

CRITIQUE AND TECHNICAL ANALYSIS

EIA OF SPONGE IRON PLANT

**SINGHAL ENERGY PRIVATE LIMITED, AT RAIGARH DISTRICT,
CHHATTISGARH**

Prepared by:

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Background of the report

Singhal Energy Pvt. Ltd. is planning to set up a plant to produce sponge iron, ferro alloys and power in Village Taraimal, Tamnagar Tehsil at Raigarh district in Chattisgarh. The proposal is to set up 4x175 TPD (231000 TPA) sponge iron units, 2x9 MVA (30000 TPA) ferro alloy units and 16+270 MW power generation units (WHRB+AFBC).

This report is a technical evaluation of the Environment Impact Assessment (EIA) document submitted by SEPL 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/protected forest in the vicinity

On page 2-2, the EIA report openly admits that a number of reserved/protected forests are present in the vicinity of the plant. These include Taraimal reserved forest (RF), 0.6 km from the site, Rabo RF, 8.5 km from the site, Urdana RF 5.2

km from the site, Barkachhar RF 4.5 km, Maghat protected forest (PF) 6.5 km, Samaruma RF 6.0 km, Pajhar PF 4.5 km and Kaharidungri PF at a distance of 5.5 km from the site. These forests are spread in the north, west, southwest, northeast and northwest direction of the site. This clearly proves that the proposed plant is surrounded by reserved/protected forests. The presence of an industrial unit in such a sensitive location will prove detrimental to the forests in the area.

A reserved/protected 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/protected 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 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 project on the forests. **Such an important and sensitive issue should not be ignored and the project proponent needs to assess the impact.**

(2) Land acquisition

EIA states on page 1-5, that the total land required for the project is about 109.35 hectares. 81 hectares of land out of this is forestland and the rest 28.35 hectares are private land. The diversion of forestland for industrial purpose is to be avoided hence **there is a need for the project proponent to look for an alternative site.** In contrast, they **should also create and present a comprehensive plan to ensure minimal or no impact on the forests in the region.** Page 2-3 of the report, states that the 28.35 hectares of private land has already been acquired. But there is no mention of the compensation that has been paid for acquiring the said amount of land. **The project proponent needs to clarify the same and**

ensure adequate compensation to the people from whom land has been acquired. Also, on page 7-24, the EIA states that the company will provide employment to all land oustees as per the government norms, which is a very vague statement. **The project proponent needs to give the exact number of these oustees and the kind and duration of employment that will be provided.**

(3) Cumulative industrial pollution load

14 steel plants and thermal power plants are present within 25 km radius as stated on page 2-3 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.**

(4) Air quality and pollution

The EIA report includes ambient air quality sampling done at 8 monitoring stations – Jamadbari, Gaurmuri, Taraimal, Gerwani, Ratrot, Punjipathra, Ujalpur and the plant site (page 3-5). 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 – October to December. The average RSPM level is 43.3 µg/m³, SPM is 132.5 µg/m³, SO₂ is 10.2 µg/m³ and NO_x is 12.4 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 1-5 that the nearest human habitation is at a distance of 1.5 km, which in the map can be recognised as village Taraimal. The village has a population of about 750. The emissions if not controlled appropriately can be very harmful to the population.

Also, since the wind direction in the region is predominant in the Northeast, Northwest and Southwest direction, the ambient air quality monitoring stations should ideally be set up in the opposite directions that is in the Southwest, Southeast and the Northeast respectively. Out of the 8 air quality monitoring stations, 3 are situated in the Southeast, 2 in the Northwest, and 1 each in northeast and southwest direction (Page 3-5). As can be seen in the windrose diagram of the site on page 3-3 of the EIA, the most predominant wind direction is the Northeast thus **most monitoring stations 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 3-28, the EIA report states that the land use pattern of the area within 10 km radius is as follows:

Un-irrigated area	-	18.8 %
Open and wasteland	-	4.7 %
Forest land	-	52.2 %
Irrigated area	-	18.5 %
Built up area	-	5.8 %

This exhibits the predominance of forestland in the region. **The project proponent needs to give appropriate measures to ensure and explain the land use pattern post the plant setup.**

(5) Biodiversity

The area is rich in flora and fauna marking its richness in biodiversity as given on page 3-34. 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, porcupine, wild boar, slot bear, 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, sarus crane, 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 project 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 Gerwani Nallah in the region, which is at a distance of about 2 km from the site. The water requirement of the proposed expansion as given on page 3-28 of the EIA is 21329 m³/day. 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 the region to assess the ground water condition in the area. These are Gerwani, Taraimal, Gaurmuri, Jamadbari, Punjipathra, Ratrot, Ujalpur 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

The total capital investment of the project is 977 crores and only 60 crores out of this total is set aside for environmental protection/management. Thus only 0.06

per cent of the total capital investment is put aside for the environmental concerns displaying the company's perspective on the same.

On page 2-14, 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, the report states that the ash and dust from bag filters will be given to brick manufacturers/cement plants. Yet again there is no mention of how much 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 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 1-7 proposes to offer employment to about 1000 people during construction phase and 400 people during operation. According to the EIA report as given on page 3-37, about 29000 people are populating the study area and the **employment being given is miniscule in comparison to the population.**

(9) Poorly drawn up EIA report

The same consultant has done the EIA report for another sponge iron unit that is going for expansion in the region. The similarity in the 2 reports is uncanny. The entire section on air pollution measures, noise pollution measures and the impact assessment chapter seems like a copy paste job.