4/2/2015
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BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH AT NEW DELHI

Original Application No. 199 of 2014

IN THE MATTER OF:

Almitra H. Patel ...**Applicant**

Versus

Union of India & Ors. ...**Respondents**

AFFIDAVIT ON BEHALF OF THE STATE OF MEGHALAYA FOR BRINGING ON RECORD THE ACTION PLAN REGARDING MUNICIPAL SOLID WASTE PLANTS IN THE STATE OF MEGHALAYA IN PURSUANCE OF THE ORDER PASSED BY THE HON'BLE NATIONAL GREEN TRIBUNAL DATED 15.01.2015.

I, Ethelbert Kharmalki, s/o Late A. L. Shabong, aged about 50 years, R/o LB-047, Nongrim Hills, Shillong, Meghalaya, do solemnly affirm and say as follows:

1. That I am the Joint Secreatry, Urban Affairs Department, Govt. of Meghalaya. I have read the contents of the petition and as such I am competent to affirm this affidavit.

2. That on 15.01.2015, the Hon'ble National Green Tribunal was pleased to pass an order directing all the State and Union Territory Governments and their respective Pollution Control Boards, including the State of Meghalaya to produce proposed Project Reports with respect to setting up and operation of Municipal Solid Waste Plants.

3. That the entire State of Meghalaya is divided into 6 municipal Boards namely –

(i) Shillong Municipal Board

(ii) Tura Municipal Board

(iii) Jowai Municipal Board

(iv) Williamnagar Municipal Board

(v) Resubelpara Municipal Board

(vi) Baghmara Municipal Board

4. That in pursuance of the order passed by this Hon'ble Tribunal, the State of Meghalaya has prepared Detailed Project Report in respect of Shillong Municipal Board and Tura Municipal Board. It is submitted that in respect of the remaining 4 municipal boards, i.e. Jowai Municipal Board, Williamnagar Municipal Board, Resubelpara Municipal Board and Baghmara Municipal Board consultants have been engaged for the preparation of Detailed Project Report relating to solid waste management in those areas.

5. That the said Project Reports/ Action Plan have been prepared in view of the judgment passed by this Hon'ble Tribunal in Capt. Mall Singh & Ors. V. Punjab PCB & Ors. (Appeal No. 70 of 2012).

6. That an extract of the Detailed Project Report/ Action Plan in respect of the aforesaid 6 Municipal Boards is annexed herewith and marked as **Annexure I**.

7. That the deponent undertakes to produce any other Project Report/ Action Plan in relation to setting up of Municipal Solid Waste Plants as and when directed by this Hon'ble Tribunal.

8. It is thus prayed accordingly.

DEPONENT

JOINT SECRETARY
URBAN AFFAIRS DEPARTMENT
GOVERNMENT OF MEGHALAYA

VERIFICATION

I, the deponent above named, do hereby verify that the contents of the paragraphs 1 to 4 of this affidavit are true to my knowledge derived from the records of the case maintained in the Department and the rest are my humble submissions and prayer

Judicial Magistrate
First Class

before this Hon'ble Tribunal; nothing material has been concealed therefrom and no part thereof is false.

DEPONENT

JOINT SECRETARY
URBAN AFFAIRS DEPARTMENT
GOVERNMENT OF MEGHALAYA

Filed On:

New Delhi

Judicial Magistrate
First Class

ACTION PLAN REPORT

Response to Original Application No. 199 of 2014- Almitra H. PATEL & Anr. Vs. Union of India & Ors. -BEFORE THE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, NEW DELHI

Issue of Non compliance of MSW Rules 2000:

Management of Solid Waste is perceived as a crucial service with great environment implications. In so far as the State of Meghalaya is concerned, every attempt is being made to comply with the MSW Rules. There are 6(six) Municipal Boards in the State of which only the Shillong Municipal Board qualifies Class I city. While efforts have been made for Shillong city to comply within the stipulated time, the rest of the other towns are small towns and with limited manpower and resources available with the Boards, some difficulty is being faced in complying with the Rules in letter and spirit. However, the State Government is making all efforts to ensure compliance in these towns also vide identifying designated dumping places, DPR preparation, construction of disposal plants, etc.

Action Taken

1. **Shillong Municipal Board:** In the areas within the Shillong Municipality, the SMB is the only authority and responsible agency for the maintenance of cleanliness of the Shillong city. Despite financial handicaps, lack of civic awareness and infrastructural deficiency the SMB still manages to keep the city clean to an average if not very good level when compared with other cities of the same class. There is still however a huge gap to be bridge in this particular civic service of the SMB in order to achieve a satisfactory level of cleanliness and beauty of the city.

Waste Generation and Collection: The entire municipal area generates about 120 - 130MT of garbage daily.The collection of the wastes is through primary and secondary collection from garbage bins. In the residential areas, the residents themselves deposit garbage in community bins and door-to-door collections have also been introduced in various localities of Shillong involving the local communities. In about 70% of the area of the city, the garbage is collected from door-to-door by the municipal vehicles. As per recent surveys about 80% of the generated waste is being collected daily by the Shillong Municipal Board.

The following statement shows the number of employees, equipment (vehicles etc) utilized by the Shillong Municipal Board in the maintenance of the cleanliness of the city.

Table 1. Conservancy staff and conservancy vehicles in SMB

Supervisory Staff (S.S.I, S.I & C.S)	12
Head Jamedars	4
Sweepers (Full time)	32
Sweepers (Part time)	202
Mazdoors (Full time)	40
Mazdoors (Part time)	12
Drivers	9
Lorry Attendants (Full time)	31
Lorry Attendants (Part time)	28
Vehicles (Hydraulics Tippers)	10
Vehicles (Ordinary Trucks)	4
Hydraulic Compactors	3
Primary Collection Vehicles	12
Cesspool Cleaners	3

Waste Disposal: The garbage is disposed at the Compost Plant of the SMB at the Trenching Ground at Mawlai where the Bio - degradable Waste is converted into compost. The existing dumping ground is located at Marten in Mawlai covering an area of 18 acres.This site covers an area of 18 acres and is a part of Riat Khwan Forest. Out of the 18 acres plot, 11 acres is being used exclusively for operating the 100 TPD Compost Plant and some land is being utilized for the bio-medical waste incinerator. In 2003 the SMB set up the Compost Plan in collaboration with Anderson Biotech Pvt. Ltd. and using Excel Industries' technology at a cost of Rs. 407.5 lacs in which the SMB invested an amount of Rs. 227.5 lacs. The compost plant segregates the Bio-Degradable wastes using a series of sieves known as trommels and the Non- Biodegradable wastes are again dumped as rejects in the same site. The project was taken up on a turn-key basis and the Franchisee i.e. ABPL was to run and operate the same for ten years from 2003. (copy of Agreement attached). In return the Franchisee has to pay Rs. 9.00 lacs as land lease and Rs. 3.00 lacs as Royalty on the compost annually as per the Agreement.

Initially the Compost plant was functioning well but thereafter encounter some problems most recent of which is in March 2010, whereby an accident many of

the machineries had been damaged and in the process affected the functioning of the plant. Improvement works is now being initiated under the under the ADB programme called North Eastern Region Capital Cities Development Investment Programme (NERCCDIP) details of which have been given in the paras below.

Improvement works undertaken under ADB funded programme for Shillong City

Summary of Projects being implemented under ADB programme for Shillong

Sr.No	Name of the work	Estimated cost of the work	Progress of work	Remarks
Tranche - I				
1.	Development of Short term Landfill site and associated works at Marten, shillong.	Rs 5.99 Crores (revised contract value)	40.12%	Project is likely to complete by June 2015.
Tranche - II				
2.	Construction of Garage cum Workshop shed and Staff Rest Room at Marten, shillong.	Rs 1.69 Crores (revised contract value)	14.50%	Project is likely to complete by June 2015.
3.	Procurement of Primary and Secondary Collection Vehicles and Workshop Machineries.	Rs 1.36 Crores	100%	Completed
4.	Procurement of Different types Bins and Personnel Protective Equipments.	Rs 1.71 Crores	53.17%	Project is likely to complete by March 2015.
	Total Amount	**Rs 10.75 Crores**		

Starting in 2011, under the ADB-MoUD funded North Eastern Region Capital Cities Development Investment Program (NERCCDIP), an intensive community awareness and participation campaign was taken up by the Urban Affairs Department through the State Investment Program Management and Implementation Unit (SIPMIU) and the Design Management and Supervision Consultants appointed under the project in collaboration with the Shillong Municipal Board. The objective was to create an efficient and sustainable system of management of municipal waste and to encourage people to segregate the waste at source. This was also in part to comply with the Solid Waste (Management & Handling) Rules, 2000 notified by the Ministry of Environment,

Government of India and adopted by the State Government. The campaign proposed to motivate the citizens of the city to participate in the collection and disposal of garbage. The active participation of the citizens will ensure that the waste will be disposed off through the Shillong Municipal Board's system and not into the drains, streams, roadside etc.

Under the same program, development and provision of infrastructure for waste management is also being provided. Each household of the city will be provided with a one-time grant of two colour coded bins for storage of segregated waste as an incentive to encourage segregation of waste at the household level until the waste is collected by the Shillong Municipal Board vehicles. 12 primary collection vehicles of 1.5 cubic meter capacity were also purchased along with 4 (four) secondary transportation vehicles of 4.5 cubic meter capacity. As part of the programme, orders have been placed for the supply of 60,000 colour coded household bins of 20 litres capacity and the same have been distributed in some localities and the process is ongoing for distribution to all the localities within Shillong Municipal area. Road side litter bins have also been installed in many parts of the city and bigger garbage bins of 360 litres capacity will be installed in the commercial areas shortly. Personal protective equipments have also been provided to the sweepers and waste handlers of Shillong Municipal board. The system is also being augmented under the 13th Finance Commission Award.

Other key feature of the program is Development of Short term Landfill site and associated works at the existing dumping ground at Marten as well as construction of Garage cum Workshop shed and Staff Rest Room. Out of the 18 acres plot, 11 acres is being used exclusively for operating the 100 TPD Compost Plant and some land is being utilized for the bio-medical waste incinerator around 5.25 acres has remained unutilized. Within this, 15000 sq m has been identified for development of a short term, emergency sanitary landfill project. The necessity for development of an emergency sanitary landfill site has arisen due to the fact that the existing site is almost saturated with accumulated garbage and also because of the fact that there is no other site in Shillong where the rejects from the compost plant as well as the non biodegradable wastes generated by the city can be disposed. In case this short term sanitary landfill site is developed, the life of the present dumping ground can be extended for another 6 to 8 years and the problem of disposal of the non biodegradable waste can be tackled to a large extent. This will also check the environmental degradation taking place now. Keeping this fact in mind, the project has been conceptualized and approved with a total estimated amount of Rs 3.07 crores and covering an area of around 6500 square meters in phase-1. The project has been designed to meet the standards of the Municipal Solid Waste (Management and Handling) Rules, 2000 and involves disposal of the

waste in a scientific manner by adopting a system of land filling with leachate collection and treatment. The project also has provisions of environmental protection measures. Since the development of the short term emergency land fill site involves cutting down of standing trees (904 trees over 15,000 sq m or 496 trees over phase-1 area of 6500 sq m), matter was taken up with the State Forest Department by SMB for necessary clearance. In this regard, State Forest and Environment Department has advised SMB to move afresh for renewal of the lease for the entire 18 acres to which action was taken up accordingly. Approval was given by the Ministry of Forest on November 2011. The work has been awarded and cutting of trees by the Forest Department has been completed at the site. Excavation work for the landfill site is currently being undertaken.

While approving the project for the short term sanitary landfill site at Marten, Asian Development Bank has laid down a condition to the effect that before the work for the short term sanitary landfill is awarded, the State Government should have obtained concurrence from the Pollution Control Board and also should have identified adequate land for a long term landfill. In this regard, the Consent to Establish has been granted by the State Pollution Control Board after having obtained the clearance of the State Environmental Impact Assessment Authority (SEIAA). A plot measuring 54 acres have also been allotted by the State Government at the New Shillong Township on October 2010 for the long term landfill site. Environmental Impact Assessment . Report and public hearing for he project has been completed and the final environmental clearance from the State Environmental Impact Assessment Authority is awaited.

Bio-Medical Waste: A Bio- Medical Waste Incinerator has also been installed to take care of the disposal of Bio - Medical Waste at the same site to scientifically process and dispose the bio-medical waste from the city's hospitals, nursing homes and clinics in accordance with the Bio-Medical Waste (Management and Handling) Rules 2000. About 9 hospitals and 5 diagnostics centers are covered by the facility

Waste to Energy: Although SMB had earlier floated an Expression of Interest establishing a waste to power project on a PPP mode which involves conversion of waste to electricity, the final outcome was not positive perhaps due to project viability. Among the new initiatives proposed to be undertaken, the SMB is now contemplating a proposal for setting up a Waste to Energy Plant which involves conversion of waste to diesel, for which work for the same is being carried out.

2. Tura Muncipal Board:

Collection and Transporation: Tura is the District Headquarters of West Garo Hills District of Meghalaya and also caters to the requirements of all the other districts of Garo Hills of Meghalaya. Tura town has been generating an estimated 65.66 MT of solid waste per day. However till recently only 18.35 MT per day of solid waste was being collected. This included waste generated from households, commercial establishments, hotels, restaurants, markets, institutions, drain cleaning, street sweeping and construction and demolition wastes and wastes from other sources. As of date, Tura Municipal Board is using 7 nos. of trucks and 3 nos. of smaller vehicles called Tata Magic with cover. House to house collection of garbage has also been initiated by using Tata Magic at Upper Chandmary area and Upper Babupara. Direct dumping of garbage at Tura Municipal Board trucks have also been introduced at Matchakol area. Two Tata Magic vehicles, one at Tura Civil Hospital and one at Maternity & Child Care Hospital are kept daily for disposal of Medical wastes. Daily clearance and disposal of medical waste is being done by TMB in the interest of the public. Inspite of all the efforts made by Tura Municipal Board, there is still acute shortage of Conservancy staff. However due to fund constraint, the strength of the regular and contractual/ temporary conservancy staff could not be increased.

Waste Disposal: The municipal waste collected used to be dumped at the dumping ground at Rongkhon Songgital and no proper treatment facility was available. Hence, during the year 2001 a proposal was submitted to the Ministry of Urban Development, Government of India for setting up of 40 TPD vermi compost plant at an estimated cost of Rs. 85.00 lakhs. The Ministry had sanctioned the project and HUDCO was engaged for implementation of the same. The compost plant was operationalise during 2005 and the Tura Municipal Board is managing the plant. The site located at Rongkhon Songgital covers an area of 8 bigha or 10702.43m2. In this plant design, care has again been taken to prevent percolation of rain water and run off of leachate through covering of the windrow platform and a proper drainage and treatment system.

Improvement works currently undertaken: The present Solid Waste Management programme of Tura town however still do not meet the requirements of the Municipal Solid Waste Rules, 2000. There is a need for further improvement like introduction of door to door collection system, segregation at source, proper transportation and disposal of the waste. Although there is the existing vermi compost plant to cater to green market

waste there is need to bring about scientific disposal of waste at the final disposal site and disposal of the non-biodegradable waste.

Keeping the above in mind, a new Solid Waste Management Programme was prepared and sanctioned by the Government of India under the central programme of Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) for towns not covered under JNNURM with a total project cost of Rs. 845.60 Lakhs.

This proposed project consisted of a systematic plan which would fill up deficiencies in the different components like segregation, collection, transportation, treatment and disposal of waste.

The system was proposed to be implemented in the following manner:

Source Segregation will be implemented through a two part system - one for bio-degradable and the other for non-biodegradable and is to be made mandatory for citizens to segregate waste. It is also proposed to impose a ban on throwing into streets, drains and open dumps. A system of storage of waste at source has been proposed so that waste is stored at the source of waste generation till collected for its disposal.

Primary Collection is proposed to be implemented through a door-to-door collection system using a containerized motorized pick up (TATA Ace) for daily collection of waste from the doorstep using a bell, whistle or horn as a means of announcing the arrival of the collection staff. The containerized motorized pick up (TATA Ace) will have two layers of bins of 12 nos. each catering to separate fractions of waste - bio-degradable and non-biodegradable waste. The help of NGO's and the Community will be enlisted for the purpose, who will charge a fee and it is expected that with their active participation, door-to-door collection will be implemented in phases and successfully.

Secondary Collection will be through the use of Refuse Collector bins of 0.5 cum capacity which will also be lifted by Refuse Collection Trucks that will empty the contents of the bin into the truck for onward transportation to the disposal site. These bins are suitably placed at strategic locations depending on available area for placement of these bins. Waste collected by street sweepers are proposed to be collected in wheel barrows and disposed to bins of 0.5 cum provided at regular intervals. Dumper Placer Containers to be placed only in major market places have also been proposed. Twin Litter bins are proposed to

be installed at public places like bus stations, market places, parks, gardens, institutional areas, important commercial areas and so on.

Transportation of waste is proposed to be carried out through Refuse Collector Trucks which will hydraulically lift the refuse collector bins and empty its contents into itself. Dumper Placers are also proposed to be used to lift the dumper placer containers from market areas to ensure quick turnaround time and negate manual handling. Tippers for construction and demolition waste are also being proposed.

Sanitary Landfill is also proposed to be established for inerts and also for rejects of compost plant. The inert wastes from drain cleaning, construction and demolition and street sweepings would be transferred to the landfill site.

Other Boards: For the other Municipalities of Jowai, Williamnagar, Baghmara and Resubelpara, in similar grounds the collection of the wastes is through primary and secondary collection from garbage bins.

Waste Generation and collection in the different Boards is as follows:

Board	Waste Generation	Waste Collection
Jowai	45 MT	30MT
Williamnagar	10.7 MT	10.7 MT
Resubelpara	15 MT	14 MT

Number of vehicles available for transportation of waste in the different Boards is as follows:

Board	Number of Vehicles
Jowai	7 (Trucks and tippers) 1 Cess Pool for liquid waste
Williamnagar	4 (Dumper, Trucks and Pick Ups)
Resubelpara	6 (Trucks and tippers) 3 Autop pick ups
Baghmara	3 (Trucks and tippers)

Designated dumping grounds have been identified for the respective Boards which is as follows:

Board	Identified Dumping Ground	Area
Jowai	Sabah Muswang	4.07 acres or 16470.77 m2
Williamnagar	Dabetkolgre	6690m2

Resubelpara	Mongponro	5 bigha or 6689.02m2
Baghmara	Damadarenggre	45 bigha or 60201.20m2

Apart form the above, an amount of Rs.2,50,000.00 has been sanctioned during 2006-07 by the Government under the 12 th Finance Commission each for the Municipal Boards of Jowai, Williamnagar, Baghmara and Resubelpara for engagement of Consultant for preparation of DPR on Vermi Compost Plant. Same is awaited from the Boards.

As regard to the other urban centres of the State, project for Solid Waste Management for Nongpoh town has been approved under JNNURM scheme and work is under progress. For Nongstoin town, project preparation has also been taken but due to non-availablity of land, matter could not be initiated further.

BEFORE THE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH AT NEW DELHI

ORIGINAL APPLICATION NO. 199 OF 2014

IN THE MATTER OF:

ALMITRA H. PATEL & ANR. .....APPLICANT

VERSUS

UNION OF INDIA & ORS .....RESPONDENTS

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3.	Annexure-A/2 A True copy of the Action Plan for Monitoring Water and air quality (Meghalaya State Pollution Control Board).	

DATED: .03.2015

(TAYENJAM MOMO SINGH)
ADVOCATE
FOR THE PETITIONERS(S)/RESPONDENT(S)
21 ,LAWYERS CHAMBER, R.K.GARG BLOCK,
SUPREME COURT OF INDIA,
NEW DELHI – 110001
MOBILE NO. 9810668853

BEFORE THE NATIONAL GREEN TRIBUNAL,

PRINCIPAL BENCH AT NEW DELHI

ORIGINAL APPLICATION No. 199 OF 2014

IN THE MATTER OF:

ALMITRA H. PATEL & ORS. .....APPLICANT

VERSUS

UNION OF INDIA & ORS. .....RESPONDENTS

MEMBER SECRETARY
Meghalaya State Pollution Control Board

AFFIDAVIT ON BEHALF OF RESPONDENT NO. , MEGHALAYA STATE POLLUTION CONTROL BOARD]

I, Shri. Jerold Hollis Nengnong, S/o (L) H.R. Lyngdoh aged about 52 years, R/o Mawnianglah, Upper Shillong-793009, Meghalaya do hereby solemnly affirm and state on oath as under:-

1. That I am the Member Secretary of the Meghalaya State Pollution Control Board, Respondent No. and I am aware of the facts and circumstances of the above case and hence, I am authorized and competent to swear to the contents of this affidavit.

2. That the answering Respondent in pursuant to this Hon'ble Court order dated 05.02.2015 had submitted its "Indicative/ suggestive Action Plan for management of the Municipal Solid Wastes in Meghalaya as per the Municipal Solid Waste (Management and Handling rules) 2000 and in reference to the judgment in the matter of Captain Mall Singh & Ors. Vs. Punjab PCB & Ors., Appeal No. 70 of 2012" to the State Government.

COURT OF THE CHIEF JUDICIAL MAGISTRATE SHILLONG

12/3/15

[A True copy of the "Indicative/ suggestive Action Plan for management of the Municipal Solid Wastes in Meghalaya as per the Municipal Solid Waste (Management and Handling rules) 2000 and in reference to the judgment in the matter of Captain Mall Singh & Ors. Vs. Punjab PCB & Ors., Appeal No. 70 of 2014" is annexed hereto and is marked as **Annexure-A/1**].

3. That the answering Respondent in pursuant to this Hon'ble Court order dated 05.02.2015 submits herewith "Action Plan for Monitoring Water and air quality (Meghalaya State Pollution Control Board).

[A True copy of the "Action Plan for Monitoring Water and air quality (Meghalaya State Pollution Control Board) is annexed hereto and is marked as **Annexure-A/2**].

4. That it is respectfully submitted that the answering respondent is conscious of its responsibilities under the Municipal Solid Waste (Management and Handling rules) 2000 and is in continuous process of Compliance and implementation of the said Rules.

COPIED OF THE CHIEF JUDICIAL MAGISTRATE SHILLONG.

14/3/15

MEMBER SECRETARY
Meghalaya State Pollution Control Board
Shillong

DEPONENT

VERIFICATION

I, the deponent above named, do hereby verified at Shillong on this 12 day of March, 2015 that the contents of my reply affidavit are true and correct to the best of my knowledge and belief. No part of the same is false and nothing material has been concealed there from.

MEMBER SECRETARY
Meghalaya State Pollution Control Board
Shillong

DEPONENT

COURT OF THE CHIEF JUDICIAL MAGISTRATE
SHILLONG

12/3/15

ANNEXURE - A/1
(17)

MEGHALAYA STATE POLLUTION CONTROL BOARD

'ARDEN' LUMPYNGNGAD,
SHILLONG – 793014

email : megspcb@rediffmail.com

PHONE : 0364 - 252153
252280
252151
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TELEFAX : 0364 - 252121
252176

No.MPCB/LEGAL-37/2014/2014-2015/17 Dated Shillong the 2nd March, 2015.

To,

The Joint Secretary to the Government of Meghalaya,
Urban Affairs Department,
Shillong.

Subj: Preparation of Action Plan for implementation of MSW Rules-in compliance with the Hon'ble NGT order dated 05.02.2015 in the Matter of Original Application No.199 of 2014. Almitra H. Patel & Anr Vs Union of India & Ors,

Sir,

In pursuant to the Hon'ble NGT Order stated above, I am enclosing herewith a copy of the "Indicative/Suggestive Action Plan for Management of Municipal Solid Waste in Meghalaya as per the Municipal Solid Waste (Management and Handling) Rules, 2000 and with reference to the judgment in Matter of Captain Mall Singh & Ors. Vs.Punjab PCB & Ors. Appeal No. 70 of 2012." prepared by the Meghalaya State Pollution Control Board alongwith a copy of the "Suggestive/Indicative Action Plan for Management of Municipal Solid Waste" prepared by the Central Pollution Control Board for favor of your information and necessary action.

Yours faithfully,

MEMBER SECRETARY
Meghalaya Pollution Control Board,
Shillong.

C/C

INDICATIVE/SUGGESTIVE ACTION PLAN FOR MANAGEMENT OF MUNICIPAL SOLID WASTE IN MEGHALAYA AS PER THE MUNICIPAL SOLID WASTE (MANAGEMENT & HANDLING)RULES, 2000 AND IN REFERENCE TO THE JUDGEMENT IN MATTERS OF CAPTAIN MALL SINGH & ORS Vs PUNJAB PCB & ORS. APPEAL No.70 of 2012.

[In Complaince with Hon'ble National Green Tribunal Order dated 5th February, 2015 in the Matter of OA. 199 of 2014, Almitra H Patel & Anr. Vs Union of India & Ors]

INDICATIVE/SUGGESTIVE ACTION PLAN FOR MANAGEMENT OF MUNICIPAL SOLID WASTE IN MEGHALAYA AS PER THE MUNICIPAL SOLID WASTE (MANAGEMENT AND HANDLING) RULES, 2000 AND IN REFERENCE TO THE JUDGMENT IN MATTER OF CAPTAIN MALL SINGH & ORS. VS. PUNJAB PCB & ORS. APPEAL NO. 70 OF 2012.

RESPONSIBILITY OF THE MEGHALAYA STATE POLLUTION CONTROL AS PER MUNICIPAL SOLID WASTE (MANAGEMENT AND HANDLING) RULES, 2000

The Meghalaya State Pollution Control Board as per Rule 6 of the Municipal Solid Waste (Management & Handling) Rules, 2000 is responsible to :-
(1).Monitor compliance of standards with regards to ground water, ambient air, leachate quality and the compost quality including incineration standards as prescribed under Schedule II, III IV of the Rule. (2)Grant periodic authorization in Form-III to municipal authorities or the operators of a facility on application in Form-I. (3). Stipulate compliance criteria and standards as specified in Schedule II, III and IV along with other conditions as may be necessary over the Solid Waste Management by Municipal Boards or operators of facility in the State.
The Solid Waste Management Authorities in the State are as follows-

i. The Shillong Municipal Boards managing the waste in some areas of Shillong
ii. The Shillong Cantonment Board managing the waste in cantonment areas of Shillong.
iii. The Tura Municipal Board managing the waste in Tura.
iv. The Jowai Municipal Board managing the waste in Jowai.
v. The William Nagar Municipal Board managing the waste in William Nagar.
vi. The Baghmara Municipal Board managing the waste in Baghmara.
vii. The Resubelpara Municipal Board managing the waste in Resubelpara.

PRESENT STATUS OF THE WASTE MANAGEMENT (IN COMPLIANCE TO THE CRITERIA OF OF RULE 6 AND SCHEDULE –I, II, III, & IV) AS PER ANNUAL REPORTS SUBMITTED TO THE MEGHALAYA STATE POLLUTION CONTROL BOARD:

MSPCB granted Authorization to the Shillong Municipal Board, the Jowai Municipal Board and the Williamnagar Municipal Board for operation of facility. The Shillong Cantonment Board shares the same facility with the Shillong Municipal Board, hence authorization is not required. Tura and Resubelpara Municipal Board's are still under process of granting by the MSPCB but the Baghmara Municipal Board has not submitted application as yet.

STATUS OF COMPLIANCE TO CRITERIA OF SCHEDULE-I

1. *Setting up of Waste Processing and Disposal Facilities* : The Shillong Municipal Board and the Shillong Cantonment Board shares an Aerobic Compost Plant treating the bio-degradable municipal solid wastes which is operating at Mawiong. Tura Municipal Board has vermi-compost Plant for processing of bio- degradable waste and Jowai Municipal Board has acquired a plot of land for construction of a scientific landfill site while the Williamnagar Municipal Board, the Baghmara Municipal Board and the Resubelpara

Municipal Board had not proposed any processing facilities either by composting, vermi-composting or pelletisation as the quantity of the waste generation is only about 7 -15 MT/day.

2. ***Monitoring the performance of Waste processing and disposal facilities***: For Shillong Municipal Board and the Shillong Cantonment Board, monitoring is carried out and as for the rest except Tura monitoring is not required presently as there is no processing facility. As for Tura monitoring has not been carried out by the Board due to acute shortage of Scientific and Technical manpower.

3. ***Improving of existing landfills site as per provision of the rules***: In Tura the Meghalaya Urban Development has commenced construction activities in the dumping ground located in Rongkon Songgital. In Jowai, the Municipal Board uses the dumping ground of the Jaintia Hills Autonomous District Council at Myngkjai and there is no proposal for improvement of landfill sites by other Municipal Authorities at present as reported in their Latest Annual Reports.
4. ***Identification of landfill sites for future use and making the site ready for operation:*** In Shillong The SMB has identified a new site. In Jowai, The Municipal Board has acquired a plot of land at Sabah Muswang. As for the rest there is no proposal to select a new site for disposal of Municipal Solid Wastes.

STATUS OF COMPLIANCE TO CRITERIA OF SCHEDULE-II

1. *Collection of Municipal Solid Waste:* In Shillong , Tura and Jowai, house to house collection is done in some localities while in other localities Storage bins and trolleys. While in the rest of the municipalities, storage bins and trolleys are being used for collection.
2. *Segregation of Municipal Wastes:* No segregation is done in any of the municipalities of the State.
3. *Storage of Municipal Wastes:* All municipalities have R.C.C open storage bins, trolleys and containers.
4. *Transportation of Municipal Wastes:* All municipal Boards have Trucks, Dumper-placers, Cess-pool Cleaner, van, auto, Cesspool Tanker, JCB (Robot) and Tractor-cum-Bulldozer are used for transportation of the collected Municipal Solid Wastes to the disposal site. Van is used for collection of bio-medical waste from Hospitals.
5. *Processing of Municipal Wastes:* Jowai, Williamnagar, Baghmara and Resubelpara are not processing Municipal Solid Wastes. In Shillong, aerobic composting is adopted for processing of bio-degradable Municipal Solid Wastes and Tura vermi -composting facility is adopted
6. *Disposal of Municipal Wastes:* Dumped in the landfill sites, trenching grounds and dumping yards.

STATUS OF COMPLIANCE TO CRITERIA OF SCHEDULE -III

1. ***Site Selection:*** The Shillong Municipal Board has identified a new site for disposal of process rejects and non-biodegradable wastes and Shillong cantonment Board is sharing the disposal site of The Shillong Municipal Board. The Jowai Municipal Board has acquired a plot of land for establishing a new Landfill site. Tura Municipal Board, Williamnagar Municipal Board, Baghmara Municipal Board and Resubelpara Municipal Board have not proposed for selection of new site as the existing sites are still adequate to meet the requirement.

2. ***Facilities at the Site:*** In the Shillong , Tura & Jowai Municipal sites, there are facilities like approach road, drinking water, Record Office fencing and lighting facility. Williamnagar Municipal Board, Baghmara Municipal Board and Resubelpara Municipal Board have no facilities at their existing dumping sites.

3. ***Specification for Land filling:*** The specifications for land filling of compost plant rejects and non bio-degradable wastes are not followed properly.

4. ***Pollution Prevention:*** Drains for storm water are provided around the compost plant of the Shillong Municipal Board, the trommel shed of the compost plant is provided with non-permeable flooring and provisions for leachate collection is provided. The Jowai, Tura, Williamnagar, Baghmara and Resubelpara Municipal Board have no provisions for prevention of either water or air pollution from the existing landfill sites.

5. ***Water Quality Monitoring:*** Near and around the Shillong and Jowai dumping site, monitoring of river water quality is carried out but near and around the area of the dumping site of the Tura, Williamnagar, Baghmara and Resubelpara Municipal Board, monitoring has not been carried out by the MSPCB due to acute shortage of Scientific and Technical manpower.

6. ***Ambient Air Quality Monitoring:*** Monitoring of air quality is carried out only in the Shillong dumping site area due to acute shortage of Scientific and Technical manpower.

7. ***Plantation at Landfill site:*** In the Shillong, Jowai and Tura landfill sites, there are natural vegetation and forest cover around the site.
8. ***Closure of landfill Site & Post-care:*** All landfill sites are still operational.

STATUS OF COMPLIANCE TO CRITERIA OF SCHEDULE -IV

Summary Statement on progress in regards to Standards for Composting, Treated Leachate and incineration -

1. In Meghalaya, the Shillong Municipal Board has set up a Waste Processing facility by adopting aerobic composting process of bio-degradable wastes. This facility is also shared by the Shillong Cantonment Board. The MSPCB has granted Consent to Establish for establishing a Compost Plant in collaboration with a private Agency M/s. Anderson Biotech

Pvt. Ltd. and is in operation. The Tura Municipal Board has also set up a Waste Processing facility by adopting Vermi-composting for processing of bio-degradable wastes.

2. There is no incineration plant for Municipal Solid Waste in the State except for Bio-Medical waste.

INADEQUACY IN MANAGING THE MUNICIPAL SOLID WASTE ALL OVER THE STATE

The problems causing the lack in addressing the needs in management of the solid waste in the whole State are as follows-

i. The whole State is not fully urbanized. Within the Urban areas there are the Municipal areas which comes under the management of the Municipal Boards for their solid wastes and there is no notified authorities for management of Municipal Solid Waste in the areas lying outside the Municipal jurisdictions. The Municipal Boards manages only the waste of the municipal areas leaving the waste of other urban areas unattended.

ii. Absence of authorities/local bodies for managing waste in urban centers lying outside the jurisdiction of Municipal Authorities in the State.

SUGGESTED POINTS TO BE CONSIDERED FOR PREPARATION OF ACTION PLAN.

The whole state may be clustered into 3 (three) clusters- namely Khasi, Garo and Jaintia Cluster.

The clusters will comprise of local bodies/authorities. More number of local bodies maybe set-up in the clusters, to cover all areas of the state. Each cluster will have one central processing facility/facilities. Each local body may set-up Storage Depots at different sites. The final rejects from the processing facilities may ultimately be disposed of in landfills that are to be set up at least one in each cluster.

Waste Management-

1. **Segregation of waste at source:** the local bodies should distribute colour coded bags for segregation of waste like recyclable waste (plastic and paper) , biodegradable waste, non - biodegradable waste and bio-Medical waste(from hospitals) in separate colors.

   Areas where house to house collection is not possible, Bins of suitable size may also be provided.

2. **Collection of Waste and Transport:** The workers collecting the waste should be provided with Personal Protection Equipments (PPE). The citizens of the State should be educated or made aware, for cooperation. The workers should ensure that all waste is inside bags and covered in the transport vehicles. to avoid littering.

Sources of waste –

a. **Market places** - markets produce different types of waste from different types of shops mostly biodegradable, recyclable, non- biodegradable.

   Color coded containers may be provided and kept at distant intervals for shopkeepers who are to be directed to deposit their waste accordingly in the containers.

b. **Marriage Halls/Community Halls** –The wastes produced are usually biodegradable and non-biodegradable. Suitable size containers with lid and bags that are color coded should be provided.

c. **Hospitals/Nursing Homes/Pathological Laboratories/ Health Care Centre** - The types of waste are human anatomical waste, animal waste, microbiology & biotechnology waste, waste sharps, discarded medicines, cytotoxic drugs and soiled waste.

   The waste are to be segregated at source in the colour coded bags as provided under schedule II of the Bio- Medical Waste (Management and Handling) Rules, 1998 for multiple treatment options.

d. **Construction & Demolition waste** – such waste may be collected and stored in various identified sites in the clusters. The local bodies should prescribe the rate per tone for the collection, transportation and disposal of such waste and notify the same to the people. The local bodies are to provide large containers on rent to the producers of construction waste for storage.

e. **Garden waste** - Private gardens/ public parks and gardens should compost the waste and reuse within the premises and if not possible they should be stored in large bags, for disposal by the local bodies, on payment in case of private gardens.

f. **Dairy and Cattle shed** – cow dung, grass and other stable waste should be stacked within their premises and stored properly to avoid littering.

g. **Streets and public places** - Litterbins are to be kept at every 150 metres distance and should be collected by local bodies at regular intervals.

3. **Storage Depots** - All the waste collected from the sources by the local bodies should be transported immediately to the depots for storage till a sufficient amount has accumulated for processing in the facility centre. The reason for accumulation is due to very less amount of solid waste generated from the sources, which is not viable for the treatment/processing plant.

   The depots should be constructed at quite a distance in the outskirts, in such away to prevent littering by dogs and stray animals etc., covered and easy accessible for the user. It should be able to hold the expected waste.

4. **Disposal of waste** –

Treatment Plant- the local bodies shall adopt suitable technologies or combine such technologies to make use of wastes to minimize the burden on the land fills.

Biodegradable waste – Bio-degradable waste shall be processed by composting, vermin-composting, anaerobic digestion. The end products should comply with standards.

Land filling - only waste that are non- biodegradable, inert and waste that are not fit for recycling or biological processing shall be disposed off in the land fills.

5. **MSW Processing/Treatment Techniques:–** Processing and treating MSW through suitable techniques can be done at the central processing facility/facilities of each cluster.

In Meghalaya very little amount of MSW is generated, as compared to other states, therefore suitable techniques for processing are suggested as follows -

Incineration - The burning of solid waste in the presence of oxygen at temperature of 1000^0C is applicable for Bio- medical waste for complete sterilization thus avoiding epidemics. Other solid waste too can be incinerated for reducing the amount for land filling.

Aerobic Composting – for Meghalaya, composting is the most responsible technical solution.

The object of this treatment is for stabilizing the organic matter to reduce possible environmental impacts & sanitary risk, mass & volume reduction of waste and the production of compost can be used for soil conditioner.

Anaerobic digestion (Biomethanation)- this is the process for biological decomposition of organic waste in the absence of oxygen. The organic waste are hydrolyzed, liquefied and gasified with the help of methanogenic bacteria. In this process the organic compound are converted to methane and carbon dioxide.

Vermi composting – this involves the joint action of earthworms and aerobic microorganisms for stabilizing of organic waste.

Microbial decomposition of organic matter takes place first by extra cellular enzymatic activity. Earthworms feed on partial decomposed matter, which further decompose in the gut of the worms. The worm cast excreted can be used as bio- fertilizer in agriculture.

6. **Ultimate Disposal of MSW:-** the final rejects after treatment of the MSW through processes, the same can finally be disposed off by the following-

Sanitary Land filling – Unscientific landfilling is the most simple and common way of practice but however causing serious environmental degradation. Sanitary land fills are highly recommended, it is a process of dumping of Municipal solid waste in thin layers in a scientifically designed pit. The waste is spread in thin layers and tightly compacted and then covered with soil. This anaerobic decomposition of organic matters in MSW produces rich biogas (Methane).

ANNEXURE - A/2

ACTION PLAN FOR MONITORING WATER AND AIR QUALITY (MEGHALAYA STATE POLLUTION CONTROL BOARD)

[In Complaince with Hon'ble National

Green Tribunal Order dated 5th

February, 2015 in the Matter of OA.

199 of 2014, Almitra H Patel & Anr. Vs

Union of India & Ors]

ACTION PLAN FOR MONITORING WATER AND AIR QUALITY (MEGHALAYA STATE POLLUTION CONTROL BOARD).

Rule 6 of the of the Municipal Solid Waste (Management & Handling) Rules, 2000 says that the Meghalaya State Pollution Control Board shall monitor the compliance of standards regarding ground water, ambient air, leachate quality and the compost quality including incineration standards under schedule II, III & IV.

1. Land fill sites

Water quality Monitoring – Prior to establishment of landfill site the MSPCB will collect and keep record baseline data of ground water quality for future reference. The ground water quality within 50 metres of the periphery of the landfill site shall be periodically monitored to cover different seasons.

Usage of ground water in and around landfill sites for any purpose is to be allowed after ensuring its quality . Specification under clause 24 of schedule III of MSW Rule,2000 shall be applied for monitoring drinking water quality.

Ambient Air Quality Monitoring - Ambient Air Quality shall be monitored to meet the specified standards prescribed under clause 28 of schedule III of the MSW Rule, 2000. Such monitoring of air quality shall be carried out twice a year in Shillong city and once a year in other towns.

2. Standards for composting, Treated Leachates

Ambient air quality monitoring shall be regularly carried out particularly for checking odour nuisance at down wind direction on the boundary of processing plant.

Compost quality – compost quality shall be monitored twice a year to ensure that safe application of compost is as per standards specified under clause 3.vii of schedule –IV of the MSW Rule, 2000, compost higher in concentration than the specified limits must not be used for food crops.

Treated Leachates – disposal of treated leachates must follow the standards prescribed under clause 4 of schedule –IV of the MSW Rule, 2000.

While discharging of treated leachates into inland surface waters, quantity of leachates to be discharged and the quantity of dilution water available in the receiving water body must be given due consideration.

The frequency for monitoring the treated leachates shall be twice a year.

Incinerators – the incinerators must follow the operating and emission standards laid down under clause 5of schedule –IV of the MSW Rule, 2000.

The emission from the incinerators shall be monitored twice a year.