BEFORE THE NATIONAL GREEN TRIBUNAL (SZ) CHENNAI

O.A. No.66 of 2017

Vallapureddy Gari Govardhan Reddy
S/o. Vallapureddy Gari Ramakrishna Reddy
H.No.1-6B, Kondajuturu Village, Panyam Mandal,
Polur, Kurnool District
Andhra Pradesh, India – 518 511 & 5 others

...Applicants

-Vs-

The Union of India
Rep. by its Secretary to the Government
The Ministry of Environment, Forests and
Climate change, Paaryavaran Bhavan
Jor BaghNew Delhi, India & 3 others

...Respondents

ADDITIONAL WRITTEN SUBMISSION FILED BY THE 4th RESPONDENT

1. The 4th respondent humbly submits this additional written submission as directed by this Hon'ble Tribunal against the specific averment whether the process carrying out by the 4th respondent to produce Precipitated Calcium Carbonate and Nano Precipitate Calcium Carbonate from Limestone falls under schedule 2(b) – Mineral Beneficiation of the EIA Notification, 2006. The 4th respondent further submits that this additional written submission is to be treated as part and parcel of the written submission filed by the 4th respondent.

2. The 4th respondent submits that the process of mineral beneficiation is a separate process that needs separate industry as well as plants that deals with concentration of ore and removal of gangue and tailings from the mineral ore and thus beneficiating it and adding value to the ore for further processing.

3. The 4th respondent submits that in the mining industry or extractive metallurgy, beneficiation is any process that improves (benefits) the economic value of the ore by removing the gangue minerals, which results in a higher grade product (ore concentrate) and a waste stream (tailings).

4. The 4th respondent submits that it is an upgrading process to achieve uniform quality, size and maximum tenor ore through the removal of less valuable material. Beneficiation benefits the costs of freight, handling, and extraction (smelting) reduce and the loss of metal through slag. Usually carried out at the mine site, it saves time and costs and allows selective, profitable bulk mining.

5. The 4th respondent submits that in the mineral beneficiation process, the R.O.M ore (Run-off Mine ore) or simply raw ore directly extracted from the mine site is fed into the beneficiation plant that undergoes a series of screening and beneficiating process that removes unwanted materials and thus increases the concentration of valuable materials in the ore. Once the ore is beneficiated and is valuable/profitable to sell the

ore, the industries sell that valuable ore to other industries that deals with extraction of the valuable materials such as Iron, Gold, Copper, Coal, Diamond, etc.

6. The 4th respondent submits that the Ministry of Environment & Forests, Government of India, New Delhi has assigned the Administrative Staff College of India (ASCI), Hyderabad to bring out and draft specific manuals for 10 various sectors in EIA Notification that includes Mineral Beneficiation. The manual explains Mineral Beneficiation in Page 1 as follows:

> **"During mining, metal-bearing deposit, called ore, is extracted from underground or opencast mines. Metal concentrations in ore vary greatly. In order to upgrade the metal concentration, the ores are beneficiated for further use in industries. Mining and beneficiation can have a variety of environmental effects. The most visible effect will be disturbance of land and water regime due to waste disposal. The beneficiation process also includes ore transport, ore handling, crushing etc. Consequently, the environmental impacts of mineral beneficiation on the surroundings are considerable. Many times, the beneficiation plants are located in the mine lease area."**

7. The 4th respondent submits that the manual in Page 2 states as follows:

> **Mineral beneficiation is of great economic importance to the mining industry and the country. The continual growth of infrastructure with rapid industrialization, exploitation of minerals is likely to increase. The increasing demand of minerals also promotes mineral beneficiation to upgrade the ore. Mineral beneficiation methods commonly used are for coal, iron ore, asbestos, base metal sulphide ores, potash, tungsten, uranium, gold, titanium and others. Their activities during the construction as well as operational phases may create a wide range of impacts on the environment through activities like crushing, ore handling, tailings management, utilities services etc. The potential adverse effects of mineral beneficiation encompass water pollution of surface streams, groundwater contamination, air pollution, noise pollution, change in drainage pattern etc.**

8. The 4th respondent submits that the above explanation and definitions shows that the process of mineral beneficiation is to concentrate the run of mine ore that is been mined from the mining industry. The 4th respondent industry has no connection whatsoever with the process of mineral beneficiation mentioned above. (Run of Mine means the raw unprocessed or uncrushed material in its natural state obtained after blasting or digging, from the mineralised zone of a lease area;)

9. The 4th respondent submits that the 4th respondent buys limestone from third party seller and process the limestone into Precipitated Calcium Carbonate and Nano Precipitated Calcium Carbonate. The 4th respondent industry doesn't deal with mineral beneficiation as contemplated in the manual put out by the Ministry of Environment & Forests, Government of India. Mineral beneficiation deals with Run-off Mine ores whereas the 4th respondent industry buys valuable limestone and processes it to Precipitated Calcium Carbonate and Nano Precipitated Calcium Carbonate. The process of preparing PCC and NPCC is not the process of mineral beneficiation.

10. The 4th respondent submits that Precipitated Calcium Carbonate and Nano Precipitated Calcium Carbonate are produced through the process as follows:

    a. Calcine (heat) in a kiln to 1850° F, which takes the calcium carbonate apart, forming lime (CaO) and carbon dioxide gas (CO2). The carbon dioxide can be captured for reuse. **$CaCO3 + Heat \rightarrow CaO + CO2 \uparrow$**
    b. Add the lime to water to form calcium hydroxide (hydrated lime or slake). **$CaO + H2O \rightarrow Ca(OH)2$**
    c. Separate out additional impurities from the slaked lime.
    d. Combine the captured carbon dioxide with the slaked lime. Calcium carbonate reforms, and since it is insoluble in water, precipitates out. **$Ca(OH)2 + CO2 \rightarrow CaCO3 \downarrow + H2O.$**

11. The 4th respondent submits that in order to obtain Nano Precipitated Calcium Carbonate, a High Gravity Controlled Precipitation (HGCP) technology platform is used which is based on fundamental mass transfer principles wherein micro mixing of the reaction phases is achieved in microseconds, with the reaction phases brought together under a high gravity environment. The 4th respondent further submits that the difference in manufacturing Precipitated Calcium Carbonate (PCC) and Nano Precipitated Calcium Carbonate (NPCC) is the process of precipitation being done in high gravity environment for the NPCC. Thus, there is no mineral beneficiation process being carried out by the 4th respondent industry and the process of mineral beneficiation is totally a irrelevant and completely different from the manufacturing of PCC and NPCC carried out by the 4th respondent industry.

12. The 4th respondent humbly submits that the manual in Page 50 defines the word "Beneficiate" as "To concentrate or enrich; the ore for further processing". It is humbly submitted before the Hon'ble Tribunal that mineral beneficiation is a separate industry that requires specialized plants to beneficiate the ores. The 4th respondent doesn't own any mineral beneficiation plant or deal with run of mine ore.

13. The 4th respondent states that the process of mineral beneficiation is not even remotely comparable to the process done by the 4th respondent industry to prepare PCC and NPCC from Limestone.

14. The 4th respondent further submits that the manual put out by the Ministry of Environment & Forests, Government of India, in Page 53, under General Information, it states as follows:

> **Depending on the types of mineral / ore processing may involve beneficiation where mined ore is either concentrated for further processing (metallic ores) or graded for sale (non- metallic ores). For metallic ores, beneficiation normally consists of preparation by crushing and / or grinding, gravity concentration, magnetic separation, and flotation aided by chemicals. The outputs from beneficiation process are ore concentrate and wastes, in the form of tailings, which include process chemicals and heavy metals. The beneficiation process may cause adverse impact on the surrounding environment. The potential adverse impacts of mineral**

beneficiation involve air pollution, surface and groundwater pollution, solid waste generation, damage to flora and fauna, socioeconomic etc. The developer is therefore, required to plan their activities considering the site specific environmental concerns and minimize the adverse impacts.

15. The 4th respondent humbly submits that the applicants knowing full well that the process carried out by the 4th respondent industry is not mineral beneficiation process wantonly with *male fide* intention to prolong and distract this Hon'ble Tribunal, leveled the false allegations. The actions of the applicants to raise frivolous and irrelevant allegations in order to harass the 4th respondent industry from carrying out their business are untenable and unwarranted.

16. The 4th respondent submits that it is crystal clear that the process carrying out by the 4th respondent to produce PCC and NPCC from limestone is not the process of mineral beneficiation as contemplated under the schedule 2(b) of the EIA Notification, 2006. The 4th respondent submits that the industry is held hostage because of the ill will, malevolence and maliciousness of some third parties who is against the establishment of the hard working 4th respondent industry.

In these circumstances, the 4th respondent therefore prays that this Hon'ble Tribunal not entertain this untenable application made by the applicant and the Hon'ble Tribunal may be pleased to dismiss the above O.A. No.66 of 2017 with exemplary costs and pass such further or other orders as this Hon'ble Tribunal may deem fit and proper and thus render justice.

Dated at Chennai on this the 17th day of March, 2022.

Counsel for 4th respondent

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ADDITIONAL WRITTEN SUBMISSIONS FILED BY THE 4TH RESPONDENT

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