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**BEFORE THE NATIONAL GREEN TRIBUNAL
WESTERN ZONE BENCH, PUNE
ORIGINAL APPLICATION NO.87/2023**

Vanashakti (NGO) & Anr

----Applicants

Vs

Municipal Corporation of Greater Mumbai & Ors. ----Respondents

**AFFIDAVIT IN REPLY ON BEHALF OF THE
MAHARASHTRA POLLUTION CONTROL BOARD i.e.
RESPONDENT NO.2.**

I, Kishor Kerlikar, Age-adult , Occupation -Service , the Sub-Regional Officer of the Maharashtra Pollution Control Board at Mumbai-II, having my office address at Kalpataru Point, 2nd Floor, Sion-Matunga Scheme Road No.8, Sion (East), Mumbai-400 022, do hereby state on solemn affirmation as under:-

1. I am filing this Affidavit on behalf of the Respondent No.2 i.e. Maharashtra Pollution Control Board (MPCB) in compliance of the Order dated 29/1/2024 passed by this Hon'ble Tribunal.
2. I say and submit that in compliance of earlier orders dated 3/7/2023 & 20/7/2023 passed by this Hon'ble Tribunal, the Respondent No.2-MPCB vide letters dated 17/8/2023 had requested NEERI and IIT, Powai to submit techno-





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commercial proposal for Assessment of the environmental damages due to debris and mud dumped at the banks of River Mithi near Tapeswar Mandir, Aarey Forest. Copies of the letters dated 17/8/2023 addressed to NEERI and IIT are enclosed herewith and annexed as an **Annexure-I collectively**

3. I say and submit that in response to the Respondent No.2-MPCB letter dated 17/8/2023, NEERI vide letter dated 25/1/2024 has submitted the Project proposal titled "Assessment of the Environmental Damages due to debris dumped at Mithi River, Mumbai" for the Mithi river, Aarey colony site. A copy of the Project Proposal received from NEERI dated 25/1/2024 is enclosed herewith and marked as an **Annexure-II**.

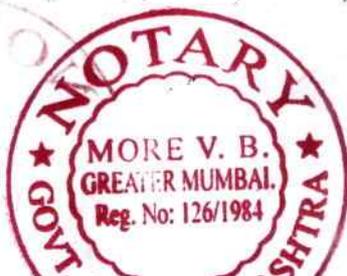
28 FEB 2024

Solemnly affirmed on this 28th day of February, 2024 at Mumbai.

For & on behalf of Respondent
No.2-MPCB,

(Kishor Kerlikar)
Sub-Regional Officer-Mumbai-II

Sub Regional Officer
M.P.C. Board, Mumbai-2



BEFORE ME

28/02/2024
VASANT B. MORE
Notary Gr. Mumbai

MAHARASHTRA POLLUTION CONTROL BOARD		
Phone :	(022) - 24016239	 Kalpataru Point, 1st floor, Sion- Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai - 400 022
Fax :	(022) - 24015269	
Email :	romumbai@mpcb.gov.in	
Visit At :	http://mpcb.gov.in	

Date: 17/08/2023

No. MPCB/RO(M)/B-1891

To,
National Environmental Engineering Research Institute (NEERI)
89B, Dr Annie Besant Rd,
Near flyover, Bhim Nagar, Worli,
Mumbai, Maharashtra 400018

Sub: - Assessment of the environmental damages due to debris and mud dumped at the banks of River Mithi, near Tapeshwar Mandir, Aarey Forest, Mumbai

Ref: - 1. Orders dtd. 3/7/2023 & 20/7/2023 passed by the Hon'ble National Green Tribunal, WZ, Pune in Original Application No. 87/2023 (WZ) filed by Vanshakti & Anr. v/s MCGM & Ors.
2. Joint Committee report dated 18/07/2023

In compliance of the orders of Hon'ble NGT in the above referred matter, National Green Tribunal Western zone Bench Pune dated 20/07/2023. Joint Committee has suggested to appoint expert agency for Assessment & restoration of the environmental damages due to debris and mud dumped at the banks of River Mithi, near Tapeshwar Mandir, Aarey Forest.

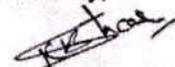
In the this regards Board has decided to assess of the environmental damages due to debris and mud dumped at the banks of River Mithi, near Survey No. 10, Village Paspoli, CTS No. 83, Tapeshwar Mandir, Aarey Forest, Mumbai through renowned institutes. The detailed Objectives of the study & scope of work is as below:

Objectives & Scope of the study of the study:

- Assess environmental damage in the terms of water pollution, damage to ecology, impact on health of nearby residents, change in hydrology, etc. Quantify damage wherever possible.
- Estimation of environmental compensation and estimation of cost of restoration of the environment.
- Recommend remediation measures along with timeframe, budget.
- To Submit Final report on Assessment of Assessment of the environmental damages due to debris and mud dumped at the banks of River Mithi, near Tapeshwar Mandir, Aarey Forest.
- The entire exercise should be executed and completed within one-month period.

In view of the above, MPCB would like to request you to submit techno-commercial proposal for Assessment of the environmental damages due to debris and mud dumped at the banks of River Mithi, near Tapeshwar Mandir, Aarey Forest, within 10 days period.

Yours faithfully,


(S. R. Bhosale)

Regional Officer, Mumbai



Copy submitted for Information:

1. P.A. to Hon'ble Chairman, MPC Board, Mumbai.
2. P.A. to Hon'ble Member Secretary, MPC Board, Mumbai.
3. Assistant Secretary (Tech), MPC Board Mumbai

Copy for Information and necessary Follow-up:

1. Sub Regional Officer Mumbai-II, MPC Board Mumbai



MAHARASHTRA POLLUTION CONTROL BOARD		
Phone :	(022) - 24016239	
Fax :	(022) - 24015269	
Email :	romumbai@mpcb.gov.in	
Visit At :	http://mpcb.gov.in	
		Kalpataru Point, 1st floor, Sion- Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai - 400 022

Date: 17/08/2023

No. MPCB/RO(M)/B-1890

To,
 Environmental Infrastructure & Clean Tech (EICT) Laboratory & GIS Laboratory for Environmental
 Management & Simulation (GEMS) Environmental Science & Engineering (ESE) Department
 Indian Institute of Technology Bombay
 Powai, Mumbai 400076

Sub: - Assessment of the environmental damages due to debris and mud dumped
 at the banks of River Mithi, near Tapeshwar Mandir, Aarey Forest, Mumbai

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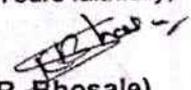
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Yours faithfully,


 (S. R. Bhosale)

Regional Officer, Mumbai



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1. Sub Regional Officer Mumbai-II, MPC Board Mumbai





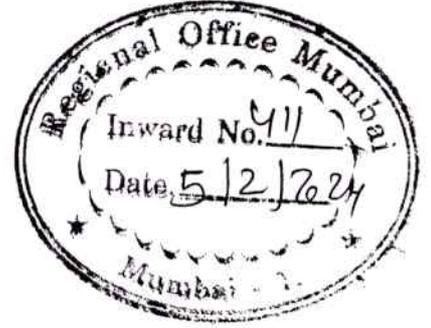
Dr. Ganesh R. Kale
Sr. Principal Scientist
Solid & Hazardous Waste Management

{phone: 0712-2249885 (6 lines) Ext. 393
{fax : 0712-2249900
{ gram : NEERI, Nagpur-20. CHWM/2024
{ email : gr_kale@neeri.res.in

Date: 25/01/2024

To,

Regional Officer,
Maharashtra Pollution Control Board,
Kalpataru Point, 1st floor, Sion- Matunga,
Scheme Road No. 8,
Opp. Cine Planet Cinema,
Near Sion Circle, Sion (E),
Mumbai - 400 022
Maharashtra, India.



Subject: Submission of Project Proposal

Dear Sir,

I am pleased to submit the Project proposal titled, "Assessment of the Environmental Damages due to Debris dumped at Mithi River, Mumbai" for the Mithi river, Aarey colony site, prepared in response to the MPCB request. The project proposal was prepared after detailed discussion and site visit.

Please do contact me for any queries.

With Warm Regards,

(Ganesh R. Kale)

Sr. Principal Scientist and Project Leader

नेहरू मार्ग, नागपुर - 440 020 भारत - Nehru Marg, Nagpur - 440 020 INDIA

Ph (O) : 91-712-2249999 Fax : 2249900 Ph (R) : 2220226 Email : director@neeri.res.in URL : www.neeri.res.in

सतत विकास की ओर / Towards Sustainable Development

SRO-II
05/02/2024

Project Proposal**Assessment of the Environmental Damages due to Debris dumped
at Mithi River, Mumbai****1.0 Preamble**

A huge quantity of debris and mud is dumped at the banks of River Mithi, near Survey No. 10, Village Paspoli, CTS No. 83, Tapeshwar Mandir, Aarey Forest, Mumbai. This land belongs to Aarey Milk Colony and is under the Jurisdiction of S ward of Municipal Corporation of Greater Mumbai (MCGM). An NGO had filed a case (Vanashakhti & Anr V/s MCGM) in National Green Tribunal (NGT) to highlight the Environmental Damage being caused due to the Dumping of debris and mud. Hon. NGT ordered Maharashtra Pollution Control Board (MPCB), Mumbai to proceed with the restoration work taking expert guidance from CSIR-NEERI Nagpur. MPCB officials forwarded the NGT order to CSIR-NEERI with request to provide technical assistance as per the NGT order.

NGT constituted joint committee consisting of MPCB, MCGM, Aarey and NGO representatives had conducted a site visit earlier and mentioned the possibility of contamination of Mithi river due to land-slides / contamination and loss of trees buried in the debris. MCGM has tentatively estimated the dumped waste to be 12 lakh m³ and is entrusted with estimating the cost of removal of debris. The Committee had termed the damage as "Severe" and suggested immediate removal of dumped material with scientific assistance from CSIR-NEERI.

A request Email from RO MPCB, Mumbai was received by CSIR-NEERI on 05/08/2023 and a site visit was conducted by CSIR-NEERI representative on 19/12/23. During the site visit, it was informed that the dumping occurred within the last 5 years. It was further informed that the Mithi river flow path was very long and its boundary wall is intact hence there was no chance that the dumped debris could have fallen in the river. Site reconnaissance revealed that the dumped waste consist mostly of Construction and Demolition debris.



This project proposal is prepared in response to the MPCB request and is based on the observations made during the site visit.

2.0 About NEERI

NEERI is the premier research institute working in Environmental Science and Engineering in India. The institute comprises research departments working on various components of environment. The role of the institute is to provide scientific and technical information and services to the various authorities and industries and promote planning, policy and management strategy for the regional environmental efforts in India as well as overseas. More than 300 scientific and technical staff members make NEERI a highly qualified partner contributing analytical facilities and extensive knowledge on various aspects of environment.

The Institute has the expertise and research capabilities in the domains of Air, Water, Sewage, Climate, Waste management, etc. The institute has assisted Judiciary and various regulatory agencies viz. Ministry of Environment and Forests, Central and State Pollution Control Boards, Municipal Corporations, State Industrial Development Corporations and the numerous industries on various aspects of Environmental protection. The institute is equipped with highly skilled manpower making it highly competent in undertaking the above-mentioned project.

3.0 Objectives and Scope of Work

Objectives & Scope of the study of the study are as follows:

- a) Technical guidance for immediate Debris disposal and management,
- b) Assess environmental damage in the terms of water pollution, damage to ecology, impact on health of nearby residents, change in hydrology, etc
- c) Estimation of environmental damage and compensation,
- d) Recommend remediation measures,
- e) To Submit Final report on Assessment of Environmental damages due to debris at site and recommended remedial measures,



4.0 Work Plan

To attain the said objectives, the following work plan is envisaged:

1. Technical Guidance Removal of Debris:

Site reconnaissance will be done to map the dumping boundary area. The nature of Debris and mud will be checked to the nearby and probable sites for Debris disposal/management. A Periodic Review of excavation operations will be undertaken. Technical guidance will be provided for recommending the management/disposal of Debris waste with Compliance-check with existing Waste Management rules and regulations.

2. Assessment of Water Pollution:

A literature review of the available documents / reports for the study area to understand the local topography, existing drainage network, geology and geomorphology of the study area and preparation of base map, geology and land use / land cover maps using satellite data will be undertaken. Study on any stream / drainage / surface water bodies which feed to Mithi river from dump yard site will be undertaken, Water level measurements for one complete hydrological cycle (pre and post monsoon periods) to understand the groundwater gradient of local regime will be undertaken. Monitoring the surface and groundwater quality for one complete hydrological cycle (pre and post monsoon periods) with respect to physico-chemical and heavy metal parameters including at selected control point locations will be done. Surface water samples will be collected at downstream as well as upstream of Mithi River bank around dumping site and any other existing stream / drainage network.



3. Assessment of Ecology Damage:

To assess the damages to the ecological environment, the impact on flora and fauna will be studied using standard tools. National and international databases may be utilized to assess the services provided by the various affected ecological components.

4. Impact on Health:

Health survey of nearby population will be undertaken. Questionnaire survey will be conducted to collect primary health data from the nearby population. Up to 100 subjects will be enrolled for the study and essential permissions such as informed consent and ethical approval will be obtained. The survey will be used to collect information like potential exposure routes (use of Mithi river water for any purpose like washing, exposure to wind-borne dust from the site etc.), general health conditions (especially respiratory, skin or GIT-related symptoms) and demographic data. As the chronology of the dumping of debris is unknown, the survey will be conducted at the beginning of the study and thereafter every six months to determine any potential pattern in the diseases. Secondary health data for past years will be collected based on availability. It will also be analysed to establish any potential health impact. The health data will finally be correlated to the nature of pollutants identified by other teams.

5. Assess total Environmental damage and compensation

Evaluation of total environmental damage (including extent of water pollution due to illegal dumping, impact of the pollution on the local ecology, changes in hydrology due to environmental damage) including quantification of additional damages (considering various aspects and wherever feasible) will be done. The results will be compiled and finalized using economic methods (suitable for assessing monetary damage). Economic assessments and utilization of econometric tools for finalization of normalized value will be studied.



Measurement of extent and severity of damage to the environment caused and comparison with acceptable pollution limits and quality data will be done. Determination of monetary cost of the environmental damage to water, land, and other elements using suitable methods will be done. Estimation of environmental compensation required for mitigating the damage will be analysed and reported.

6. Recommending Remedial measures for restoring environmental quality.

Based on the results of the study, Recommendation of Remedial measures will be done wherever feasible.

Any Financial evaluation / assessment is not included in the present project.

5.0 Duration

Total duration of the project shall be 15 months from the date of the award and receipt of first budget instalment.

6.0 Project Cost

The total project cost is worked out to be (75 lakhs INR + GST). This includes charges for man-power, sample analysis, assistance in site visits, TA/DA for visiting NEERI staff, contingencies, and Institute overheads as per Norms of Council of Scientific and Industrial Research (CSIR).

7.0 Payment Terms

- 1st installment: 50% + GST to initiate the study with Work Order
- 2nd installment: 40% + GST after 12 months
- 3rd & final installment: 10% + GST after submission of final Draft report.



8.0 Deliverables

- Annual report after 12 months
- A comprehensive Final report on completion of study.

9.0 Inputs Required from MPCB/MCGM/Aarey:

- Provide local co-coordinator for assisting NEERI personnel during site visit and obtaining relevant data/information at site;
- Provision of all data, process drawings, documents, reports, etc. related to project site;
- Provide local hospitality (accommodation and vehicle) to NEERI personnel during field studies.

Project Team members:

Dr. Ganesh R. Kale

Dr. Paras Pujari

Dr. Saravanadevi Sivanesan

Dr. (Mrs.) Shalini Dhyani

Dr. Hemant Bherwani



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