Ministry of Environment, Forest and Climate Change

Notification

New Delhi, the ...th April, 2020

S.O. .......(E).— Whereas the Central Government had, in exercise of its powers under Section 3, Section 6 and Section 25 of Environment (Protection) Act, 1986 (29 of 1986) read with Rule 5 of Environment (Protection) Rules, 1986, published the amendment of Sub-rule 8 of Rule 3 of Environment (Protection) Rules, 1986, in the Gazette of India, Extraordinary, vide number G.S.R. 02(E), dated 2nd January, 2014 mandating certain category of thermal power plants to use coal with ash content restricted to 34%.

And whereas, the said Notification vide number G.S.R. 02(E), dated 2nd January, 2014 mandated coal based thermal power plants to use raw or blended or beneficiated coal with ash content not exceeding thirty-four percent (34%), on quarterly basis, by the time lines given below:

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And whereas, the said Notification vide number G.S.R. 02(E), dated 2nd January, 2014 exempted to use coal with ash content restricted 34% for power plants using Fluidised Bed Combustion Technologies, Integrated Gasification Combined Cycle Technologies or any other clean technologies as notified by the Central Government in the Official Gazette.

And whereas, the Central Government had, in exercise of its powers under Sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with sub-rule (3) of rule 5 of the Environment (Protection) Rules, in the Gazette of India, Extraordinary, vide number S.O. 3305 (E), dated 7th December, 2015 and G.S.R. 593 (E), dated 28th June, 2018 published the emission standards and specific water consumption for various category of thermal power plants, based on capacity of power generation and date of installation of power plant and to be achieved in time bound manner.

And whereas, the Ministry of Environment, Forest and Climate Change directed the Central Pollution Control Board vide F.No.Q-15017/40/2007-CPW dated 7th December, 2017 to issue Directions under Section 5 of Environment (Protection) Act, 1986, to various Thermal Power Plants to install pollution control equipment as per the revised plan submitted by the Ministry of Power dated 13.10.2017 by 2022 (including NOx).

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And whereas, the Ministry of Power vide several representations emphasised that : -
i) Washing or beneficiation of coal does not bring the ash content in the coal to zero or negligible and reduces to marginal percentage of ash.

ii) Washing process, results in production of Coal Washery Rejects (CWR) with different energy contents (Gross Calorific Value, or GCV) depending on quality of input coal and efficiency of washing process.

iii) The rejects generated in the washing process find their way into the market for use in industries and create pollution.

iii) Washing incurs additional cost to the coal besides causing challenges in handling, storage, transport and marketing. The transportation of coal from Mine to Washery and washed coal/rejects from Washery to Power plants involves multiple loading and unloading which leads to additional cost of transportation and in turn leads to higher power prices. Besides, non-availability of rail infrastructure will entail road transportation which will generate pollution.

v) Washing process consumes resources such as land, fresh water and energy. It is also pollution intensive in terms of air pollution, water pollution, soil degradation and waste management which require advanced pollution control technologies for mitigation and control.

vi) Due to increased cost of coal after washing, the thermal power plants located along the coast are opting for imported coal as viable option, to meet the object of achieving ash content below 34% in the coal, which results in outflow of foreign exchange.

v) Washing process involves loss of calorific value in rejects which has varying calorific values less than 2200 kcal/kg, 1500 kcal/kg and below. Though the rejects having calorific value less than 1500 kcal/kg are considered unusable, small industries and users utilise these rejects.

vi) With advancement in pollution control technologies, thermal power plants are equipped to capture almost all the pollutants including fly-ash generated in combustion process.

vii) Over a period of time, many uses have been found for fly-ash which is used in cement manufacturing, brick making, road laying, as back-fill material etc. Several industries and construction activities, using fly-ash are generally located near Thermal Power Plants which are far away from coal mines.

viii) Un-utilised Fly-ash can be transported and filled in the closed or abandoned mines.

And Whereas, the Ministry of Coal of vide several representations emphasised that:

i. The supply of raw coal from Coal India Limited subsidiaries have improved considerably in terms of quality, size and extraneous material over the years, which has considerably reduced wear and tear of all related equipment.

ii. Based on the present pricing structure of washed coal, improvement in raw coal quality & size and scope of ash utilization at load center, it is beneficial to use raw coal instead of washed coal which increases ECR (Energy Charge Rate) with very little savings.
iii. With the use of super critical technology in power plants, technological improvement to arrest emissions, unwashed coal can be used more efficiently and economically than using washed coal which makes power generation costlier.

iv. Power plants are designed for coal with wide variety of ash contents. Use of unwashed coal will not have any effect unless the quality goes beyond the design quality of the boiler.

v. Regulation of mandatory washing of domestic thermal coal is unable to meet its intended objective as it merely localizes the pollution around coal mines which otherwise would have been distributed over larger areas.

And Whereas, the Ministry of Coal and Ministry of Power represented that the mandating power plants to use washed coal is to be revisited and doing away with the requirement of washing will help ease power generation for long distance haulage of coal.

And Whereas, the NITI Ayog, in its report after analysing the issue from the perspective of washeries, Coal mining, transportation and consumption of coal at power plants has, inter alia, summed up as under:

i. Ash content is being reduced only by 8-10% from 42-44% to 34%. Ash content of 34-35% also requires power plants to handle substantial amount of ash. The environmental benefit therefore only seems to be marginal.

ii. Whereas, the ash generated from the power plants can be used and is usable in various ways e.g. brick making (which is beneficial as requirement of bricks from useful soil is reduced), cement, road construction and others. The ash generated in the washing process only goes to pollute the water along with coal particles and cannot be gainfully utilised.

iii. Coal washing process has negative environmental impact as it has to handle / dispose huge quantity of low grade coal washery rejects, liquid effluent streams, coal storage, handling coal dust, runoff and fugitive dust. It also impacts topography, water drainage pattern and quality, water bodies, surrounding air quality at large scale and many more apart from significant increase of cost of coal.

iv. The use of washery rejects in nearby industries also generates more pollution and since it is distributed in number of smaller industries, the pollution control at numerous points is much more difficult than controlling the pollution at power point end.

v. There seems to be no environmental rational of fixing minimum distance of 500 kms beyond which use of washed coal is mandated for thermal power plants and the coal transportation for less than 500 km has been exempted from washing.

vi. The directives of MoEF&CC on the basis of distance from the pitheads is working as a disincentive to the power sector since plants located at a distance of less than 500 km from pitheads have better price advantage as they are not required to use the washed coal compared to those located beyond 500 km from pitheads who are required to use washed coal.

vii. Washing process increases the cost of power generation. In terms of the quoted price of raw coal, transportation and washing, the net effect on power is to increase the power cost. While coal washing may make sense when coal is to be transported for a very long distance, however the distance at which coal washing may be economically viable depends upon cost of raw coal, railway freight rate and washing cost. It may also be noted that currently the rail freight rates are higher as they subsidise the
passenger fare. A more rationalised freight rate would lower the cost of transportation, and washing of coal would make even less economic sense.

viii. No clear scientific evidence is available for showing net environmental gain due to washing of coal.

ix. Several coal bearing States are of the view that washing of coal at pitheads would be detrimental to the local environment particularly from the point of increased water use, effluent generation and disposal of washeries rejects. They are of the opinion that consumers should carry the coal to the destination and set up washeries at the plant location.

And Whereas, NITI Aayog recommended that it may be prudent to determine and enforce the environmental and pollution norms to be complied by the power generators, rather than restricting the ash content in the coal based on distance of transportation.

And Whereas, the Ministry of Environment, Forest and Climate Change after deliberating the representations from Ministry of Power, Ministry of Coal, report of NITI Aayog and various stakeholders, arrived at the following:

i. In the overall scheme of Coal, mine, washeries and power plant, the extent of Ash content in mined coal remains the same. With washeries, the ash content gets divided at two places (washeries and the power plant), whereas in case of unwashed coal the ash content is handled at one place viz. the power plant;

ii. The power plants are better equipped to address the Ash generated in terms of pollution control, waste management etc.;

iii. The Ministry of Environment, Forest & Climate Change has notified emission norms, mandating the respective power plants to adhere to such norms in a time bound manner.

iv. The Ministry of Power has reported that the respective thermal power plants have already undertaken steps to put in place technology solutions so as to adhere to such norms;

v. The Ministry of Power has also informed that those units that have either not initiated the process of putting in place technology solutions for adhering to emission norms or where such mechanism is not feasible, shall be phased out in due course. The Govt. has also announced this approach in the Union Budget 2020;

And Whereas, it is expedient to adopt best possible framework towards handling of unwashed coal including management of Fly Ash & other associated environmental implications arising out of processing of unwashed coal at different stages. The framework ought to ensure minimal environmental impact in terms of emissions, their utilization, disposal and is cost effective;

Now, therefore, in exercise of the powers conferred by Sub-section (1) and Clause (v) of Sub-section (2) of Section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of Sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986, and in supersession of the Notification G.S.R. 02(E), dated 2nd January, 2014; and in partial modification of the Notification S.O. 3305 (E), dated 7th December, 2015 and G.S.R. 593 (E), dated 28th June, 2018, the Central Government hereby issues the following directions after having dispense with the requirement of notice under Clause (a) of Sub-Rule (3) of Rule 5 of the Environment (Protection) Rules, 1986 in public interest which shall come into force on the date of the publication of this notification, namely :-
1. That power plants shall be allowed to utilize unwashed coal for the purposes of power generation irrespective of their location from coal mine and their generation capacity subject to the following:
a. Setting Up Technology Solution for emission norms:

i. Power plants have either set up technology solutions to adhere to the prescribed emission norms and are meeting such norms or are in the process of setting up such technology solutions in compliance to the extant notifications and instructions of CPCB, issued from time to time.

ii. In case of washeries, Middling/rejects to be utilized in CBC (Fluidized Bed Combustion) technology based power plants. Washery to have linkage for 100% middling/rejects in FBC plants. Long distance (>100 km) of transportation of middling/rejects to be avoided.

ii. Management of Ash Ponds:

i. Power plants shall not be entitled to any additional capacity of Fly Ash pond on grounds of switching from washed coal to unwashed coal.

ii. Powers plants shall be under obligation to utilize Fly Ash including Bottom Ash for different purposes as notified in the Fly Ash notification from time to time.

iv. 100% utilisation shall be achieved as per the timelines provided in the Flyash Notification and its amendments issued time to time. It is reiterated that Ash ponds are allowed only for emergency dumping not as regular disposal.

v. High concentration slurry disposal system shall be put in place to use to reduce water consumption ash slurry preparation. Ash Water Recycling System to be installed to recycle decanted water from the emergency ash pond for reuse.

vi. Coarse ash from first pass of ESP to be stored in one silo and remaining ash to be stored in another silo to enable the cement industries/ash based industry to take flyash as per required sizes. This also enables to ensure the requirement of minimum blaine number of free silica.

vii. Around periphery of ash dyke, at least 20 m greenbelt is to be developed. Once the ash pond exhausts its capacity, filling up of 30 cm depth with good soil shall be done to raise greenbelt.

viii. Ash pond surface shall be kept moist always. In case of dry bed, flexible water sprinklers to be provided for regular sprinkling of water in dry season so that fly ash shall not become air borne.

ix. Use of bottom ash should be promoted in construction industry and for this help of local regulatory authorities including district administration can be taken.

x. MoEF&CC vide Office Memorandum dated 28th August, 2019 enabled all thermal power plants to dispose flyash in abandoned or working mines with environmental safeguards. If the mines are available within 50 km, the option flyash disposal in mine voids shall be explored to avoid degradation of fresh land for ash ponds.

Transportation:

i. Coal transportation shall be by rail only. In case of road transportation, permission from Ministry as modification of existing Environmental Clearance may be obtained by providing justification of traffic sufficiency, non-availability of rail infrastructure, action plan and commitment to connect rail line to
the plant premises, along with traffic impact assessment study). The proposals of transportation shall be placed before Expert Appraisal Committee for making recommendations.

ii. For road transportation, covered trucks to be used. Other than trucks complying with latest Bharat Stage (BS) Emission Standards, no other trucks shall be used for coal transportation.

iii. Unwashed coal shall be transported from coal mine to the point of loading at designated rail siding in closed container trucks by road, if transportation by rail, or conveyor facility or otherwise is not available which is subject to permission from the Ministry.

iv. It shall be the responsibility of coal mine owner to ensure 100% of such transport facility either (i) or (ii) above by 31st March, 2022. However, till 31st March, 2021, 40% of unwashed coal may be transported through tarpaulin covered truck facility.

This shall also be deemed to be additional conditions of the relevant Environmental Clearances for respective projects for FY 2020-21 and onwards. The existing Environmental Clearances shall stand modified so as to make the above conditions operative for relevant sectors. The Consent to Operate shall be issued by respective SPCBs accordingly.

[F.No.13015/05/2020-IA.I(T)]
Geeta Menon, Jt. Secy.