL07	Balaji Residency, Kanpoli	18.01.2022	Residential	1.2	ESE
NL08	Tondare village	18.01.2022	Residential	1.1	N

Noise Level Readings

Loc. Code	Location	CPCB Limits in dB (A)		Average Noise levels in dB (A)	
		Day Time	Night Time	Day Time	Night Time
NL01	At Site Main gate	75.0	70.0	60.3	54.6
NL02	At Site NE Corner	75.0	70.0	55.0	48.9
NL03	At Site NW corner	75.0	70.0	53.0	48.0
NL04	At Site (Nr Utility Area)	75.0	70.0	66.2	62.0
NL05	At Site (West boundary)	75.0	70.0	53.8	48.0
NL06	Valap village	55.0	45.0	54.5	41.2
NL07	Balaji Residency, Kanpoli	55.0	45.0	53.0	41.6
NL08	Tondare village	55.0	45.0	54.8	40.7

1.11.3 Drainage

The area at and around the project is basaltic flows. In the NE direction we find hillocks placed along the N-S direction. These hillocks give rise to drainages running westerly namely Taloja River, Kasadi River & Kaludri river. In the west, far off is Arabian Sea and at a short distance there is a creek. Southern boundary of plant is adjacent to 4th order drainage namely Kasadi River which dries out post winter. The drainage is observed as polluted through solid waste.

1.11.4 Ground Water

The ground water samples were collected in January 2022

Code No.	Location	Dist. (km)	Dir.
GW 1	Tondhare	1.2	NNE
GW 2	Gavdevipada	2	ESE
GW 3	Valap	0.94	SSE
GW 4	Ghot	2.35	NW
GW 5	Padgha	2.1	S
GW 6	Valavali	3.5	SSW
GW 7	Navade	3.3	SW
GW 8	Pendhar	2.3	W

Observations

- In order to have an idea about in variation in ground water quality with respect to space & depth, water samples have been collected and subjected to chemical analysis as per IS 10500 (2012).

- It is observed that TDS in groundwater is with the permissible limit and value ranging from 173 mg/l to 890 mg/l.
- Iron is detected in GW 1, GW 3, GW 4, GW 6 & GW 7 and with the acceptable limit.
- Zinc is detected in only sampling location i.e.GW 6
- Total and Faecal Coliform is detected in GW 2 and GW 8

1.11.5 Surface Water Environment

The surface water samples were collected in January 2022

Code No.	Location	Date	Dist. (km)	Dir.
SW 1	Kasardi River (Upstream)	17.11.2021	2.4	E
SW 2	Kalundre River (Upstream)	17.11.2021	5.6	SE
SW 3	Kalundre River (Downstream)	17.11.2021	8.3	S
SW 4	Taloje River (Upstream)	16.12.2021	2.8	NW
SW 5	Taloje River (Downstream)	16.12.2021	6.6	SW
SW 6	Owe dam water	16.12.2021	6.7	WNW
SW 7	Morbe Dam	16.12.2021	8.5	ENE
SW 8	Pond nr. Balaji Industrial Park	16.12.2021	0.9	N

Key Findings

The following inferences can be made based on the baseline quality monitoring of surface water:

- All samples were analyzed for parameters as per IS 2296-1982 with respect to Inland Classification with respect to use of water in five classes A, B,C,D and E as per CPCB guidelines
- Samples of surface water collected from River (SW01 & SW02), dam water sample SW06 and pond sample SW08 fall into category B- "Outdoor bathing (organised)"
- The samples collected from kalundre river upstream and downstream fall into Class C – "Drinking water source with conventional treatment followed by disinfection" and Class D "Propagation of wildlife, fisheries" because of high TDS and Eletrical Conductivity.
- Sample collected from Taloje River SW05 fall into class E "Irrigation, industrial cooling, controlled waste disposal" because of high TDS, Electrical conductivity and Sulphates. There is Saline water influence into the water.
- Sample no. SW0-07 from Morbe dam falls into Class A- "Drinking water source without conventional treatment but after disinfection"

1.11.6 Soil

The soil samples were collected in January 2022

Code No.	Location	Dist. (km)	Dir.
ST 1	Tondhare	1.2	NNE
ST 2	Gavdevipada	2	ESE
ST 3	Valap	0.94	SSE
ST 4	Ghot	2.35	NW
ST 5	Padgha	2.1	S
ST 6	Valavali	3.5	SSW
ST 7	Navade	3.3	SW

Code No.	Location	Dist. (km)	Dir.
ST 8	Pendhar	2.3	W

Observations

The analysis of physico-chemical properties of soil samples collected from site and surrounding area indicated that porosity ranged from 45 - 56 % and WHC varied from 42.69 – 49.97 %, while permeability ranged from 17.93– 39.60 mm/hr. High WHC and porosity is on account of loamy sand to loam texture of soils.

The CEC ranged from 18.97 – 24.80 meq/100 g soil, which is a moderate looking to the texture of soils. The EC (0.086– 1.082 dS/m) was below prescribed limit of <0.80 dS/m in all the samples except one and ESP (2.24 to 2.66) was well within the safe limit of <15.0. The pH ranged from 6.95 – 7.78, indicating that soils are normal (pH 6.5 to 7.8). Among water soluble cations predominance of Ca (40 to 120 mg/kg) was seen followed by Mg (24 to 120 mg/kg), Na (34 to 102v mg/kg) and K (1 to 8 mg/kg) The soil fertility data indicate that organic carbon ranged from 0.30 - 0.52 %, which indicates that nitrogen status is low (<0.50 % OC) to medium (0.50 to 0.75 % OC). The available P (17.4 – 44.4 kg/ha) was in the low (<28 kg/ha) to medium (28 to 56 kg/ha) category, while available potassium (73.9 – 678.5 kg/ha) was in low (<140 kg/ha) to high (>280 kg/ha) category.

1.11.7 Biological Environment

Wild Life (Protection) Act, 1972, amended on 17th January 2003, is an Act to provide for the protection of wild animals, birds and plants and for matters connected therewith or ancillary or incidental thereto with a view to ensuring the ecological and environmental security of the country.

Some of the sighted fauna was given protection by the Indian Wild Life (Protection) Act, 1972 by including them in different schedules. Among the birds in the study area, Pea fowl (*Pavo cristatus*), is included in schedule I. of Wild life protection Act (1972), while many other birds are included in schedule IV.

Among the reptiles, Common rat snake (*Ptyas mucosus*), Indian Cobra (*Naja naja*), are provided protection as per Schedule-II of Wild life protection act, (1972)

Among mammals; *Lepus nigricollis* (Black-naped hare) are schedule –IV while *Muntiacus muntjak* (Barking deer) is schedule- III animal of Wild Life Protection act 1972.

List of Reserve forest and distance from site

Type of Forest	Distance in KM	Direction	Remarks
Reserve Forest	10.38	SE	Dominated by <i>Terminalia tomentosa</i> , <i>Garuga pinnara</i> , <i>Terminalia paniculata</i> , <i>Tectona grandis</i> , <i>salmalia malabérica</i> , <i>Termanalia belerica</i> , <i>Albizia lebbek</i> , <i>Dalbergia latifolia</i>
Reserve Forest	4.86	NE	
Reserve Forest	5.51	WNW	
Reserve Forest	8.16	WSW	
Reserve Forest	10	SW	
Reserve Forest	7.5	ESE	

1.12 Anticipated Environmental Impacts And Mitigation Measures

1.12.1 Ambient Air

- The maximum 24 hourly average GLC's for PM is observed to be 12.8 µg/m³. These GLC's are expected to occur at a distance of 500 m from the source towards the W direction.

- The maximum 24 hourly average GLC's for SO_x is observed to be 1.86 µg/m³. These GLC's are expected to occur at a distance of 500 m from the source towards the SE direction.
- The maximum 24 hourly average GLC's for NO_x is observed to be 20.79 µg/m³. These GLC's are expected to occur at a distance of 500 m from the source towards the SE direction.

Mitigation Measures

Mitigation measures for air quality impacts are:

- It shall be ensured that both gasoline and diesel-powered construction machines and vehicles are properly maintained to minimize smoke in the exhaust emissions
- Concentration of SO₂, NO_x, HC and CO may slightly increase due to increased vehicular traffic. The impact of such activities would be temporary and restricted to the constructed phase.
- The approach roads will be paved or tarred and vehicles will be kept in good order to minimize the dust pollution due to vehicular traffic.
- All vehicles delivering construction materials to the site shall be covered with tarpaulin to avoid spillage of materials and maintain cleanliness of the roads
- Regular water sprinkling will be done for dust suppression at the 'kaccha' transportation road and construction site.
- Ensuring the availability of valid Pollution Under Control Certificates (PUCC) for all vehicles used at site

With the emission factor and the phased manner in which construction activity is to be carried out, it is likely that increase in PM levels due to construction would mainly be confined to the project site. Thus, it is inferred that minor negative impact within a few 100 meters from the source within the site would occur on the ambient air quality under the worst conditions, which are mitigated by implementing environmental management plan. However, no significant impacts are expected on the overall ambient air quality due to construction activities at the sensitive receptors outside the project premises.

1.12.2 Noise Environment

During construction phase: due to vehicle movements during site preparation, excavation work, civil work, heavy fabrication work, disposal of construction waste, due to piling work and;

During operation phase: due to operation of DG set, transportation of raw materials, start up and shutdown activities, etc. will lead to noise pollution.

Mitigation Measures

- Acoustic Enclosures on all major equipment in the plant will have to be provided for noise attenuation
- Workers should also be provided with suitable personal protective equipment (PPE) such as earmuffs and earplugs.
- Rotation of workers in the high noise area
- High noise generating areas would be identified and tags marked.
- Green belt will be developed to reduce noise.
- Vehicle trips to be minimized to the extent possible
- Acoustic mufflers / enclosures to be provided in large engines/machinery.
- Equipment to be maintained in good working order.
- Implement good working practices (equipment selection) to minimize noise and reduce its impacts on human health (earmuffs, safe distances, and enclosures).
- Noise to be monitored in ambient air within the premises.

- All equipment operated within specified design parameters.

1.12.3 Water Environment

Impact Identification

Ground Water

The wastewater generated from the domestic use will be treated in STP and used for gardening/green belt development. Other effluents from the proposed plant will be treated in ETP consisting RO and MEE. Treated water will be recycled and reused in plant premises. There will be no impact on ground water resources and quality.

Surface Water

Water will be sourced from MIDC and the treated effluent will be recycled and reused in plant premises. Separate drainage around the process area shall separate the rainwater from the storm water drain and would ensure no intermixing. Thus impact over the surface water quality will be negligible.

Mitigation Measures

- Fresh water demand will be optimized by recycling and reuse of treated water through ZLD system.
- For greenbelt, development of native species will be done to optimize the water consumption.
- Use of spill control measures and PPE's will be used while handling the chemicals as well as during the treatment of liquid and solid waste.
- Separate drainage for storm water and effluent will be provided to avoid any contamination of surface water sources.
- Chemical and fuel storage, handling areas will be provided with proper bunds to avoid runoff contamination during rainy season

1.12.4 Soil Environment

Based on the impacting activities and their impacts over the soil quality, it has been observed that the soil quality get impacted by activities like excavation work, transportation and storage of chemicals.

Mitigation Measures

- During excavation there may increase in soil erosion, level the soil by cutting & filling
- Top soil loss due to excavation, store the soil for landscape
- Spillage of liquid and solid hazardous wastes may affect soil quality, disposed it off at the earmarked site

1.12.5 Biological Environment

Impact on Flora

- Air emissions levels during the operational phase may impact on sensitive vegetation.
- The increase in vehicular movement due to the expansion might increase the risk of introducing obnoxious or exotic species.

Impact on Fauna

- The fauna might be impacted due to noise generated during the operational phase.

- The increase in human activity may also pose a threat fauna in the nearby areas.
- The air emissions might reduce the abundance of sensitive species like butterflies and birds.

Mitigation Measures

- State of art pollution control technologies have been selected to keep the emission low, hence insignificant impact on the nearby vegetation.
- The fugitive dust generated during operation phases shall be controlled by appropriate APCM.
- To minimize the impact due to noise generated during the operational phase clear instruction will be given to the vehicles entering in the project site not to use pressure horns during night time as it may distract the fauna or animals near the sit
- Since the proposed project is expansion and most of facilities will be within the existing plant area, the overall impacts are predicted will be insignificant.

1.13 Environment Monitoring Programme

Various environmental parameter to be monitored area given in table below:

Table 1-3: Environmental Monitoring

S. No.	Parameters	Frequency	Location
1	Ambient air monitoring of parameters specified by SPCB consents from time to time (As per NAAQS)	Once in a month	At 4 location
2	Stack monitoring of parameters specified by SPCB consents from time to time	once in a month	All flue gas stack and process vent
3	Maintaining record of water consumption and wastewater generation	Daily	Near fresh water consumption tank and treated effluent collection tank
4	Monitoring of industrial and Domestic effluent of parameters	External once in a month	Inlet and out let of ETP and STP
5	Ambient Noise level	Once in months	2 locations at Site
6	Work Zone Noise monitoring	Once in a three months	5 locations at site
7	Maintaining record of Hazardous Waste Generation, Storage and Disposal	Regular. Maintain hazardous waste generation, disposal and stock data as and when generated and disposed.	Hazardous waste storage facility
8	Monitoring of Greenbelt	Regular	At site
9	Occupational Health & Safety (OHS)	Regular	At site
		As per para 6.2.8, above	At OHC
10	Readiness for Emergency Response	Once in a month	Various location in mining area
11	Efficiency Monitoring of Pollution Control Equipments	Once in six months	At Site

1.14 Environment Management Cell

Hindalco Industries Ltd. will create a team consisting of officers from various departments to co-ordinate the activities concerned with management and implementation of the environmental control measures. This team will undertake the activity of monitoring the stack emissions, ambient air quality, noise level etc. either

departmentally or by appointing external agencies wherever necessary. Regular monitoring of environmental parameters will be carried out to find out any deterioration in environmental quality and also to take corrective steps, if required, through respective internal departments.

An environment management cell shall be created which shall perform the following functions:

- Achieve objectives of the 'Environment Protection Policy' of the management.
- Collect information from regular monitoring and create a database.
- Analyze the data and decide thrust area.
- Based on the data collected, decide target for each thrust area.
- Carry out 'Projects' in each thrust area to arrive at practical solutions to environmental problems.
- Discuss the reports of study on environment and disseminate the information.
- Work out 'Action plan' for implementation of the recommendations made in the reports.
- Prepare Management Information System (MIS) reports and budget for environment management program.

An internal Monthly Compliance report for Hindalco Industries Limited shall be prepared and submitted to the Top Management. Environmental violations, if any, are reported to the Top Management in this report.

1.15 Environment Management Plan

The EMP is prepared with a view to facilitate effective environmental management of the project in general and implementation of the mitigation measures in particular. The EMP describes a delivery mechanism for implementing the suggested mitigation measures aimed at addressing the potential adverse impacts and to introduce standards of good practice to be adopted for all project works. For each stage of the program, the EMP lists all the administrative aspects necessary to ensure effective implementation of the mitigation measures. It also lists the parameters which needs to be monitored to ensure effective implementation.

The expenditure to be incurred on environment matters with approximate total capital cost of 3554.7 Lakhs per Annum and Recurring 230.6 Lakhs per Annum.

1.16 Social Management Plan

The social management plan proposes to improve the quality of life of inhabitants of potentially affected villages directly.

The goal is "a pollution free area with improved quality of life and empowered community " and the three key pillars on which this would be developed are – social, health, infrastructure

Improvements with efforts on minimal disruptions present life style and any ensuing negative impacts.

Social – Awareness on project benefits, gender empowerment, increases livelihood opportunities during implementation of technical and social remediation plans and generating community participation.

Health - Awareness on health, hygiene, environmental sanitation and generic issues related to improving quality of life with specific emphasis on potable drinking water, HIV/AIDS/STD preventive measures.

Infrastructure - Developing prioritized infrastructure facilities which are related to the continuum of project benefits to the local communities and area as a whole.

Implementation Arrangement

The social management plan and its activities will be implemented by NGO under the close supervision and monitoring of the CSR division of the company or any consultant appointed by the company.

The final budget for CER/ESC/CSR activities shall be finalized based on the public hearing output.