Proposed Terms of Reference (ToR) of Environmental Impact Assessment (EIA) of the Project

In consideration to the screening category A(3a) of the project, concept of iron ore grinding & desliming project along with slurry pipeline and the prevailing site features within Keonjhar district of Odisha, the ToR of EIA are proposed as follows for one (1) dry season (90 days only).

1. Baseline data generation

1.1 Site-specific Micro-Meteorology

Continuous recording of hourly micro-meteorological parameters of the study area (10 km aerial coverage of the project site) comprising temperature, relative humidity, cloud cover, rainfall, wind speed, wind direction during the three (3) months.

1.2 Ambient Air Quality (AAQ)

a) Recording of AAQ in respect of PM_{10}, $PM_{2.5}$, SO_2, NOx, CO, NH_3 and O_3 within the study area for twice a week on 24 hrs basis for a total duration of 12 weeks. The number of stations will be eight (8) covering downwind and upwind directions depending on wind frequency and availability of suitable site.

b) Determination of the presence of poly-aromatic hydrocarbons (PAH) substances by benzene soluble fractions of the PM_{10} collected. Also, determination of heavy metals in PM_{10}.

1.3 Surface Water Quality

Monitoring of prevailing water quality of nearest major surface streams within the study area monthly once for one season (90 days) at eight (8) locations. The parameters to be recorded would be physico-chemical and biological covering 28/30 parameters for ascertaining the baseline status. The locations of sampling will include 60 m upstream and/or 60 m downstream of effluent outfall of the plant, if any.

1.4 Ground Water Quality

Determination of ground water quality of the study area from the dug wells, tube wells at eight (8) different locations. The frequency of monitoring will be monthly once for one season (90 days). The parameters to be recorded are as per IS: 10500.

1.5 Soil Quality

At the project site and its surroundings within the study area, the top soil quality will be recorded in respect of physico-chemical, nutrients level and micro-biological characteristics. The soil will be monitored for once at three (3) different locations during the study period.

1.6 Ambient Noise Level

The ambient noise level or Leq for day time and night time will be recorded within the study area at ten (10) locations for once.

1.7 Ground Water Hydrology

The geo-hydrological condition of the study area will be ascertained in respect of hydro-meteorological condition, ground water quality, ground water yield, depth of ground water with water table maps, drainage pattern etc. based on field investigation during pre & post monsoon period.

1.8 Terrestrial Ecological Status

The terrestrial ecological status of the study are will be ascertained in respect of vascular plant species, endangered species, crops pattern and faunal status etc.

1.9 Aquatic Ecological Status

The aquatic ecological status of the surface water bodies within the study area will be determined in terms of nutrient level, plankton, primary productivity, aquatic fauna etc.

1.10 Landuse Study

Based on recent times satellite imageries of the study area made available by NRSC-Hyderabad, Survey of India's Topomaps and ground validation, a thematic landuse of the study area will be prepared to ascertain the present baseline of landuse.

1.11 Socio-economic Status

For ascertaining the prevailing socio-economic status, a profile on socio-economic conditions of the people living in the study area will be prepared based on authentic secondary data source and sample data recorded.

2. Impact Assessment

2.1 Air quality modelling for emissions of specific pollutants to the air.

2.2 Wastewater inventorisation, and its treatment.

2.3 Inventorisation of plant solid wastes and utilisation, disposal and storage.

2.4 Management measures in respect of pollution monitoring, associated environmental risks and emergency preparedness plan.

2.5 Mitigation measures to minimise the adverse environmental impacts.

2.6 Greenbelt development plan and scheme for rainwater harvesting.

2.7 Compliance with the CREP guidelines.