BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,Southern Zone

Original Application No. 30 of 2021

IN THE MATTER OF

Dharmesh Shah — Petitioner

Versus

Union of India and Ors — Respondent

SUBMISSION ON BEHALF OF THE APPLICANT TO THE DRAFT GUIDELINES PREPARED BY CPCB DATED 23-09-2021

1. That pursuant to the direction of this Hon'ble Tribunal, the Central Pollution Control Board has prepared a draft Guidelines titled ' "*Environmental Guidelines for Decommissioning a Coal/ Lignite Power Plant, July, 2021'. The specific direction dated 23.3.221 were as follows:*

> "the Ministry of Environment Forests and Climate Change (MoEF&CC), Central Electricity Authority (CEA) and Central Pollution Control Board (CPCB) to constitute a joint committee of their own and evolve a policy or guideline as to how the decommissioning of Thermal Power Plant unit has to be carried out, prior to decommissioning of a thermal Power Plant and if guidelines, already exists, then the committee can submit a report of the guidelines detailing how it is carried out to protect environment and if not evolve a guideline including manner of creating mechanism to supervise as to how it is being properly implemented by the power plant and mining area".

2. That the Draft Guidelines, July 2021 correctly identifies the need for such a Guidelines in the following manner:

In last 5 years, 94 units of 9908 MW capacity have retired and another 14 units of 1988 MW capacity have been identified for retirement in near future. Therefore, addressing environmental issues related to decommissioning a power plant properly is a primary concern of environmentalist and regulatory bodies.

3. The Applicant submits that though the Draft Guidelines are a significant development as opposed to the present situation where no guidelines exists: however, the Draft Guidelines lack the details as well as compliance with the specific direction of the Hon'ble Tribunal that the guidelines must deal with the manner in which it will be supervised.

4. As a preliminary matter, it should be noted that some of the text in the draft guidelines is copied verbatim from a 2004 industry-funded report by the US based Electric Power Research Institute (EPRI), entitled *Decommissioning Handbook for Coal-Fired Power Plants*.[1] For example, the entirety of Section 2.0 of the draft is copied with only slight modification from pages 2-1 through 2-3 of the EPRI report.

5. While the draft guidelines may provide some benefit by helping TPP operators plan the decommissioning process, it is no substitute for enforceable requirements for the process. Many aspects of environmental remediation involved in TPP decommissioning will be covered by existing environmental laws and standards, MOEFC&C should adopt enforceable requirements regarding the process for decommissioning, including development of a preliminary Environmental Assessment (EA) that is subject to regulatory approval; and development of a decommissioning plan that is subject to regulatory approval, which takes into account the future use of the site, the data from the EA, and public input.

[1] *Available at* https://www.epri.com/research/products/1011220

6. The following are the comments on Draft Guidelines.

Para 3.1 in guidelines: The document recommends carrying out an EIA and EMP prior to the decommissioning process. However, there are no TORs for the preparation of these documents. The guidance should include TORs on the EIA and EMP and also provide clarity on the provision of law under which these studies are to be carried out. The term regulatory body is ambiguous - decommissioning should come under the purview of the State Pollution Control Boards and Committees. This section should be expanded to include much more detail about the preliminary environmental assessment that should be performed prior to decommissioning work. Unlike an EIA, which evaluates future environmental impacts of a proposed project, an environmental assessment evaluates the existing environmental conditions at a site. The draft should set forth in detail the various conditions that should be evaluated before decommissioning and environmental management plans can be developed. These conditions should include:

- A complete accounting of all hazardous materials stored or disposed at the site, including all asbestos-containing materials, PCBs, solvents, waste oils, SCR catalysts, etc.
- Baseline groundwater monitoring data for the entire site, including all ash disposal areas.
- Ash dyke stability assessment.

Sec 3.4.2 in guidelines: The section on compliance to the Air Act should include guidance on the prevention of dust and other airborne pollutants during demolition activities. These could be drawn from the C&D Waste Rules 2016.

Sec 2.0 in guidelines: While the guidelines talk about the future land use it is silent on the process or strategy of determining future land use. The issue of future land use is at the crux of the decontamination and remediation efforts

and will determine the nature of technology and rigour of decontamination efforts. It is hence important to include a process of determining future land use as part of the guidelines.

Section 4.1 Fly Ash Management : As the draft notes, closure of ash ponds is often the most challenging and expensive activity associated with decommissioning a TPP site. As such, much more detail is needed in this section to address all of the issues that may arise with ash pond closure.

5. That in addition to the above points, there are other issues of concerns.

5.1 Qua**lification of Contractors:** The major administrative task is the establishment of contracts for the actions to be taken in decommissioning. The types and number of contracts will be determined by the contracting strategy established by management and project planners. The guidelines are silent on the issue of qualifications of the contractors engaged in the process of decommissioning. Given the hazardous nature of the dismantling and demolition works - it is important that these tasks be carried out by qualified personnel. Furthermore, it is important that the plant operators demonstrate links or agreements with authorised hazardous waste handling and disposal facilities especially when dealing with hazardous wastes. It is important to have a qualified inspector or environmental engineer onsite throughout dismantling to make sure that asbestos-containing or other hazardous wastes are not introduced into the non-hazardous scrap.

5.2 **Coal Residue Management** - After surplus coal is removed, any coal residue that is mixed with the soil in the coal yard should be removed and disposed in the onsite ash landfill or surface impoundment or hauled to an offsite permitted facility. After the coal and soil mixture is removed, the coal yard should be backfilled with clean material and contoured as needed for stormwater runoff. The management of coal ash residue will be determined by the future use of the site as discussed in Sec 2.0 of the guidelines.

5.3 **Site Investigations**: The site investigation phase should focus on confirming whether or not contamination exists at a site, locating any existing contamination, and characterizing the nature and extent of that contamination. Based on the site assessment, sampling of potentially contaminated areas should be performed following established protocols. If predicted by the site assessment or by results from sampling during this phase, migration pathways of contaminants should be evaluated. Historically, contaminants of concern for coal-fired power plants include: (1) arsenic, cadmium, chromium, iron, lead, mercury, nickel, selenium, manganese, and zinc from the fly ash and coal pile areas; (2) polychlorinated biphenyls, polycyclic aromatic hydrocarbon, BTEX (benzene, toluene, ethyl benzene, xylene), and other petroleum hydrocarbons from oil storage and mechanical and electrical equipment; and (3) copper, iron, nickel, chromium, and zinc from metal cleaning and cooling tower blowdown wastewaters.

Special circumstances, such as historical spills, may require investigation for contaminants. This is especially true for sites like NLC (respondent No.4) who had been listed as a PCB contaminated site under an evaluation conducted by the United Nations Industrial Development Organisation (UNIDO) in March 2015. The results of the site investigation can be used to perform a baseline risk assessment to calculate risk to human health or the environment and the concentration levels of contaminants that will require clean up. The Guidance Document for Assessment and Remediation of Contaminated Sites issued by the MoEF&CC in 2015 can be employed in this case. It is important to point out that the Draft Guidelines makes no mention of the Guidance Document on Contaminated Sites.

5.4 Monitoring and Sampling: Relying on the data collected from the site assessment and investigation phases, clean-up alternatives are evaluated. The technologies should be evaluated for their capability to meet specific clean-up levels and redevelopment objectives, such as schedules, costs, and compatibility with the surrounding environment, area (urban, rural, etc.), and demographics. The need for future monitoring or controls also should be considered when evaluating the various technologies. After the areas of contamination are identified and the clean-up technologies are selected, the clean-up plan can be designed and implemented.

Following clean-up of the site area, confirmatory sampling should be performed using specific sampling and analytical protocols.

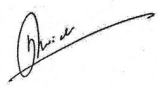
Successful confirmatory sampling results are a prerequisite for owners and/or regulatory officials who certify that the property is clean and can be accepted for transfer. This is important as some power plant sites convert land use to residential or other purposes of general public use. In the case of two of Delhi's flagship thermal power plants in Rajghat and Badarpur, the government proposes to convert the sites into solar and eco parks. The project to convert the 884 acre Badarpur plant site into an eco-park only proposes to bury the ash under soil cover and vegetation as part of its remediation efforts.

5.5 The draft states "Post closure EMP should be got approved [*sic*] from the regulatory body," but does not specific which regulatory bodies would have authority to issue or deny such approval. The draft should describe which authorities would have jurisdiction over such approvals, including the role that MOEF&CC would play in this process.

5.5 The draft also states, "Laws on environmental and safety issues, as well as community concerns should be taken into account and necessary permission taken prior to initiating the decommission process," but does not explain how community concerns should be identified and taken into account.

That in view of the above facts, it is important that the Draft Guidelines be revised in light of the concerns raised. This is important in order to ensure that the Guidelines becomes an effective tool to ensure safe decommissioning of power plants.

Dated at Chennai on this 23rd day of September,2021



Ritwick Dutta

Counsel for Applicant