

REPORT OF JOINT COMMITTEE IN THE MATTER OF OA No 196 OF 2021 (SZ) & IA.No.134 OF 2021 SUBMITTED BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, SOUTHERN ZONE, CHENNAI, AS PER ORDERS DATED 06.09.2021.

1.0 PREAMBLE

In the Original Application No.196 of 2021(SZ) & IA.No.134 of 2021 filed by Shri. T.M. Umashankar Vs The Union of India & Ors., the Hon'ble National Green Tribunal (NGT), Chennai issued Orders on 06.09.2021 with the following directions:

"7. In order to ascertain the nature of violations committed by the 5th respondent and also the question regarding the environment compensation, if any, to be imposed for the alleged violation said to have been committed by the 5th respondent, we feel it appropriate to appoint a Joint Committee consists of (1) a Senior Scientist from MoEF & CC, Integrated Regional Office, Bangalore, (2) a senior Scientist from Central Pollution Control Board, Integrated Regional Office, Bangalore, (3) a Senior Scientist from Karnataka State Pollution Control Board and (4) a Senior Scientist from Indian Institute of Science, Bangalore to inspect the unit in question and submit a factual as well as action taken report, if there is any violation found.

8. The Committee is directed to ascertain (i) whether the 5th respondent unit had committed any violation of environmental laws in establishing and running the unit without obtaining necessary permission and in violation of the direction issued by the Principal Bench in O.A.No.654 of 2019, (ii) On account of violation committed, is there any damage caused to the environment, (iii) if any damage has been caused, the Committed is directed to assess the environment compensation payable by the 5th respondent and also suggest the methodology by which damage caused to the environment can be restored.

9. The Karnataka State Pollution Control Board will be the nodal agency for coordination and also for providing necessary logistics for this purpose.

10. The applicant is directed to submit complete set of papers to the members of the committee within a week, so as to enable them to comply with the direction.

11. The Committee is directed to submit the report to this Tribunal on or before 29.10.2021 by e-filing in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF along with necessary hard copies to be produced as per rules”.

Pursuant to the request made by the Karnataka State Pollution Control Board (KSPCB) the concerned Department/Authority had nominated the officers for the Committee and the KSPCB has constituted the Committee vide Office Memorandum No. PCB/WMC/65/HWM (2020)/2021-22 dated: 12-11-2021 (Annexure- 1). As per the O.M, the committee comprises the following members:

1	A Senior officer from Regional Office, Ministry of Environment, Forest and Climate Change (MoEF&CC), Bangalore	Shri. Murali Krishna, Scientist 'E', MoEF&CC, Southern Zone, Bangalore Mobile No: 9654684977
2	A Senior Scientist from Central Pollution Control Board, Integrated Regional Office, Bangalore	Smt. Selvi. P.K, Scientist 'D', CPCB, Regional Directorate-South Zone, Bangalore Mobile No: 9868166753
3	A Senior Officer from Karnataka State Pollution Control Board	Shri. Siddaramaiah C Senior Environmental Officer, Zonal Office, Bangalore North, Bangalore Mobile No: 9845311539
4	A Senior Scientist from Indian Institute of Science, Bangalore	Prof. G. L. Shivakumar Babu Department of Civil Engineering, Indian Institute of Science, Bangalore. Mobile No: 9448480671

2. TERMS OF REFERENCE OF THE JOINT COMMITTEE:

To inspect the project and submit a factual report on;

- (i) whether the 5th respondent unit had committed any violation of environmental laws is establishing and running the unit without obtaining necessary permission and in violation of the direction issued by the Principal Bench in O.A.No.654 of 2019,
- (ii) On account of violation committed, is there any damage caused to the environment,
- (iii) If any damage has been caused, the Committed is directed to assess the environment compensation payable by the 5th respondent and also suggest the methodology by which damage caused to the environment can be restored.

3. INSPECTION BY THE JOINT COMMITTEE

The Joint Committee inspected the project site on 18.11.2021. The following committee members were present during inspection.

1. Shri. Murali Krishna, Scientist 'E', MoEF&CC, Southern Zone, Bangalore
2. Smt. Selvi. P.K, Scientist 'D', CPCB, Regional Directorate - South Zone, Bangalore
3. Shri. Siddaramaiah C, Senior Environmental Officer, KSPCB, Zonal Office, Bangalore-North, Bangalore.
4. Prof. G. L. Shivakumar Babu, Department of Civil Engineering, Indian Institute of Science, Bangalore

The following officials of KSPCB were present during the inspection.

1. Mr. H. K. Marimadaiah, EO, KSPCB, RO- Nelamangala,
2. Mrs. Pallavi. H. V, DEO, KSPCB, RO- Nelamangala,
3. Mr. R. Bhaskar, AEO, KSPCB RO- Nelamangala,

The following representatives of Karnataka Waste Management Project were present during the inspection.

1. Mr. Amit Chaudhary, Sr. General Manager,
2. Dr. Salman Khan, Head (Lab & EHS),
3. Mr. Vardhan, Asst. Manager (Legal),

The Applicant, Sri. T. M. Umashankar, Thimmanayakanahalli, Nelamangala Taluk was also present during the inspection.

4.0 ABOUT THE PROJECT- M/s. KARNATAKA WASTE MANAGEMENT PROJECT (KWMP), DABASPET.

M/s Karnataka Waste Management Project (KWMP), (A Division of Ramky Enviro Engineers Ltd.), is a Common TSDF project located at KIADB Industrial Area, Dabaspete, Nelamangala Taluk, Bangalore Rural Dist. - 562111, Karnataka. The area of the facility is 93.18 acres in which about 26 acres is earmarked for Secured Land Fill of 5 phases consisting of 21 cells, planned for 20 Years. Average span to each phase is 5 years. The facility has commissioned its operation during June 2008 and completed about thirteen years of operation, but till now the first phase is not completed which is nearing completion. The facility has taken-up excavation work (earth work) for second phase.

4.1 LOCATION OF TSDF AND ITS SURROUNDINGS

M/s KWMP has been established in 93.18 acres within the KIADB Industrial Area, Dabaspete, Bangalore Rural Dist. This land is acquired by the KIADB and handed over to the operator of the TSDF i.e. M/s Ramky Enviro Engineers Ltd. consortium.

The TSDF site is located about 1 km away from the National Highway (NH-4) i.e. Bangalore-Pune Highway and NH 207 (Doddaballapura road) is passing adjacent to the boundary of the TSDF premises. The TSDF is surrounded by industrial plots and industries on three sides and private open lands and Thimmanayakanahalli village on

Northern side. There are different kinds of industries established and operating around the TSDF site viz., Bulk drug and Pharmaceutical, Iron & Steel Foundries, Electroplating, e-waste dismantling & recycling, Biomedical Waste treatment & disposal facility (incinerator), Tyre pyrolysis, Aluminium, Wind power blades production unit etc.

The industrial area is provided with normal open storm water drains, which by natural course may reach downstream lakes in case of heavy rain. The nearby water bodies are as follows:

- a) Pemmanahalli Tank - 800 meters on upstream
- b) Dabaspete lake- 750 meters on upstream
- c) Nidavanda Lake - 1 km
- d) Lakkur Lake - 780 meters

5.0 OBSERVATIONS OF JOINT COMMITTEE

The Joint Committee reviewed the status of operation of Treatment, Storage, Disposal Facility (TSDF), Design of TSDF, Sampling of H.W, Procedure adopted for direct landfilling / landfilling after stabilisation, Stabilisation process, Leachate management, Operation of Incineration, Pollution Control measures adopted, OCEMS connected to Incineration facility, Ambient Air Quality Management, Fugitive Dust Emission, Surface run off management, Green cover etc.

5.1 COMPLIANCE TO THE NGT DIRECTIONS:

- 5.1.1** *Directions to ascertain whether the 5th respondent i.e., operator of TSDF unit had committed any violation of environmental laws in establishing and running the unit without obtaining necessary permission and in violation of the direction issued by the Principal Bench in O.A No, 654 of 2019 .*

5.1.1.1 COMPLIANCE W.R.T LOCATION CRITERIA FOR HAZARDOUS WASTE LANDFILL SITE

The TSDF facility falls under the classification of "Large Size Landfill" which has got area more than 20 hectares. The Joint committee made observations w.r.t. the compliance of Location Criteria as specified in the "Criteria for Hazardous Waste Landfills" published by CPCB vide Series HAZWAMS/17/2000-01. The compliance status as follow:

COMPLIANCE OF LOCATION CRITERIA

S. No.	Location Criteria	Observations
1.	Lake & Pond: No landfill shall normally be constructed within 200 meters of any lake or pond.	There is no Lake/ Pond existing within 200 m distance.
2.	River: No landfill shall be constructed within 100 meters of a navigable river or stream.	There is no river existing within 100 m.
3.	Flood Plain: No landfill shall be constructed within 100 years flood plain.	There is no record of flood plain of this landfill site in 100 years.
4.	Highway: No landfill shall be constructed within 500 meters of the right of the way of any state or national highway.	TSDF site located about 1 km away from the National Highway (NH-48) i.e. Bangalore - Pune Highway, But, the NH 648 is passing adjacent to the boundary of the TSDF premises, about 400 m from the active landfill.
5.	Habitation: Landfill shall be at least 500 meters from a notified habituated area and a Zone of 500 m around a landfill boundary should be declared a no-development buffer zone after	<i>500 m around the landfill boundary is not declared as non-development buffer zone after landfill location finalization till date. This landfill is developed within the KIADB Industrial Area,</i>

	landfill location is finalized.	<i>Dabaspete.</i>
6.	Public parks: No landfill shall be constructed within 500 m of a public park.	No public parks present within 500 m distance.
7.	Critical Habitat Area: No landfill shall be constructed within critical habitat areas including reserved forest areas. A critical habitat area is defined as the area in which one or more endangered species live.	Not constructed within critical habitat area including reserve forest area.
8.	Wetlands: No landfill shall be constructed within wetlands.	Not constructed within /on wetlands.
9.	Air Port Zone: No Landfill shall be constructed within a zone around Airports as notified by the regulatory authority or the aviation authority.	Not coming under Air Port Zone, Nearest airport is at the distance about 50 km.
10.	Water supply well: No landfill shall be constructed within 500 m of any water supply well.	There is no water supply well available within 500 m.
11.	Coastal Regulation Zone: No landfill shall be sited in a coastal regulation zone.	Location is not coming under Coastal Regulation Zone.
12.	Ground Water table level: No landfill shall be located in areas where the ground water table will be less than 2 m below the base of the landfill.	Ground water table at landfill site is beyond 2 m.

The TSDF site is complying with the location criteria except notification of no development buffer zone. The landfill facility is provided with access roads, equipment

shelters, weighing scale, office space, waste inspection / sampling facility, temporary waste storage area, surface water drainage facility, leachate collection tank, monitoring wells, fencing and green belt along the peripheral boundary etc.

5.1.1.2 COMPLIANCE TO THIPPAGONDANAHALLI RESERVOIR CATCHMENT AREA NOTIFICATION (TGR NOTIFICATION) ISSUED BY THE STATE OF KARNATAKA.

The committee observed that the Central Government in exercise of the powers conferred under section 23 of the Environment (Protection) Act, 1986 have delegated the power to give direction vested with them under section 5 of the said Act to the State Government of Karnataka vide Notification No. S.O. 152 (E), dated 10.02.1988. The State Government of Karnataka in exercise of the aforementioned power to give direction under Section 5 of the Environment (Protection) Act, 1986, issued Notification No. FEE 215 ENV 2000, dated 18.11.2003 (Annexure-2), with a view to protect the catchment area of Tippagondanahalli Reservoir to prevent any activity that would lead to contamination of the reservoir.

The aforementioned Notification dated 18.11.2003 categorized the Tippagondanahalli Reservoir catchment area in to Four Zones based on vicinity and sensitivity comprising of areas specified in column (2) of the Schedule falling under the corresponding zone specified in column (1) thereof and also specify the nature of restricted or regulated activities in these areas in column (3) and the Authorities responsible for regulating the activities in column (4). The TSDF falls within Zone-I. The Schedule, to the aforementioned notification in respect of Zone -1 is given below.

Zone	Area covered	Nature of restricted / regulated activities	Authorities responsible for regulation
(1)	(2)	(3)	(4)
Zone-1	Entire Tippagondanahalli Reservoir (TGR) catchment area specified in annexure to this Notification.	<ul style="list-style-type: none"> a. Regulation and checking of over exploitation of ground water b. No fresh leases or license for mining, quarrying and stone crushers shall be granted c. No person shall dispose solid as well as liquid waste in this area without scientific processing. d. To ensure adoption of rainwater harvesting systems in all the new and existing buildings, within six months from the date of issue of this order e. To promote organic farming including bio-Fertilizer and bio-pesticide. 	<p>Director, Mines and Geology Department</p> <ul style="list-style-type: none"> 1. Department of Urban Development 2. Bangalore Water Supply and Sewerage Board. 3. Nelamangala Planning Authority. <p>Secretary, Department of Agriculture / Horticulture</p>

It is noted from the above that, there was no mining, quarrying and stone crushing activities were being carrying out in the TSDF and hence the establishment is not in violation of Tippagondanahalli Reservoir (TGR) catchment area Notification.

5.1.1.3 COMPLIANCE W.R.T ENVIRONMENTAL CLEARANCES

Compliance to EIA Notifications & Circulars / H.W. Rules

S. No.	EIA Notifications & Circulars / Hazardous Waste Rules	Status of Compliance
1.	<i>EIA Notification 1994 dt. 27.01.1994</i> , as amended on 04.05.1994, 10.04.1997, 27.1.2000 and 13.12.2000	
	Schedule 1: List of Projects Requiring Environmental Clearance from the Central Government	Under Schedule I, there are 30 Projects listed requiring EC from MoEF&CC. But, the list does not include the TSDF.
2	<i>The Hazardous Wastes (Management and Handling) Rules, 1989.</i>	The Rules does not comment about TSDF.
3.	The Hazardous Waste (Management and Handling) (Amendment) Rules, 2003. The Hazardous Waste (Management & Handling) Rules, 1989, amended 2000, further amended 2003 require every State in India to build and operate environmentally sound hazardous waste management facilities. Substituted Rule 8 by Rule 7 of the Hazardous Waste (Management and Handling) (Amendment) Rules, 2003 notified by Notification S.O.593 (E), dated 20.5.2003. <i>The Rule 8 is about Disposal Sites, the details are:</i>	
	i. The occupier or operator of a facility or any association of occupiers shall be jointly and severally <i>responsible for</i>	The Govt. of Karnataka and Karnataka State Pollution Control Board (KSPCB) have taken initiative to identify TSDF site. The Govt. of Karnataka made an

	<p><i>identifying sites for establishing the facility</i> for treatment, storage and disposal of hazardous wastes.</p>	<p>agreement with German Technical Co-operation (GTZ) for evolving an effective Hazardous Waste Management (HAWA) strategy in the State of Karnataka.</p>
	<p>ii. The State Government, operator of a facility or any association of occupiers shall jointly and severally be responsible for, and <i>identify sites for common facility</i> for treatment, storage and disposal of hazardous wastes in the State.</p>	<p>Site Selection:</p> <p>Initially two sites i.e. one in Siddalaghatta taluk in Kolar district and the other in Dabaspete, Bangalore Rural District were short listed by the KSPCB for setting up TSDF. Finally, Dabaspete site was found more suitable and identified for setting up TSDF to cater the need of the entire state. The KIADB acquired land for TSDF site.</p>
	<p>iii. The operator of a facility, occupier or any association of occupiers shall <i>undertake an environmental impact assessment (EIA) of the selected site(s) and shall submit the EIA report to the State Pollution Control Board</i> or Committee.</p>	<p>Notification:</p> <p>The Dabaspete site was notified for the TSDF purpose by the Government of Karnataka on 21.02.2003.</p> <p>Preliminary investigations and Environmental Impact Assessment (EIA) was completed in January 2004 under the GTZ-HAWA Project.</p> <p>The Technical Advisory Committee of KSPCB in their 272nd meeting held on</p>

		<p>15.11.2003 recommended for establishment of TSDF at Dabaspeta and authorized KSPCB to put up the project for public hearing as per the prevalent EIA Notification, 1994.</p>
	<p>iv. The State Pollution Control Board or Committee shall on being satisfied with the EIA report, cause a public notice for conducting a public hearing as per the procedure contained in the Environment Impact Assessment Notification, 1994 published vide S.O. 60(E) dated the 27th January, 1994 as amended from time to time.</p>	<p>Public Hearing: Informed that intensive public awareness campaign about the project was conducted in the surroundings (5 km radius) of Dabaspeta site from June 2003 to January 2004, to appraise the entire stakeholders. The Deputy Commissioner, Bangalore Rural district had chaired public hearing on 20.02.2004, as per the provisions contained in the EIA Notification of 1994.</p>
	<p>v. The State Pollution Control Board or Committee shall <i>forward to the State Government</i> or Union territory Administration, as the case may be, the project report including <i>EIA report and details of public hearing along with its recommendations</i> within a period of 30 days from the last</p>	<p>The proceedings of the public hearing was received by KSPCB vide letter No. CAL CR 369/2003-04 dated 18.03.2004. Accordingly, the KSPCB vide letter No. KSPCB/HWMC/AEO-1/EO/2003-04/ 686 dated 31.03.2004 forwarded the project report including EIA report and details of the public hearing along with its</p>

	date of public hearing.	recommendation to the State Government.
	vi. The State Government shall <i>complete the assessment within</i> a period of thirty days from the date of receipt of the documents mentioned in sub-rule (5) and convey the decision of its approval of site(s) or otherwise within 30 days thereafter to the concerned operator of the facility, occupier or any association of occupiers.	The State Government accorded approval vide Government Order No. FEE 293 ECO 2002 Bangalore dated 21.04.2004, within the stipulated time (Annexure-3).
	vii. After approval of the site or sites, the State Government shall acquire the site(s) or inform the occupier or any operator of facility, or any association of occupiers to <i>acquire the site(s) for setting up the facility</i> for treatment, storage and disposal of hazardous wastes. The State Government shall simultaneously notify such sites(s). The State Government shall also compile and publish periodically an inventory of	Government of Karnataka has issued final notification for acquisition of 93.18 acres of land. Accordingly, KIADB have acquired land by paying compensation to the land losers as per procedure.

	such hazardous wastes disposal sites and facilities;	
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From the above, it is concluded that the facility has followed all required procedures as per Rule 8 of the Hazardous Waste (Management and Handling) (Amendment) Rules, 2016 i.e. Identification & Selection of suitable site, Notification of site for TSDF purpose, Environmental Impact Assessment Study, Technical Advisory Committee of KSPCB review for satisfaction of EIA report, Public Awareness Campaign, Public Hearing conducted by DC, KSPCB recommends to Govt. of Karnataka within 30 days of Public Hearing, Approval of State Govt., and Order to acquire the sites for setting up facility.

Grant of Consent for Establishment by KSPCB:

The Consent for Establishment (CFE) was issued to the unit under Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 for setting up of TSDF vide Order No. KSPCB/HWMC/2007-08/425A dated July 06, 2007 with a condition that the facility shall make an application for CFO to KSPCB in the prescribed form at least 45 days before the expected date of commissioning of the facility (Annexure-4).

First Consent for Operation (CFO) was issued under Water Act and Air Act by the KSPCB vide combined consent order No. H- 362 dated: June 19, 2008 with validity up to June 30, 2009 (Annexure-5). Pursuant to the receipt of the Consent to Operate under Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, the facility has applied for periodical revalidation of Consent for Operation. Copies of latest CFO and Authorization are enclosed as ANNEXURE - 6A & ANNEXURE-6B.

Authorization for Handling of Hazardous Wastes: Authorization for managing of Hazardous Wastes was issued under the Hazardous Wastes (Management and Handling) Amendment Rules 2003 vide order No. KSPCB/HWM/H-361 dated June 19, 2008 with validity up to June 2009 and subsequently keeps renewed up to

June 30, 2026. The unit is authorized for the land disposal of hazardous waste after treatment for a quantity of 40,000 MT/ Annum.

5.1.1.4 CONSTITUTION OF SEIAA AND EC FOR INTEGRATED FACILITY

The MoEF&CC has notified Environment Impact Assessment (EIA) - 2006 on 14.09.2006 in supersession of the EIA 1994 Notification. As per the EIA Notification, the activities requiring Environmental Clearance have been broadly categorised as Category A and Category B. As a measure of decentralisation, State Level Environment Impact Assessment Authority (SEIAA) and State Expert Appraisal Committee (SEAC) have been promulgated to consider the proposals pertaining to issue of Environmental Clearance for Category B activities listed in the schedule of the Notification.

The MoEF& CC vide circular No. J -11013/41/2006-IA II (I) dated 13.10.2006 w.r.t. EIA Notification 14.09.2006 - Interim Operational Guidelines till 13.09.2007 in respect of applications made under EIA 1994 Notification, was issued stating that "The EIA Appraisal Applications will be processed / evaluated by MoEF as per the procedures, till such time as concerned SEIAA /SEAC is notified. Upon such notification, the papers will be promptly transferred to the SEIAA for further consideration".

The SEIAA and SEAC for the State of Karnataka were constituted for the first time by MoEF & CC vide Notification No. S.O. 945 (E) dated 11.06.2007 for a period of three years. But, the SEIAA/SEAC commenced functioning from 10.08.2007. Subsequently, the Authority and Committee were reconstituted by MoEF & CC vide Notification S.O.2402 (E) dated 01.10.2010.

As per Paragraph 2 of Environment Impact Assessment Notification, 2006, projects or activities which require environmental clearance are:

- i. All new projects or activities listed in the schedule to the notification;

- ii. Expansion and Modernisation of existing projects or activities listed in the schedule to the notification with addition of capacity beyond the limits specified for the sector, that is, projects or activities which cross the threshold limits given in the schedule, after expansion or modernisation;
- iii. Any change in product mix in an existing manufacturing unit included in Schedule beyond the specified range.

SCHEDULE

The list of Projects or Activities Requiring Prior Environmental Clearance

Project or Activity	Category with threshold limit		Conditions if any
	A	B	
	Physical Infrastructure including Environmental Services		
7d Common Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDFs)	All integrated facilities having incineration & landfill or incineration alone	All facilities having landfill only.	General Conditions

According to above Schedule, the facility had sought Environmental Clearance from MoEF & CC under the Environment Impact Assessment Notification - 2006 for setting up incinerator within the existing site of TSDF. The facility had provided mandatory documents in response to the observations of Expert Appraisal Committee (EAC) during the period of March 2013 to May 2014. *In all the deliberation of EAC, the requirement of Environmental Clearance to the existing facility i.e. TSDF was not discussed / called for.* The proposal was considered by the EAC in its meeting held on October 18-19, 2012 and May 13-14, 2013, also exempted the public hearing for the project, since it was located in notified industrial area.

The EAC recommended for EC for setting up Incinerator facility of capacity 5.5 Million Kcal per hour (1000 -1500 kg per hour). EC for setting up incinerator at TSDF, Dabaspeta, Bangalore, Karnataka by M/s Ramky Enviro Engineers Ltd, Bangalore was issued by MoEF & CC vide order F. No. 10-65/2012-IA.III dated 19.09.2014. Hence the facility became an Integrated Common Hazardous Waste Management Facility having incineration & landfill, falling under Category A (Annexure-7).

Also, the Government of Karnataka vide order No. FEE 277 ENV 2014 dated 04.09.2015 issued NOC for the implementation of the Hazardous Waste Management Project to set up incinerator plant of capacity 1.5 MT/hr at the TSDF site by M/s Ramky Enviro Engineers Limited, Hyderabad (Annexure-8).

Accordingly, the Karnataka State Pollution Control Board (KSPCB) accorded Consent For Establishment (CFE) under Water Act and Air Act for establishing Incinerator Plant of capacity 1.5 MT/Hr for incineration of Hazardous Waste generated from other industries in the existing premises vide Order No. KSPCB/SEO (WMC)/CFExp/2015-16/H110 dated 23.11.2015 (Annexure-9).

5.1.1.5 COMPLIANCE W.R.T AMBIENT AIR QUALITY

The unit has established three Manual Ambient Air Quality Monitoring stations to monitor the ambient air quality for PM₁₀, PM_{2.5}, SO₂, and NO₂ by using Respirable Dust Sampler (RDS) and PM_{2.5} sampler at all manual locations. The ambient air quality monitoring is carried out by NABL approved laboratory of their own at all locations twice a week as per the CPCB protocol.

The joint committee reviewed the monitoring results of ambient air quality data of three manual stations established at Near Weigh Bridge, Near Canteen and Near Garage Building. The observations are:

- The major sources of air pollution are from the handling operation of hazardous waste during stabilisation and landfilling operations, truck movements etc.
- The unit has established three Ambient Air Quality Monitoring Stations within TSDF and monitoring the ambient air quality manually. The analysis results (average) of 2st Quarter (July to September) of 2021 are as follow:

Ambient Air Quality Monitoring Results (Average)

S. No.	Locations	SO ₂ µg/m ³	NO _x µg/m ³	PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	Ammonia µg/m ³
1.	Near Weigh Bridge	14.93	5.32	24.29	15.21	5.09
2.	Near Canteen	15.10	5.13	27.39	15.13	5.05
3.	Near Garage Building	15.10	5.18	25.93	14.86	5.19
Standard limit (Day)		80	80	100	60	400

- The ambient air quality monitoring carried out by KSPCB and the monitoring results are as follow:

Ambient Air Quality Monitoring Results

Date	SO ₂ µg/m ³	NO ₂ µg/m ³	PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	Ammonia µg/m ³
06-01-2018	-	-	-	51	-
06-01-2018	BDL	31	86	-	39
31-01-2019 to 01-02-2019	0.9	13.3	106	62	15.1
16 to 17-05-2019	-	11.6	76	48	18.3
Standard limit (24 hours)	80	80	100	60	400

The above ambient air quality monitoring results reveals that SO₂, NO₂, and NH₃ is complying all the time with the Ambient Air Quality Standards (24 Hrs average), whereas PM₁₀ and PM_{2.5} exceeded on few occasion marginally.

5.1.1.6 COMPLIANCE W.R.T STABILISATION OF HAZARDOUS WASTE & MANAGEMENT OF LEACHATE GENERATED

Central Pollution Control Board (CPCB), Delhi, vide order No. B-29016 (SC) 1 (52-II)/18 / HWMD/2786 - 92 dated June 13, 2018 issued direction to the Common TSDF's under Section 5 of the Environmental (Protection) Act, 1986 with respect to installation/ upgradation of facility for management of leachate generated from secured landfill and stabilization of hazardous waste with APC measures.

a) STABILISATION OF HAZARDOUS WASTE

Options:

- i. *Mechanized cover system having arrangement of waste conveyor system, mixing unit with mechanized mixing arrangement, suction duct / hood, scrubber system and stack (or)*
- ii. *Stabilization in pit by mixing with excavator / backhoe loader having hood over the pit with adequate suction arrangement to arrest dust / fumes followed by scrubber and stack.*

The facility is following the *Option (ii)* for stabilization of Hazardous Waste for secured landfilling. The Observations are:

- The TSDF has provided/ constructed shed in an area of 25.5 M x 30.23 M for hazardous waste stabilization. The stabilization area is provided with concrete flooring and 5 number of stabilization pits of equal size. The size of the each stabilization pit is 4.8 mx 4.3m x 1.5m i.e. 30.96 M³. The total capacity of 5 stabilization pit is 154.8 M³. Out of 5 pits, only two pits are used of hazardous waste stabilization and the same is provided with three side HDPE cover and suction arrangement to collect the dust generated during stabilization process.
- The stabilization shed is used for storing of stabilization materials such as lime, cement, fly ash etc. Out of total area, 14.5m x 25.5 is used for waste stabilization and the remaining area is used for stabilization materials (chemicals) etc.

- A partition wall with suction ducts is provided to collect dust generated and the collected dust is passed through scrubber followed by stack above the roof level.

b) MANAGEMENT OF LEACHATE GENERATED

Options:

- i. *Solar Evaporation Pond: May be used / provided suitable sized pond be installed considering evaporation loss Vs. Leachate generation. Further such pond shall have double liner system with leachate pumping system; (or)*
- ii. *Multiple Effect Evaporator and the residue of MEE to be dispose into secured landfill after proper encapsulation and the condensate water to be managed as per the conditions stipulated in the consent to Operate issued by the concerned SPCB under the Water Act; (or)*
- iii. *Adequate treatment Facility for treating leachate so as to achieve concentration of COD < 250 mg/L prior to its use in Spray Dryer of common hazardous waste incinerator for quenching of flue gases from secondary chamber of the incinerator; (or)*
- iv. *Effluent Treatment Plant having advance oxidation technology or adopting other suitable technology and manage as per the conditions stipulated in the consent issued by the concerned SPCB under Water Act.*

The facility is following *Option (i)*, and option (iii) partially for quenching of flue gases from secondary chamber of the common hazardous waste incinerator.

The Observations made are:

- A drainage liner of 300 mm thickness of gravel layer and HDPE pipes are provided in the secured landfill to collect Leachate. The leachates are collect through perforated pipes, drains in to common header pipes and transfer leachate generated by gravity to leachate collection pond cum solar evaporation ponds. The existing leachate collection tank is having dimension of 36 m x 42m x 2 m with a capacity of 3024 m³. Inspection chambers also provided for inspection of interior of the pipe as well as back flushing in case of any clogging.

- During inspection, the entire leachate collection tank was found covered with HDPE sheet to avoid entry of rain water & to prevent odour nuisance. Due to covering there was accumulation of gas, bulging of HDPE sheet was noticed.
- The existing leachate collection tank is provided with single liner system with leachate pumping system. The facility has constructed and put in to use one more double lined leachate collection tank with dimension of 35.39 m x 52.65 m x 3.1 m having capacity of 5776 m³.
- In case of utilization of leachate in Spray Dryer of common hazardous waste incinerator for quenching of flue gases from secondary chamber of the incinerator the TSDF facility need to provide leachate treatment plant so as to achieve concentration of COD < 250 mg/L prior to its use.
- Leachate is also being managed for spraying on hazardous waste to control dust during summer, which is one of the recommended alternative as per the Criteria for Hazardous Waste Landfills published by CPCB. (HWM Series: HAZWAMS/17/2000-01).

5.1.1.7 COMPLIANCE W.R.T MANAGEMENT OF SURFACE WATER RUN OFF

The TSDF area is divided into dark zone (contaminated area like roads where the trucks with waste moves, near treatment and storage building, near drying yard, etc.) and white zone where there is no contamination area like the green belt area, garden, other open spaces away from the movement of waste.

The first flush of rain water for 15- 20 minutes is collected from the dark zones through open drainage system and stored in separate tanks called as Quarantine Tanks, and thus collected water is being used for waste stabilization, and for spraying to control dust pollution in land fill.

5.1.1.8 COMPLIANCE W.R.T GROUND WATER QUALITY

The KSPCB is monitoring the ground water in and around the TSDF facility premises on quarterly basis at 4 locations inside the premises and 11 locations outside the TSDF to ascertain the water quality for any possible contamination due to TSDF activities. The locations of ground water quality monitoring are as follow:

A. Inside the TSDF Premises

- i. Bore well located near the leachate pond
- ii. Bore well located near the land fill site
- iii. Bore well located near the Admin building
- iv. Bore well near the Security Gate

B. Outside the TSDF Premises

- i. Bore well located at M/s Vintex Cintrroller System Pvt Ltd
- ii. Bore well located at M/s HHV Solar
- iii. Bore well located at M/s Peenya Industrial Gases
- iv. Bore well located at M/s Leonid Chemicals Pvt Ltd
- v. Bore well located at M/s Surya Hard Chrome
- vi. Bore well located at M/s LM Glass Fibers India Pvt Ltd
- vii. Bore well located at Thimmanayakanahalli Village
- viii. Bore well located at Nanjundappa Land, Thimmanyakanahalli village
- ix. Bore well located at Bettaiah Land, Pemmanahalli Village
- x. Public Bore well at Pemmanahalli Village
- xi. Bore well located at M/s Emmvee Solar Systems Pvt Ltd

The committee reviewed the monitoring results of all above mentioned ground water locations, analysis results of ground water quality are found within the permissible limit of ISO 1500 Drinking Water Standards, except marginal exceedence of Iron, Nickel and Manganese concentrations on a few sampling locations. Also, the heavy metal

concentrations in the ground water samples were found Below Detection Limit (BDL). It is concluded that there is no significance impact on ground water.

5.1.1.9 COMPLIANCE W.R.T HAZARDOUS WASTE INCINERATOR OF 1.5 TONNES/HOUR.

The Karnataka State Pollution Control Board (KSPCB) has accorded Consent For Establishment (CFE) under Water Act and Air Act for establishing Incinerator Plant of capacity 1.5 MT/Hour for incineration of Hazardous Waste generated from other industries in the existing premises vide order No. KSPCB/SEO (WMC)/CFExp/2015-16/H110 dated 23.11.2015 (**Annexure -9**).

The Hazardous Waste Incinerator is Rotary kiln type with a capacity of 1.5 MT/Hr and provided required control measures such as Spray dryer, Multi cyclone, Reagent Feeding System - Lime & activated carbon, Bag filters, Packed scrubber, Mist eliminator with stack of height 40 m AGL. In addition, they have installed Online Continuous Emission Monitoring System and the system is connected to CPCB and KSPCB servers to view real time data of emissions from the incinerator. One such copy is enclosed (**Annexure-10**). The observed parameters with concentration are CO-17.30mg/Nm³, HCl-10.36mg/Nm³, PM-0 mg/Nm³, SO₂-34.50 mg/Nm³, HF-1.04 mg/Nm³, Total Organic Carbon-6.92 mg/Nm³, and NO₂-43.25 mg/Nm³, which are within the limits prescribed by the Board.

5.1.1.10 COMPLIANCE W.R.T ESCROW ACCOUNT

After post closure of TSDF, it is required to be monitored at least for a period of 30 years from the closure of the facility so as to ensure that no adverse impact on the environment as well as health of the public living in the vicinity of the facility. For undertaking such activities, adequate funds would be required which need to be deposited in a common account called "Escrow Account".

In view of this, MoEF& CC issued Office Memorandum vide No. 23-1/2008-HSMD dated April 16, 2009, requesting all the SPCB/PCC to create Escrow Account recommending to deposit 5% of the annual turnover of landfillable waste towards the Escrow Account. This account would be a tripartite agreement between Operator of the facility, Respective SPCB/PCC and the Public Sector Bank acting as Escrow Agent. Afore said provisions of Escrow Account shall be implemented w.e.f. commencement of the operation of common secured landfill site or April 16, 2009, the day of the O.M. was issued by MoEF & CC, whichever is later.

The date of Commencement of TSDF operation was June 2008, accordingly the details of Escrow Amount statement as follow:

ESCROW AMOUNT STATEMENT

Period	User Charges in Rupees			Escrow Amount (Rs)
	DL	LAT	Total	
2008-2009	68,71,702	1,05,91,673	1,74,63,375	8,73,169
2009-2010	1,39,56,000	2,82,02,000	4,21,58,000	21,07,900
2010-2011	1,10,07,172	5,36,96,015	6,47,03,187	32,35,159
2011-2012	89,51,000	6,82,73,000	7,72,24,000	38,61,200
2012-2013	60,14,876	7,96,09,097	8,56,23,973	42,81,199
2013-2014	78,56,478	9,39,80,411	10,18,36,889	50,91,844
2014-2015	57,19,203	7,44,42,996	8,01,62,199	40,08,110
2015-2016	60,97,325	7,64,93,866	8,25,91,191	41,29,560
2016-2017	67,22,986	4,16,76,728	4,83,99,715	24,19,986
2017-2018	38,12,348	3,57,86,740	3,95,99,088	19,79,954

2018- 2019	52,86,418	3,24,28,372	3,77,14,790	18,85,739
2019-2020	40,07,203	6,94,31,060	7,34,63,730	36,73,186
2020-2021	50,58,167	8,32,30,953	8,83,19,031	44,15,952
Total	9,13,60,879	74,78,42,910	83,92,59,167	4,19,62,958

Note: DL: Direct Landfill, LAT: Landfilling After Treatment

Based on the above statement, the facility has to deposit Rs. 4,19,62,958/- (Rupees four crores nineteen lakh sixty two thousand nine hundred and fifty eight only), as Escrow Amount.

As per the Detailed Project Report (DPR) of 2004, Contract Agreement executed between KIADB as Contracting Agency (CA) and Ramky Consortium on 01.12.2006, the Clause No. 16.2 of DPR explains the need of Super Fund. The need of Super Fund is:

- i. For remediation of contaminated site due to failure of Landfill and
- ii. During post Closure period of 30 years: However, the post closure period of 30 years, requires finance for maintenance and monitoring activities. A separate fund (Super Fund) set aside from the gate fee could be used during the post closure as there is no other source of revenue at that time.

The committee of the opinion that the "Super Fund Dabaspete KIADB" is operated by KIADB, not as per tripartite agreement between Operator of the facility, Respective SPCB/PCC and the Public Sector Bank acting as Escrow Agent. In view of above, it is recommended to operate the account as per MoEF & CC, O.M. dated April 16, 2009 on Escrow Account to have uniformity across the country.

5.1.1.11 COMPLIANCE TO THE DIRECTION ISSUED BY THE PRINCIPAL BENCH IN O.A.No.654 OF 2019.

With respect to Environmental Clearance for the Existing TSDF, the facility has followed all required procedures as per Rule 8 of the Hazardous Waste (Management and Handling) (Amendment) Rules, 2003 i.e. Identification & Selection of suitable site, Notification of site for TSDF purpose, Environmental Impact Assessment Study, Technical Advisory Committee of KSPCB review for satisfaction of EIA report, Public Awareness Campaign, Public Hearing conducted by DC, KSPCB recommends to Govt. of Karnataka within 30 days of Public Hearing, Approval of State Govt., and Order for acquire the sites for setting up facility.

As per EIA Notification 1994 dt. 27.01.1994, as amended on 04.05.1994, 10.04.1997, 27.1.2000 and 13.12.2000, under Schedule 1, thirty categories of Projects Requiring Environmental Clearance from the Central Government are listed, **but, the list does not include the TSDF**. By the time the EIA Notification 2006 was notified on 14.09.2006 by MoEF & CC, the facility had completed all the process as stated above and submitted the application for obtaining NOC from the Karnataka State Pollution Control Board on 12.09.2006 (*2 days before Notification*). After obtaining additional required information, the KSPCB has granted Consent for Establishment on 06.07.2007 (**Annexure-4**).

As per the Circular of MoEF& CC dated 21-11-2006, the "application received for NOC by the SPCB before 14th September 2006 may be considered as per the provisions of Water Act, 1974 and Air Act, 1981. However, they will have to obtain Environmental Clearance from the relevant authority by June 30th 2007 if the category requires EIA clearance as per EIA Notification. In such cases unit can meanwhile carry on with the commencement of their project activities. The projects

not seeking clearance under EIA Notification 2006 by 30th June 2007 will be treated as violation cases under Section 15 of Environment (Protection) Act, 1986".

In spite of above Circular, the facility was allowed and found in operation with valid Consent For Operation (CFO) from inception i.e. May 2008 till refusal of CFO by KSPCB i.e. on 06.02.2018 in view of non submission of EC and other non compliances (Annexure-11A&Annexure-11B). But, the requirement of EC was never raised by any authorities till 30.06.2016.

In the Original Application No.654 of 2019 filed by Shri. T.M. Umashankar & Ors Vs The Union of India & Ors., the Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi issued Orders on 26.09.2019 with the following directions:

"7. In view of above, while we do not interfere with the functioning of the TSDF, we direct that the TSDF must comply with the law and the requisite EC may be obtained. The project proponent may apply for EC within two months. The Appellate Authority may deal with the appeal said to be pending for about three years expeditiously in accordance with law".

In view of the directions, M/s. Ramky Enviro Engineers Ltd., has submitted the application for grant of EC (amendment) for the project in question in prescribed format within the stipulated time i.e. two months from the date of judgment for both both Landfill and Incinerator (ANNEXURE - 12).

It was learnt that the application for EC came up for consideration before the Expert Appraisal Committee - Infra-2 ('EAC') in its 48th Meeting dated 28-29 January, 2020. The proposal regarding the application for EC was considered at Agenda Item No.48.4.2. The EAC has considered the application in the background of the entire chronology of event in relation to project in question.

In the minutes of said meeting, it was noted that the EAC noticed that EC for setting up the incinerator at TSDF, Dabaspete, Bangalore by M/s. Ramky Enviro Engineers Ltd., has been granted by MoEF & CC vide letter dated 19.09.2014, wherein it was clearly mentioned that the proposal of project involved setting of incinerator facility within the existing TSDF of KWMP to dispose the incinerable waste in scientific manner so that the facility becomes Integrated Common Hazardous Waste Management Facility (ICHWMF). The relevant part of minutes of meeting dated 28-29 January, 2020 is enclosed as **ANNEXURE-13**.

That the EAC has clearly expressed its opinion that while granting the said environmental clearance on 19.09.2014, the Ministry has endorsed the existence of the landfill site along with the proposal of incinerator as the project proponent has not proposed any expansion of the existing facility.

However, in the concluding part, the EAC has opined that the project proponent may approach the Hon'ble NGT for seeking clarification on further requirement of EC in view of the EC granted to the project proponent vide letter dated 19.09.2014 and deferred the proposal. The proposal shall be reconsidered after the above details are addressed and submitted.

The Consent sought by the facility for the period from July 01, 2016 was refused by the KSPCB vide letter No. PCB/WMC/1933/HWM/2017-18/H-1435 dated 06.02.2018 in view of non submission of EC for TSDF and other non compliances (**Annexure 11 A & Annexure-11B**). On Refusal of consent by KSPCB, the M/s KWMP has filed an appeal before the Karnataka State Appellate Authority against the Consent Refusal Order and the Hon'ble Appellate Authority has stayed the Refusal order and ordered to maintain the status quo (**Annexure- 14**). The KSPCB has issued subsequent Consent for Operation for both TSDF and Incinerator (Integrated Common Hazardous Waste Treatment facility).

5.1.2 Compliance to direction (ii) *On account of violation committed, is there any damage caused to the environment*

Based on the above facts & observations, the Joint Committee concludes that there can't be any significant impacts on environment based on the present environmental compliances of the facility. Also, the Joint Committee could not notice any significant non-compliance on the Environmental monitoring data of ambient air quality, ground water quality, etc. But there is always scope to further improve the system.

5.1.3 Compliance to direction (iii) *if any damage has been caused, the Committed is directed to assess the environment compensation payable by the 5th respondent and also suggest the methodology by which damage caused to the environment can be restored.*

In view of the facts stated above in 5.1.2, the committee did not assess any environmental compensation.

5.1.4 Compliance to the direction "10. *The applicant is directed to submit complete set of papers to the members of the committee within a week, so as to enable them to comply with the direction*".

The applicant Sri. T. M Umashankar was present during the inspection of Joint Committee and he failed to submit complete set of papers to the members of Joint Committee, as per the Directions of Hon'ble NGT.

He submitted the following oral objections before the Committee;

1. The overflow from the check dams i.e., quarantine tanks flows outside the facility premises and finally leads the nearby Nidavanda tank and eventually Tippagondanahalli reservoir, thereby polluting the water source.
2. The health of cattle and villagers in the surrounding village is being affected from the smell nuisance caused by the operation of the facility especially during night times.

3. The industry is not complying with the rules made for carrying out landfilling the waste ie, without providing any impervious layer like clay layer, geo mat etc and the facility is not carrying out the TSDF operation scientifically.

During the inspection it was raining and observed little spillages/drop-outs of hazardous wastes from the transportation vehicles near the weigh bridge facility and on approach road. The surface run-off over the approach road was flowing out of the premises through storm water drain and finally reaches the downstream Nidavanda tank. In case this surface run-off water gets contaminated/ polluted due to hazardous waste, there will be impact on Nidavanda tank water. Hence the Committee directed the Environmental officer of KSPCB to collect the sample of water from storm water drain for analysis and to issue directions to the facility to provide collection tank near the entrance gate, such that no surface run-off/ storm water/ any overflow from quarantine tank/ leachate tank is discharged outside the facility premises.

The applicant was taken near the quarantine tanks and observed that the water level was much below the top surface of the tanks. He was also taken to the land fill facility and showed him physically the impervious materials like clay layer, geo mat, etc provided at the bottom before filling the waste and he was convinced. There was no smell nuisance observed during inspection and the Environmental officer of KSPCB was directed to address the smell issues if any during the waste stabilization/filling operations since the said operations were not being carried out due to rain.

6.0 OVERALL OBSERVATIONS AND VIEWS OF THE JOINT COMMITTEE

Based on the inspection and review of environmental monitoring data, procedure followed in obtaining EC etc., the observations of Joint Committee are:

- ❖ In the light of the Hon'ble Supreme Court Order No. W.P.(C) No.657 of 1995 dated 14.10.2003, it was mandatory for all States to have a safe disposal site for various categories of hazardous wastes. Accordingly, the

Department of Forest Ecology and Environment and the Karnataka State Pollution Control Board in collaboration with the German Technical co-operation (GTZ) have inventoried the hazardous waste generated in the State of Karnataka and identified suitable sites for establishing Transport Storage Disposal Facility (TSDF) for hazardous wastes final disposal.

- ❖ Initially, two sites i.e. one in Siddalaghatta taluk in Kolar district and the other in Dabaspete, Bangalore Rural District were short listed and Dabaspete site was found more suitable and identified for setting up TSDF to cater the need of the entire State. Accordingly, Dabaspete site was notified for establishing TSDF by the Government of Karnataka on 21.02.2003.
- ❖ Preliminary investigations and Environment Impact Assessment (EIA) was completed in January 2004 under the Hazardous Waste Management (GTZ-HAWA) Project. The Technical Advisory Committee of KSPCB in their 272nd meeting held on 15.11.2003 recommended for establishment of TSDF at Dabaspete and authorized KSPCB to put up the project for public hearing as per the prevalent EIA notification 1994.
- ❖ Public awareness campaign was conducted during June 2003 to January 2004, to appraise the entire stakeholders located in 5 km radius. The Deputy Commissioner, Bangalore Rural district has conducted public hearing on 20.02.2004, as per the provisions contained in the EIA Notification of 1994.
- ❖ The project report received by the KSPCB on 18.03.2004 was forwarded to the State Government along with EIA report, Details of the public hearing with its recommendation on 31.03.2004. Accordingly, the State Govt. accorded approval vide order dated 21.04.2004.

- ❖ The design drawings relating to TSDF including final DPR was prepared by GTZ in June 2004 and the project obtained clearance / approval from the State cabinet in June 2005.
- ❖ The TSDF site was identified based on soil investigation, geo technical analysis, hydro geological investigations and other site specific studies. The EIA study covers the information about social, economic and cultural details of the habitats in the study area. The study concludes that the proposed TSDF does not have any negative impact on above factors.
- ❖ Government of Karnataka have issued final notification for acquisition of 93.18 Acres of land. Accordingly, Karnataka Industrial Area Development Board (KIADB), contracting authority for the establishment of the TSDF has acquired land by paying compensation to the land losers as per procedure.
- ❖ The contract Agreement for Design, Build, Own, Operate and Transfer (DBOOT) of Dabaspete Hazardous Waste TSDF was made between KIADB and Consortium of M/s Ramky Infrastructure Ltd., & M/s Ramky Enviro Engineers Ltd., on 01.12.2006. Also Lease deed between Govt. of Karnataka (i.e. Secretary to Govt. Ecology & Environment) on same day for 51 Years. The duration of the lease comprises:
 - i. One year for the construction phase of the TSDF;
 - ii. A Period of 20 Years after the completion of the construction phase of the TSDF, which is the operation of TSDF;
 - iii. A period of 30 Years after the completion of the operation phase, which is the post closure of TSDF. This duration under no circumstances shall be altered.

- ❖ The TSDF facility falls under the classification of “Large Size Landfill” which has got area more than 20 hectare and complying with the location criteria as specified in the “Criteria for Hazardous Waste Landfills” except declaring 500 M around the landfill boundary as non-development buffer Zone. This landfill is developed within the KIADB Industrial area. The landfill facility is provided with access roads, equipment shelters, weighing scale, office space, waste inspection / sampling facility, temporary waste storage area, surface water drainage facility, leachate collection tank, monitoring wells, fencing and green belt along the peripheral boundary etc.

- ❖ State Level Environment Impact Assessment Authority (SEIAA) and State Expert Appraisal Committee (SEAC) have been promulgated to consider the proposals pertaining to issue of Environmental Clearance for Category B activities listed in the Schedule of the EIA Notification 2006. Accordingly, the SEIAA and SEAC for the State of Karnataka were constituted by MoEF & CC on 11.06.2007 and SEIAA / SEAC commenced functioning from 10.08.2007. *During the period of non constitution of SEIAA / SEAC, there was no EIA Appraisal Applications submitted by the facility to MoEF & CC and also latter to SEIAA /SEAC for TSDF.*

- ❖ The TSDF facility has obtained Consent for Establishment from KSPCB on 06.07.2007, which is after the constitution of SEIAA/ SEAC for Karnataka by MoEF & CC. In continuation obtained combined consent under Water Act and Air Act from KSPCB on 19.06.2008 and commenced their operation. The consent for operation was renewed up to 30.06.2016. Subsequently, the Consent sought by the facility for the further period from July 01, 2016 was refused by the KSPCB. On refusal of consent by KSPCB, the M/s KWMP have filed an appeal before the Karnataka State Appellate

Authority against the Consent refusal order and the Hon'ble Appellate Authority stayed the refusal order and ordered to maintain the status quo.

- ❖ There are 747 member industries disposing their landfillable hazardous wastes to TSDF as on October 2021 with 175 active members. The design capacity of TSDF is 800000 MT with 40,000 MT per Annum for 20 years; so far the facility has received landfillable hazardous wastes only 43% of its design capacity in these 13 years, not receiving expected design quantity.
- ❖ The facility has to deposit 5% of the annual turnover of landfillable waste towards the Escrow Account. Accordingly total amount deposited in Escrow (Super Fund Dabaspete, KIADB) is Rs 3,98,41,364 against 4,19,61,713 the remaining balance to be deposited is Rs. 21,20,349. This account is operated only by KIADB, not as per tripartite agreement between Operator of the facility, Respective SPCB/PCC and the Public Sector Bank acting as Escrow Agent.
- ❖ The manual ambient air quality monitoring results of three stations located within the TSDF premises reveals that SO₂, NO₂, PM₁₀, PM_{2.5} and NH₃ are found complying with Ambient Air Quality Standards of Annual average. Only on a few occasion PM₁₀, and PM_{2.5} marginally exceeded the National Ambient Air Quality Standards.
- ❖ The ground water quality monitoring results of TSDF reveals that there is no noticeable impact on ground water. The facility has provided quarantine tanks for collection of surface runoff water during rain and the same is being used for waste stabilization and for controlling dust emission.

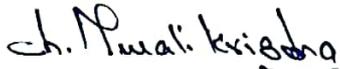
- ❖ The facility had sought Environmental Clearance (EC) from MoEF & CC as per EIA Notification 2006 for setting up incinerator within the existing site of TSDF during 2013-14. Based on the recommendation of Expert Appraisal Committee (EAC), the MoEF & CC issued EC for setting up incinerator at TSDF, Dabaspete, Bangalore on 19.09.2014. Hence, the facility became an Integrated Common Hazardous Waste Management Facilities having incineration & landfill, falling under Category A. This project was exempted from public hearing, since it is located in notified industrial area.
- ❖ Government of Karnataka issued NOC to set up incinerator plant of capacity 1.5 MT/Hr at the TSDF site on 04.09.2015. Also, the Karnataka State Pollution Control Board (KSPCB) has accorded Consent for Establishment (CFE) under Water Act and Air Act for establishing Incinerator Plant of capacity 1.5 MT/Hour for incineration of Hazardous Waste generated from other industries in the existing premises on 23.11.2015. Accordingly, the facility has established H.W. Incinerator with required Air Pollution Control Devices.

Based on the above facts & observations, the Joint Committee concludes that there are no any significant impacts on environment based on the present environmental compliances of the facility. Also, the Joint Committee could not notice any significant non-compliance on the Environmental monitoring data of ambient air quality, ground water quality, etc. But there is always scope to further improve the system.

THE COMMITTEE SUGGESTS THE FOLLOWING ITEMS/MEASURES TO BE IMPLEMENTED:

- To continue with regular ground water monitoring of the TSDF premises and its surroundings to ascertain any ground water contamination.

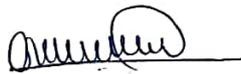
- The Karnataka State Pollution Control Board shall be directed to identify fugitive dust emission sources and prescribe the standard for the same. Also the unit shall be directed to carryout fugitive dust emission monitoring as per the source identified. Also to conduct performance evaluation of TSDF yearly.
- To implement the directions of CPCB with respect to stabilization of Hazardous Waste and Management of Leachate.
- To operate Escrow Account i.e. "*Super Fund Dabaspete KIADB*" as tripartite agreement between Operator of the facility, Respective SPCB / PCC and the Public Sector Bank acting as Escrow Agent, by following MoEF & CC O.M. dated April 16, 2009 on Escrow Account, to have a uniformity across the country.
- To provide collection tank near the entrance gate, so that no surface runoff/storm water/any overflow from quarantine tank/leachate tank is discharged outside the facility premises including providing vehicle tyre washing facility.



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