

OFFICE OF THE MONITORING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016, OA No.916/2018 (earlier OA No.101 of 2014) OA No.606 of 2018 and OA No.1040 of 2018

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To

The Registrar,
National Green Tribunal,
Faridkot House, Copernicus Marg, Near India Gate,
New Delhi, Delhi 110001

No.CMC/2020/659

Dated: 20.1.2020

Subject: Report of the Monitoring Committee Constituted by Hon'ble National Green Tribunal in OA Number 606 of 2018 in the matter of compliance of Solid waste management Rules, 2016 with respect to Order dated 28.11.2019 in EA No. 35/2019 in OA No. 150/2014 in the Matter of Ajay Sipahiya & Ors. V/s Union of India and Others.

It is submitted that the Hon'ble National Green Tribunal in EA No - 35/2019 in OA No- 150/2014 in the Matter of Ajay Sipahiya & Ors. V/s Union of India and Others vide its order dated: 28.11.2019 in para No. 08 and 09 has directed as under.

Para 8.

We are informed that the Committee constituted by the Tribunal in Original Application No. 606/2018 to oversee the compliance of Solid Waste Management Rules, 2016 headed by Justice Pritam Pal is still in operation. Ms. Urvashi Gulati, IAS, Former Chief Secretary, Haryana was later added as a Member of the Committee. The said Committee may oversee the compliance and furnish a report.

Para 9.

The issue of functioning of the plant at optimum capacity in terms of earlier orders may also be worked out with the guidance and supervision of the above Committee. An interim report may be furnished by the oversight Committee on or before 31.01.2020. A copy of the report submitted to this Tribunal may also be given to the Municipal Corporation, Chandigarh for its response, if any before the next date. The applicant may also be allowed access to the said report. List for further consideration on 12.02.2020.

In compliance to the order of the Hon'ble Tribunal, the Monitoring Committee held its meeting with the Municipal Corporation, Chandigarh & Chandigarh Pollution Control Committee on 14.01.2020 and also visited the

Solid Waste Management plant located at Dadu Majra, Chandigarh on 14.01.2020 and 18.01.2020. Accordingly, the Monitoring Committee has prepared its report along with recommendations to be implemented by Municipal Corporation, Chandigarh and operator of the Municipal Solid Waste processing plant in the name of M/s Green Tech Fuel processing plant is run by M/s Jaiprakash Associates Limited.

Accordingly, a report of the Monitoring Committee alongwith its recommendations in the matter are enclosed herewith for placing the same before the Principal Bench of the Hon'ble NGT, New Delhi.

It is further submitted that the abovesaid report is also being sent through email at filing.ngt@gmail.com.

DA/As above


(**Justice Pritam Pal**)
Former Judge,
Punjab & Haryana High Court
Now as Chairman of the
Monitoring Committee

Endst. No. CEC/2020/660

Dated: 20.1.2020

A copy of the above is forwarded to the Commissioner, Municipal Corporation, Chandigarh for information and necessary action please. This is with reference to Para no. 9 of order dated 28.11.2019 of the Hon'ble Tribunal.

DA/As above


(**Justice Pritam Pal**)
Former Judge,
Punjab & Haryana High Court
Now as Chairman of the
Monitoring Committee

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1.0 Report of the Committee:

In order to comply with the orders of Hon'ble NGT, the Monitoring Committee consisting of following members held its meeting with the Municipal Corporation Chandigarh & Chandigarh Pollution Control committee on 14.01.2020 and also visited the Solid waste management plant located at Dadu Majra, Chandigarh and the report is submitted as under :

Members of the Monitoring Committee

Sr. no.	Name and Designation in the Deptt.	Name & Designation in the Committee
1.	Justice Pritam Pal, Former Judge Punjab & Haryana High Court	Chairman
2.	Ms. Urvashi Gulati IAS, Former Chief Secretary, Haryana	Member
3.	Dr. Babu Ram, Former Member Secretary, PPCB	Technical Expert

1.1 Background :

The Municipal Solid Waste (MSW) processing plant, in the name of Green Tech Fuel processing plant is run by M/s Jaiprakash Associates Limited in an area of about 10 acres at Dadu Majra, Chandigarh and had been commissioned in May 2008. The plant (having design capacity of 500 MT per day) had been set up through a Memorandum of Understanding (MoU) between Municipal Corporation Chandigarh and M/s Jaiprakash Associates Ltd. As per the MoU, Municipal Corporation Chandigarh is to hand over municipal solid waste at the plant and the Plant operator is to process the same to produce Refused Derived Fuel (RDF) which shall be utilised in its own manufacturing units in Himachal Pradesh or other units at any other locations. The land of about 10 acre has been allotted by Municipal Corporation, Chandigarh to M/s Jaiprakash Associates Ltd. on lease of Rs. one/sq. mt./year for 30 years on BOOT basis. M/s Jaiprakash Associates Ltd. is operating the plant in the name of Green tech Fuel Processing Plant.

1.2 Visit to Solid Waste processing plant on 14.01.2020

The Monitoring Committee visited the Solid Waste Processing Plant at Dadu majra, Chandigarh on 14.01.2020, wherein it was observed that for the processing and segregation of solid waste, the following machinery has been installed at site:

- i. Ballistic separator
- ii. Magnetic separator
- iii. Trommels
- iv. Hot Air Generator
- v. Rotary dryer

The Municipal Solid Waste processing plant was commissioned in year 2008. The installed capacity of plant is 500 tons/day. Land measuring 10 acres for installation of the plant was provided by MC, Chandigarh at the nominal lease rate of Rs 1/m²/year for 30 years. The machinery of the waste processing plant was installed by M/S Jaiprakash Associates Ltd. with their own funds and no financial aid was provided by MC, Chandigarh. As per the agreement made between MC, Chandigarh and M/S Jaiprakash Associates Ltd., no tipping charges are to be paid by MC, Chandigarh and RDF produced in the process is to be sold by Jaiprakash Associates Ltd. The processes involved at plant site are separation of inert material, metallic items, removal of moisture and production of RDF.

For compost manufacturing, it has installed separate plant of capacity 300 TPD adjoining the RDF plant. This plant is equipped with 3 trommels machines to separate different sizes of waste and finally compost is manufactured.

Later on, Plant Authorities demanded that tipping charges should be given to them. However, same was declined by MC, Chandigarh thereafter matter went to Hon'ble NGT.

The Monitoring Committee visited the solid waste processing plant and the following observations were made:

1. The main furnace of plant (Thermax make) was not in operation and plant was using old furnace to generate hot air for reduction of moisture in the mixed waste.
2. Huge quantity of unprocessed municipal waste was found dumped at site and leachate was being generated.
3. The produced RDF was found in wet condition due to rainfall and it cannot be used as fuel in any furnace.
4. Despite of having capacity of processing solid waste @ 500 TPD, presently the plant was found processing approximately 150 TPD. The remaining quantity (more than 70%) of solid waste is dumped at Municipal solid waste dumping site along with rejects of processed material. As such, the purpose of providing waste processing plant is defeated. The quantity of waste at dump site is increasing day by day.
5. For the treatment of liquid waste, the plant operator has installed ETP consisting of physico-chemical treatment followed by aerobic biological treatment system.

Besides, the Municipal Corporation has been directed by the Monitoring committee during its meeting with MC, Chandigarh and CPCC with regard to source segregation of solid waste as under,

- **Source Segregation of solid waste**

The commissioner, Municipal Corporation Chandigarh informed that out of 3.70 Lakh households of Chandigarh, source segregation of solid waste has started in 1.60 Lakh households and in the remaining households, source segregation shall be started by 30.6.2020.

The Chairman of the Monitoring Committee directed that 100 % source segregation of solid waste in all the wards of the Municipal Corporation Chandigarh shall be started by 30.6.2020.

2.0 Visit to the Solid waste management Plant on 18.01.2020

The Technical Expert of the Monitoring Committee visited the solid waste processing plant again on 18.1.2019 and report is submitted as under:

2.1 About processing of solid waste at Solid Waste Processing Plant

For the processing and segregation of solid waste, the following machinery has been installed at site:

- i. Ballistic Separator
- ii. Magnetic Separator
- iii. Trommels
- iv. Hot Air Generator
- v. Rotary Dryer
- vi. Air Density Separator

The plant was commissioned in year 2008. Presently, plant is receiving about 150 MT solid waste daily, out of which only 20-25 MT is segregated waste. Plant is processing around 225 MT (150 MT waste received daily + 75 MT waste already accumulated in plant) solid waste on daily basis.

The municipal solid waste (MSW) is fed into the hopper by overhead grab bucket into a feeder belt conveyor, passes through magnetic separator, which takes the feed into a multi- stage rotary screen which separates the feed into three fractions (fraction <10 mm, fraction >10 mm<150 mm, fraction >150 mm). Fraction <10 mm is primarily contains dust/sand/earth etc. and is disposed off in inert form. The fraction >10 mm<150 mm primarily contains organic matter and is carried away by conveyor belt to the rotary dryer. The fraction >150 mm is taken on conveyor belt to reduce the size less than 150 mm. After size reduction in primary shredder, the output proceeds towards further processing. The hot air is generated in a specially designed hot air generator (HAG) where RDF is burnt as a fuel. After drying, the screening process takes place to separate the fine sand/grit (below 10 mm which are abrasive and may cause damage to process equipments). MSW coming out of the rotary dryer is fed into the rotary trammel to separate the fines below 10 mm, which are used as garden manure.

The heavy non combustible fractions of MSW like stones, glass etc. are separated by passing through the specially developed air density separator (ADS) in which the light combustibles and dense fractions are separated. Before the MSW is fed into the ADS, one more magnetic separation takes place to separate the remaining metallic fraction from the feed. The light combustibles are recovered as RDF.

2.2 Observations of the Monitoring Committee

During visit on 18.1.2020, the following observations have been made:

About 25,000 MT un-segregated and un-processed solid waste is lying dumped within the premises of the Municipal Solid Waste Processing Plant. Photograph showing the big heap (about 25000 MT) of un-segregated solid waste is

mentioned as per plate 1 given below:



Plate-1: Heap of unprocessed solid waste lying in the premises of the SWM Plant

Presently, the project proponent is lifting about 75 MT from the old dumped waste and 150 MT fresh waste (received from the Municipal Corporation, Chandigarh) for processing to convert into RDF, compost and inert material.

About 40 MT waste is generated in the form of inert material during RDF manufacturing and 102 MT is generated in the form of inert material during compost manufacturing. These inert materials are sent to the Municipal Solid Waste dumping site, Dadu Majra, U.T. Chandigarh resulting in increase in the height of the dumping site day by day.

Because of non-maintenance of available machinery (ballistic separator, trammels, air density separators, rotary dryers, hot air generator), the processing efficiency has been reduced.

The representative of the processing plant informed that due to paucity of funds, the plant is not being operated at optimum capacity.

During both the inspections of the monitoring committee i.e. on 14.1.2020 and 18.1.2020, only old furnace was found in operation, which is being operated at low temperature (400° C) resulting in generation of dioxin and furan gases in the environment, whereas, the new Thermax make furnace, which is operated at 1000° C and may eliminate the production of dioxin and furan gases, was not in operation.

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In the Solid Waste processing Plant, for the control of gaseous emissions, the project proponent has installed cyclonic separator followed by venturi scrubber and carbon bed scrubber. However, the representative of CPCC claimed that they have monitored the stack of the Solid Waste Processing Plant number of times and the value of dioxin has been found beyond the permissible limits at every time.

The Monitoring Committee was informed by the representative of the Solid Waste Management Plant that out of 150 MT material being received at Plant site, only 20-25 MT material is segregated and the remaining 125-130 MT is non segregated material.

The inert material lying at site (claimed by the representative of the SWM Plant) was found containing some portion of RDF which could have been recovered by the plant operator.

The present 25000 MT solid waste, lying dumped at site, has occupied most of the space of the plant and it has become difficult for the movement of the vehicles within the premises of the plant.

2.2 Recommendations of the Monitoring Committee

1. The Municipal Corporation, Chandigarh shall remove about 25000 MT old unprocessed solid waste material, occupying lot of space of the Solid Waste Processing Plant, within the time schedule as directed by the Hon'ble NGT in its order dated 28.11.2019.
2. During the meeting with the Municipal Corporation, Chandigarh and Chandigarh Pollution Control Committee on 14.1.2020, the Commissioner, Municipal Corporation, Chandigarh had informed that out of 3.70 Lakh households of Chandigarh, source segregation of solid waste has been started in 1.60 Lakh households and in the remaining households, source segregation shall be started by 30.6.2020. Accordingly, the Monitoring Committee directed the Municipal Corporation, Chandigarh to start 100 % source segregation of solid waste in all the wards of the Municipal Corporation Chandigarh by 30.6.2020. Therefore, the Municipal Corporation Chandigarh shall make immediate arrangements to deliver segregated solid waste of 1.6 lacs households to the Solid Waste Processing Plant so as to enable it to process the same effectively.
3. The Municipal Corporation, Chandigarh may make some provisions for giving processing fee to the project proponent to enable it to run the plant effectively and optimally.
4. The Municipal Corporation, Chandigarh shall engage the services of experts of IIT Roorkee/ IIT Delhi to assess the efficiency of the machinery available with the Solid Waste Processing Plant within 15 days and the work may be allotted to the institution within next 10 days. In case, after study/assessment, it is observed that the machineries installed at plant site require repairs/renovation, the same may be carried out by Solid

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Waste management plant within 3 months.

The Municipal Corporation, Chandigarh shall also get expert opinion about conversion of existing RDF plant into waste to energy plant.

5. The project proponent (Solid Waste Processing Plant) shall use and operate only Thermax make furnace, which is operated at 1000⁰ C (at this temperature, the toxic gases like furan and dioxin are almost eliminated) to generate hot air for the removal of moisture of the solid waste. The repairing of this Thermax make furnace may be done within 15 days. The other old furnace operating at low temperature (400⁰ C) shall not be used in any circumstance.
6. The project proponent shall modify/rectify the air pollution control device under the guidance of reputed technical organization to bring the dioxin parameter within the permissible limits.


Dr. Babu Ram


Ms. Urvashi Gulati


Justice Pritam Pal
Former Judge
Punjab & Haryana High
Court