

CRITIQUE AND TECHNICAL ANALYSIS

EIA OF EXPANSION OF SPONGE IRON PLANT

**RAIGARH ISPAT & POWER PRIVATE LIMITED, AT RAIGARH DISTRICT,
CHHATTISGARH**

Prepared by:

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Background of the report

Raigarh Ispat & Power Pvt. Ltd. (RIPPL), is planning to expand its present 2x100 TPD sponge iron plant in Village Delari at Raigarh district in Chattisgarh to 2x100 TPD sponge iron, 300 TPD of billets, 300 TPD of rolled products, 100 TPD of ferro alloys, 1 MTPA of coal washery and 54 MW of power plant.

This report is a technical evaluation of the Rapid Environment Impact Assessment (EIA) document submitted by RIPPL as part of the clearance process. The EIA has been conducted by the Hyderabad based Pioneer Enviro Laboratories & Consultants Pvt. Ltd.

About CSE

Centre for Science and Environment (CSE) is an independent, public interest research and advocacy organisation, which aims to increase public awareness on science, technology, environment and development. The Centre was started in 1980.

For more than two decades, CSE has been creating awareness about the environmental challenges facing our nation. It has been:

- Searching for solutions that people and communities can implement themselves,
- Challenging the country to confront its problems,
- Inspiring it to take action and,
- Pushing the government to create frameworks for people and communities to act on their own.

Critique of EIA

The EIA report prepared by M/s Pioneer Enviro Laboratories & Consultants Private Limited is superficial in nature and the proponent needs to clarify the following points in order to ensure maximum benefits to local people and preserve environment.

(1) Presence of extensive reserved forest in the vicinity

On page 9 of 147, the EIA report openly admits that a number of reserved forests are present in the vicinity of the plant. These include Taraimal reserved forest, 3 km from the site, Rabo reserved forest, again 3 km from the site and Urdana reserved forest at a distance of 2 km from the site. These forests are spread in the

North, West and Southwest direction of the site. The presence and now the expansion of an industrial unit in such a sensitive location will prove detrimental to the forests in the area.

A reserved forest in India is a forest accorded a certain degree of protection as first introduced under the Indian Forest Act 1927. It is essentially an area of land over which the Government holds proprietary rights. For any area that has been designated a reserved forest, no one will be allowed to acquire any right over such land except under succession or a grant by the Government. Thus it is clear that such area is considered sensitive and a need to keep it free from all interference is recognised. The presence of reserved forests very close to the sponge iron plant is hence an issue that needs to be looked at more closely. However, in the EIA of the expansion project, no mention of the sensitivity of the region or a study to address this issue has been mentioned. There has also been no assessment of the impact of this proposed expansion on the reserved forests. **Such an important and sensitive issue should not be ignored and the project proponent needs to clarify the same.**

(2) Cumulative industrial pollution load

18 steel plants are present within 25 km radius as stated on page 16 of 147 of the EIA report. Thus the expansion of the plant will increase the already high industrial pollution load. **The same has not been taken into account in the EIA report.**

(3) Air quality and pollution

The EIA report includes ambient air quality sampling done at 8 monitoring stations – Delari, Jamadbari, Gaurmuri, Taraimal, Gerwani, Saraipali, Punjipathra and the plant site (page 40 of 147). The area is considered rural for the purpose. The parameters that were monitored at each of these are Respirable Suspended Particulate Matter (RSPM), Suspended Particulate Matter (SPM), SO₂ and NO_x. The sampling was done 2 days per week for 3 months in the winter monsoon season – December to February. The average RSPM level is 40.9 µg/m³, SPM is 133.6 µg/m³, SO₂ is 9.8 µg/m³ and NO_x is 13.5 µg/m³. The very fact that the

sampling has been done during the monsoon season means that the data obtained will be lesser than actual since during rains the ambient air quality tends to improve due to suppression effect. Thus the **project proponent needs to do proper monitoring of ambient air quality during non-monsoon winter months**. The EIA report states on page 15 of 147 that the nearest human habitation is at a distance of 1.2 km, which in the map can be recognised as village Delari. The village has a population of 700. The emissions if not controlled appropriately can be very harmful to the population. Not only this, since the transportation of raw materials is going to be in trucks through roads, the dust emissions will be an important component that needs to be dealt with. **The project proponent has not talked about any mitigation measures for the transport related pollution.**

Also, since the wind direction in the region is predominant in the Northeast, Northwest, Southwest and Southeast direction, the ambient air quality monitoring stations should ideally be set up in the opposite directions that is in the Southwest, Southeast, Northeast and the Northwest respectively. Out of the 8 monitoring stations, 2 each are situated in the Southeast, Northeast and the Northwest direction while 1 is in the north direction (Page 40 of 147). As can be seen in the windrose diagram of the site on page 37 of 147 of the EIA, the most predominant wind direction is the Northeast thus **a monitoring station in the Southwest direction is of utmost importance that has not been considered**. There is a need for the **project proponent to fill the gap of this irregularity to be able to present the true picture of air quality data in the region.**

(4) Land use pattern

On page 61 of 147, the EIA report states that the land use pattern of the area within 10 km radius is as follows:

Un-irrigated area	-	31.8 %
Open and wasteland	-	26.3 %
Forest land	-	20.2 %
Irrigated area	-	19.5 %

Built up area - 2.2 %

The EIA report on page 15 of 147 has also stated that the land is industrial area while the same does not come out through the land use pattern arrangement given.

(5) Biodiversity

The area is rich in flora and fauna marking its richness in biodiversity as given on page 67 of 147. The area has trees like mango, sal, dhaura, soja, mahua, bija, tendu, char, amla, black berry, etc. A number of animals are also found in the region like Felis Pardus (leopard), hyaena, bisons, buffalo, sambhars, nilgai, etc. Snakes such as cobras, vipers, kraits, rat snake, buff stripes keel back, wolf snakes, etc., are also found in plenty. The area boasts of aquatic fauna as well with fishes like catla, labeo rohita, catfish, mural, sol, tangra, etc., being present. Birds like crow, bulbul, nilkanth, great horned owl, nightjars, weaverbird, swifts, duskey horned owls, pappeha, and etc., mark their presence in the region. Once destroyed, the biodiversity of an area cannot be restored hence **the project proponent needs to assess the effect of this proposed expansion on the biodiversity in the region, which has not been included in the EIA.**

(6) Water use and source

The proposed plant proposes to meet its water requirement from the Delari Jharma Nallah in the region. The water requirement of the proposed expansion as given on page 85 of 147 of the EIA is 4515 m³/day. This includes water required for cooling, power plant, rolling mill, ferro alloys plant, etc. A surface water quality analysis of the nallah has been carried out at 60 meter upstream and 60 meter downstream covering characteristics like pH, turbidity, TDS, hardness, COD, etc. However, the most important aspect of the nallah that is its flow has not been mentioned. This makes it difficult to assess whether the nallah will be able to sustain the expansion plan water requirement or not. **There is a need for the project proponent to carry out proper flow based study of the nallah to avoid producing water stress condition.** Water samples were also collected from 8 different bore wells in various villages to assess the ground water condition

in the area. These are Delari, Gerwani, Taraimal, Saraipali, Gaurmuri, Jamadbari, Punjipathra and the plant site. **These again cannot be justified as the preferred water sampling locations since the direction of the nallah flow has also not been mentioned.** Another problem with the water use is that **the EIA does not mention any competing users of the water from this nallah nor does it say as to how the water will be taken for use in the plant. These points need to be clarified by the project proponent.**

(7) Environmental Management Plan

On page 23 of 147, the EIA report states that char will be utilised for power generation in the FBC boiler. However, no indication of the amount of char produced or that utilised in the boiler has been mentioned imparting a very vague status to the measure. Similarly, page 33 of 147 of the EIA states that the slag will be used in road construction and the ash and dust from bag filters will be given to brick manufacturers/cement plants. Wastes from coal washery will be given to power plants. Yet again there is no mention of how much slag/ash/dust will be generated and how much will be used for the respective mitigation measures. There is no mention of who these brick manufacturers/cement plants/power plants are and what is the mode of this transfer. **All these aspects impart vagueness to the EMP. The project proponent needs to be more concrete in giving mitigation measures to remove any doubts.**

(8) Employment generation

The project as on page 120 of 147 proposes to offer employment to about 150 people during construction phase and 100 people during operation of the expansion phase. There is no data available on the number of local people employed by the plant at present. According to the map given on page 11 of 147 of the EIA report, close to 8 villages are present in the vicinity of the plant with a

total population of more than 3000 people¹ and the **employment being given is miniscule in comparison to the population.**

¹ <http://ourvillageindia.org/Place.aspx?PID=143649>