

**BEFORE THE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH  
AT NEW DELHI  
M.A. NO. 112 OF 2024  
IN  
O.A. NO. 107 OF 2020 (PB)**

**IN THE MATTER OF:**

**News Item in Indian Express newspaper Sunday Express Edition dated  
28<sup>th</sup> June 2020 title Gas Leak in Agro Company Claims life of One.**

**(FOR INDEX PLEASE SEE INSIDE)**

**FILED BY:  
TVS RAGHAVENDRA SREYAS  
ADVOCATE  
OFFICE: 24, ASHOKA ENCLAVE EXTENSION III  
SECTOR 35, FARIDABAD 121003  
[raghavendrasreyas.office@gmail.com](mailto:raghavendrasreyas.office@gmail.com)**



**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
 APIIC Colony Road, Gurunanak Colony, Autonagar,  
 Vijayawada- 520007 Phone: No.0866-2463200,  
 Website : <https://pcb.ap.gov.in/>



**Lr. No.107/APPCB/ECS/HSC& NGT/CA No. 1778 of 2021/2024Dt.: 03-01-2025**

To  
**The Registrar General,  
 Hon'ble National Green Tribunal,  
 Faridkot House, Copernicus Marg,  
 New Delhi - 110 001.**

Sir,

Sub: APPCB – Legal – Hon'ble NGT, New Delhi order dt. 13.11.2024 in M.A.No. 112 of 2024 in O.A. No. 107/2020 (PB) and Hon'ble Supreme Court order dt. 20.10.2021 in Civil Appeal No. 1778 of 2021 – Compliance submitted- Reg

- Ref:
1. Hon'ble NGT, New Delhi order dt. 08.01.2021 in O.A. No. 107 of 2020(PB)
  2. Hon'ble Supreme Court Order dt. 20.10.2021 in Civil Appeal No. 1778 of 2021.
  3. APPCB Lr.No. 107/APPCB/Legal/ HSC & NGT/CA No. 1778 of 2021/2024, Date. 22.10.2024
  4. Hon'bel NGT (PB), New Delhi Order date. 13.11.2024 in M.A.No. 112 of 2024 in O.A. No. 107/2020.

\*\*\*

It is to submit that the Hon'ble NGT, New Delhi disposed the Original Application No. 107 of 2020(PB) through order dt. 08.01.2021 and Hon'ble Supreme Court disposed the Civil Appeal No. 1778 of 2021 by the order dt. 20.10.2021 pertaining to levy of the Environmental Compensation (EC) to M/s. S.P.Y Agro Industries Limited, Nandyala District, Andhra Pradesh.

The APPCB vide ref.3rd cited furnished proposal to the Registrar general, Hon'ble NGT (PB), New Delhi in M.A.No. 112 of 2024 in O.A. No. 107/2020 for consideration of compliance status.

The Hon'ble NGT (PB), New Delhi heard the matter on 13.11.2024 and issued order in M.A.No. 112 of 2024 in O.A. No. 107/2020.

In compliance to the above orders, the Board is herewith submitting the proposal for utilization of EC funds for kind information and consideration.

Encl: As above.

Yours faithfully,

  
**MEMBER SECRETARY**  
 MEMBER SECRETARY  
 A.P. Pollution Control Board  
 VIJAYAWADA-520 007.

## BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

## PRINCIPAL BENCH: NEW DELHI

## M.A. NO. 112 OF 2024 IN ORIGINAL APPLICATION NO. 107 OF 2020 (PB)

Report of the A.P. Pollution Control Board in compliance with the Hon'ble Supreme Court order dt. 20.10.2021 in Civil Appeal No. 1778 of 2021 and M.A.No. 112 of 2024 in O.A. No. 107/2020 (PB) in Hon'ble NGT, New Delhi

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Place: Vijayawada

Dt. 3.1.25

  
**Member Secretary**  
A.P. Pollution Control Board  
Vijayawada

**MEMBER SECRETARY**  
A.P. Pollution Control Board  
VIJAYAWADA-520 007.

PROPOSAL FOR UTILIZATION OF EC FUND DEPOSITED BY M/S. S.P.Y. AGRO INDUSTRIES LTD., NANDYALA DISTRICT, ANDHRA PRADESH IN THE MATTER OF HON'BLE SUPREME COURT OF INDIA ORDER DT. 20.10.2021 IN CIVIL APPEAL NO. 1778 OF 2021 AND HON'BLE NGT, NEW DELHI ORDER DATE: 13.11.2024 IN M.A.NO. 112 OF 2024 IN OA NO. 107 OF 2020 (PB).

1. M/s. S.P.Y. Agro Industries Ltd., is a grain-based distillery, established in the year 2008 for manufacturing of total spirit-134 KLD (or) Extra neutral alcohol - 125 KLD with Co-generation power plant of 4MW capacity. The industry is located at APIIC, Integrated Infrastructure Development Center (IIDC), Udumulapuram Village, Nandyala Mandal, Nandyala District (erstwhile Kurnool District) in about 43 acres, with a built-up area of 14.87 acres and green belt area of 14.30 acres.
2. MoEF& CC issued Environmental Clearance (EC) dt: 28.06.2007 to the project for establishment of grain based distillery to produce Rectified Spirit (RS) /ENA / Ethanol of 134 KLPD and 4MW Co generation power plant.
3. Andhra Pradesh Pollution Control Board (APPCB) issued Consent for Establishment (CFE) dt: 04.01.2006 to set up grain based distillery to produce Total Spirit - 134 KLD (or) Extra Neutral Alcohol (ENA) -125 KLD and Co-Generation Power Plant of 4 MW capacity. First Consent to operation (CTO) was issued by APPCB to the unit vide order dt.07.07.2008. Later, the CTO & HWA was renewed from time to time.
4. Ammonia gas accident leakage took place at M/s. S.P.Y. Agro Industries Ltd., Nandyala in Nandyala District (erstwhile Kurnool District) on 26.06.2020 (First accident) resulted in death of one person and injury to three workers followed by second such incident in the same unit on 05.08.2020 (Second accident) resulted in one more death.
5. The Hon'ble NGT (PB) took the matter suo moto through O.A No. 107 of 2020 based on the News item published in the local daily "Indian Express

Sunday Express" dated 28.06.2020 titled "Gas Leak in Agro Company Claims life of one".

6. The Hon'ble NGT constituted a Joint committee to inspect the industry and to furnish report. Accordingly, the joint committee furnished the report dt: 28.10.2020 and suggested remedies to avert such accidents in future. Further, the committee has assessed Environmental Compensation for the second accident using the formula  $EC = PI \times N \times R \times S \times LF$  (based on the pollution index) -

| S. No.                                 | Period of non-compliance  | PI | S   | L F | R (Rs) | N (days) | Environmental compensation (Rs) | Deterrent factor   |
|--|---|----|-----|-----|--------|----------|---------------------------------|--|
| 1                                      | 28.06.2020 to 05.08.2020<br>And from 06.08.2020 to 21.09.2020<br>(deviations observed till the day of committee inspection) | 80 | 1.5 | 1   | 250/-  | 85       | 25,50,000/-                     | (EC is increased on exponential basis i.e 2, 4, 6, 8...on each similar violation.) |
| Total EC for 2 <sup>nd</sup> violation |   |    |     |     |        | 85       | 25,50,000/- x 2                 |  |
|  |   |    |     |     |        |          | 51,00,000/-                     |  |
| Rupees Fifty One Lakhs only            |   |    |     |     |        |          |                                 |  |

The Hon'ble NGT vide order dt: 08.01.2021 in O.A No. 107 of 2020 accepted the joint committee report and levied Environmental compensation of Rs.51,00,000/- (Rupees Fifty-One Lakhs only) on M/s. S.P.Y. Agro Industries Ltd., Nandyala, Nandyala District (erstwhile Kurnool District) and disposed the Original Application No. 107 of 2020(PB) through order dt. 08.01.2021.

7. The industry filed Civil Appeal No. 1778 of 2021 before the Hon'ble Supreme Court of India. The Hon'ble Supreme Court vide order dt: 20.10.2021 disposed the Civil Appeal No. 1778/2021 filed by the industry with orders. The operative part of the order is as follows: -

*"The NGT had constituted a Joint Committee, which in its report, inter alia, directed the appellant to pay environmental compensation quantified at Rs 51 lakhs for operating the unit in violation of the 'Stop Production Order' issued by the Andhra Pradesh Pollution Control Board, causing an accident in the unit.*

*In order to enable the NGT to have control over the manner in which the funds would be utilized, we direct the APPCB to place before the NGT, within a period of six weeks from the date of receipt of this order, a statement indicating the manner in which the funds which have been deposited by the appellant would be utilized for purposes beneficial to the environment.*

*We request the NGT to ensure that the funds are properly utilized by APPCB. We close the appeal as we are in agreement with the reasons which weighed with the NGT in affirming the report of the Joint Committee insofar as the culpability of the appellant and the levy of compensation are concerned.*

*The appeal is disposed of".*

#### **Environmental Compensation deposited by the industry:**

8. In accordance to the orders of the Hon'ble Supreme Court of India, the industry deposited the EC amount as levied by the Joint Committee on different dates as submitted below:

| Sl. No | Industry Name                  | DD Date    | Amount (in Rs.) | Remarks                         |
|--------|--------------------------------|------------|-----------------|---------------------------------|
| 1      | M/s. S.P.Y Agro Industries Ltd | 15.07.2021 | 17,00,000/-     | Assessed by Joint Committee and |
| 2      | M/s. S.P.Y Agro Industries Ltd | 18.08.2021 | 17,00,000/-     |                                 |

|   |                                |            |             |   |
|---|--------------------------------|------------|-------------|---|
| 3 | M/s. S.P.Y Agro Industries Ltd | 09.09.2021 | 17,00,000/- | paid as per the orders of Hon'ble Supreme Court |
|   |                                | Total      | 51,00,000/- |   |

9. **Re Case Proceedings**

- a) The National Green Tribunal, Principal Bench had disposed off the suo motto petition vide its order dated 08.01.2021.
- b) The project proponent had challenged the judgment of the National Green Tribunal vide Civil Appeal No. 1778 of 2021 on 24.03.2021 and the same was registered on 08.05.2021 and verified on 28.06.2021
- c) The Appeal was listed for admission hearing on 02.07.2021, when the Hon'ble Apex Court directed the proponent to deposit the compensation adjudicated by the Tribunal in three instalments and to file proof of service. Subject to such deposit the matter was to be listed for admission. A copy of the office report prepared by the registry of the apex court and order dated 02.07.2021 passed by the Apex Court is annexed (Apex court order at **Annexure A-1**).
- d) The matter was again listed on 20.09.2021 when the appeal was adjourned in light of the fact that the issue as to whether the National Green Tribunal can exercise suo moto jurisdiction is pending before a coordinate Bench of Apex Court. A copy of the office report prepared by the registry of the apex court and order dated 20.09.2021 passed by the Apex Court is annexed (Apex court order at **Annexure A-2**).
- e) The matter was again listed on 20.10.2021 for admission when the appeal was disposed off with the relevant directions to APPCB the order also stated that the copy of the order be communicated to PCB. This shows that PCB was not represented in the court. A copy of the office report prepared by the registry of the apex court and

order dated 20.10.2021 passed by the Apex Court is annexed (Apex court order at **Annexure A-3**).

f) As stated before the registry of the Apex Court sent letter on 25.10.2021.

10. It is humbly submitted that, the APPCB could not comply with the orders of the Hon'ble Supreme Court within stipulated period to file the proposals before the Hon'ble NGT, on specific utilization of EC fund in respect of EC fund deposited by M/s. S.P.Y Agro Industries Limited, Nandyala, Andhra Pradesh. The APPCB tenders its sincere apology for the inadvertent delay for not filing the status affidavit before the Hon'ble NGT in the matter. However, by way of present report, the APPCB is herewith furnishing detailed report on utilization of EC fund for various schemes undertaken for benefit to the environment. The schemes are under progress at various stages and the proposal for utilization of EC fund of Rs. 51,00,000/- exclusively for different schemes, in accordance to the methodology prescribed by the CPCB for utilization of EC fund, is herewith submitted. The APPCB undertaking to obey any orders issued by the Hon'ble NGT, deemed necessary, for utilization of EC fund for any specific purposes as stipulated by this Hon'ble Tribunal.
11. The APPCB vide letter date:22.10.2024 furnished proposal to the Registrar general, Hon'ble NGT (PB), New Delhi in M.A.No. 112 of 2024 in O.A. No. 107/2020 for consideration of compliance status.
12. The Hon'ble NGT (PB), New Delhi heard the matter on 13.11.2024 and issued order in M.A.No. 112 of 2024 in O.A. No. 107/2020. The operative part of the order is as follows: -

*"5. Though the Hon'ble Supreme Court had given only six weeks but the report containing the proposal for utilization of the fund deposited by M/s S.P.Y. Agro Industry has been filed before the NGT on 24.10.2024. The APPCB*

*is required to explain why the report has been filed with such a delay. We also find that the proposal for utilization of the EC funds given in the said report is vague and unspecific which does not disclose the head-wise utilization of the funds for the purpose beneficial to the environment. The APPCB is required to show that the sum of Rs. 51 lakhs received from the Project Proponent was kept separately and it was separately utilized for the purpose beneficial to the environment as directed by the Hon'ble Supreme Court instead of mixing it with the other funds and using it for the general purposes." Copy of the order placed at **Annexure A-4**.*

13. The APPCB also apologize for delay of 3 weeks for filing the status report in obedience to the above orders. The delay is caused for consolidation of the vast data on past expenditure of EC fund for various schemes undertaken in co-ordination with stake holders & in accordance to CPCB prescribed methodology for utilization of EC funds and to obtain detailed estimates from implementing agencies / stake holders for utilization of EC fund. The same may be condoned, pass appropriate orders deemed, any such directions, for which APPCB is undertaking to obey such orders.

#### **STATUS ON UTILIZATION OF ENVIRONMENTAL COMPENSATION FUND:**

14. APPCB is depositing the Environmental Compensation collected from the industries/projects in separate Bank Account as per the CPCB guidelines, to exclusively maintain all the receipts and payments of EC funds. The Bank account is being operated by APPCB at State Bank of India (A/c No. 39040282262), Prajasakthi Nagar Branch, Vijayawada, Andhra Pradesh.

15. The EC fund of Rs. 51 Lakhs remitted by M/s. SPY Agro Industries Limited, Nandyala District (erstwhile Kurnool District) is also deposited in the same account.
16. The APPCB is utilizing the Environmental compensation fund for benefit to the environment in accordance to Hon'ble NGT directives to utilize the Environmental compensation fund for the purposes, if any specified on case to case basis. In the case of environmental compensation is levied by the Hon'ble NGT, but no specific directions from on utilization of EC fund, in such cases the APPCB is following methodology prescribe by CPCB for utilization of EC fund.

#### **METHODOLOGY PRESCRIBED BY CPCB FOR UTILIZATION OF EC FUND:**

17. The CPCB prescribed Methodology for Assessing Environmental Compensation and Action Plan to Utilize the Fund. The methodology for utilization of EC fund are as follows –

The amount received by imposing the Environmental Compensation to the industries / organization non-complying with the environmental standards / violating any CPCB's directions shall be deposited in a separate bank account. The amount accumulated will be utilized for Protection of Environment. The following schemes were identified, which may be considered for utilization of Environmental Compensation Fund:

#### **a) When Environmental Compensation is calculated through the Pollution Index -**

The amount received by imposing the Environmental Compensation to the industries / organization non-complying with the environmental standards / violating any CPCB's directions shall be deposited in a separate bank account. The amount accumulated will be utilized for Protection of Environment. The following schemes were identified,

which may be considered for utilization of Environmental Compensation Fund:

- a) Industrial Inspections for compliance verification
- b) Installation of Continuous water quality monitoring stations / Continuous ambient air quality monitoring stations for strengthening of existing monitoring network
- c) Preparation of Comprehensive Industry Documents on Industrial Sectors / clean technology
- d) Investigations of environmental damages, preparation of DPRs
- e) Remediation of contaminated sites
- f) Infrastructure augmentation of Urban Local Bodies (ULBs) /capacity building of SPCBs/PCCs

The above proposed list may include other schemes also, depending upon the requirement.

**b) When Environmental Compensation is assessed based on actual damage to the environment by Expert Organization/ Agency:**

The amount of Environmental Compensation under this case will be remediation costs, measures requiring immediate and short-term actions, compensation towards loss of ecology, etc., and will be utilized exclusively for the purpose at specific site, based on the detailed investigations by the Expert Organizations/ agencies.

Copy of the CPCB guidelines is placed at **Annexure A-5**.

18. In the case of directions issued by the Hon'ble NGT for utilization of EC fund for specific purpose, the same is being is utilized by APPCB in co-ordination with Government departments, which are holding stake in the activity on case to case basis viz., Forest Department, Urban Local Bodies (Municipal Administration), Revenue Department (or) Irrigation Department, etc.
19. The EC fund received by APPCB is deposited in separate account and payments are to made from the consolidated EC fund for various purposes either in accordance to Hon'ble NGT directives for specific purposes,

alternatively for the activities covered under the methodology prescribed by CPCB for utilization EC fund i.e. a) Industrial Inspections for compliance verification; b) Installation of Continuous water quality monitoring stations / Continuous ambient air quality monitoring stations for strengthening of existing monitoring network; c) Preparation of Comprehensive Industry Documents on Industrial Sectors / clean technology; d) Investigations of environmental damages, preparation of DPRs ; e) Remediation of contaminated sites; f) Infrastructure augmentation of Urban Local Bodies (ULBs) /capacity building of SPCBs/PCCs and other schemes also, depending upon the requirement.

20. The details of the activities undertaken by APPCB by utilizing the EC funds are submitted hereunder for kind perusal -

APPCB has undertaken various activities duly utilizing the EC fund like strengthening of the monitoring mechanism; remediation of contaminated sites and to undertake the scientific studies to assess the environmental impact due to the project activities:

**STRENGTHENING OF MONITORING  
INFRASTRUCTURE**

## 1. STRENGTHENING OF MONITORING INFRASTRUCTURE:

### A. RTWQM Stations (5 nos.) on river stretches:

In order to strengthen the monitoring mechanism of the river water quality, the APPCB procured 5 No. of Real Time Water Quality Monitoring (RTWQM) stations duly utilizing the EC fund of Rs. 2,92,00,000.00/-. The RTWQM stations are intended to achieve the following benefits -

- The RTWQM stations facilitates in designing effective water management with timely and accurate information about water quality. Real-time water quality monitoring systems enable water managers to make informed decisions regarding water allocation, usage, and conservation. By having access to up-to-date information about water quality, authorities can identify pollution sources, implement appropriate remedial measures, and plan water treatment strategies more efficiently.
- One of the primary advantages of real-time water quality monitoring systems is their ability to detect contamination events promptly. With real-time monitoring, any changes in water quality are detected instantaneously, eliminating delays in response time. This allows authorities to take immediate action to address contamination threats, safeguard public health, and mitigate potential environmental damage.
- By detecting variations in water quality at an early stage, the systems can alert authorities to potential health risks, such as harmful algal blooms or bacterial contamination. This prompt detection enables health departments to issue advisories, undertake necessary precautions, and ultimately protect the well-being of the public.
- Real-time water quality monitoring systems play a crucial role in safeguarding aquatic ecosystems. By continuously tracking water quality parameters, such as dissolved oxygen and turbidity, they provide insights

into the overall health of ecosystems, enabling targeted conservation efforts. This includes identifying vulnerable species, protecting spawning grounds, and assessing the effectiveness of restoration initiatives.

- Real-time water quality monitoring systems offer numerous benefits that are revolutionizing water management and safety practices. By leveraging continuous data collection and analysis, real-time monitoring empowers stakeholders to make informed decisions, prevent contamination events, and optimize resource allocation. As the significance of water quality preservation grows, the adoption of real-time water quality monitoring systems becomes increasingly vital for a sustainable and safe water future.
- Installation of Real time water quality monitoring stations at major river stretches strengthen the monitoring of the river water quality round the clock to prevent possible diurnal variation and events of episodal discharges.

Considering the above benefits, the APPCB has installed RTWQMS on major river stretches at the following 5 locations to collect and analyze data from various sensors that detect parameters such as pH, temperature, dissolved oxygen, turbidity, and conductivity to ascertain the river water. These parameters give valuable insights into the health and safety of water bodies. The collected data is transmitted in real-time to a centralized system, where it is processed, analyzed, and made available to stakeholders.

| S. No. | District   | Location  | Quantity | Status                 |
|--------|------------|---|----------|------------------------|
| 1      | Srikakulam | Upstream of River Nagavali, Tamminaidupeta, Andhra Pradesh. | 1        | Installation completed |
| 2      | Kurnool    | Downstream of River Tungabhadra after joining of            | 1        | Installation completed |

|   |               |  |   |                        |
|---|---------------|--|---|------------------------|
|   |               | Kurnool City Domestic Sewage at Padidempadu (V), Andhra Pradesh.                     |   |                        |
| 3 | East Godavari | Downstream of River Godavari near Dowleiswaram (V), Rajahmundry (M), Andhra Pradesh. | 1 | Installation completed |
| 4 | NTR           | Upstream of River Krishna near Prakasham barrage, Vijayawada, Andhra Pradesh.        | 1 | Installation completed |
| 5 | Nellore       | Upstream of River Pennar near Nellore barrage, Nellore, Andhra Pradesh.              | 1 | Installation completed |

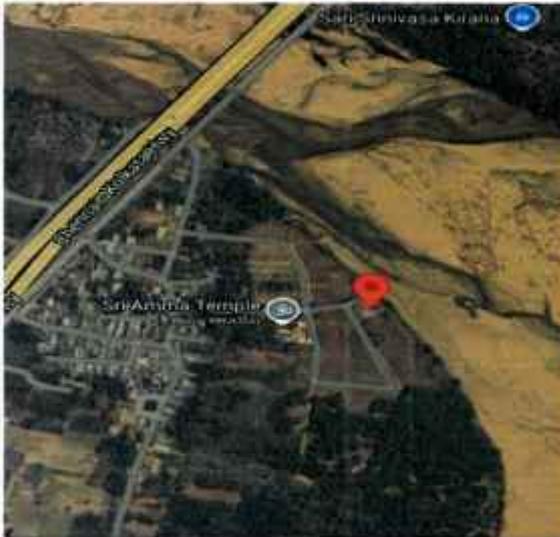
**a) RTWQM Station at Upstream of River Nagavali, Tamminaidupeta, Srikakula District:**

- Nagavali River originates from a hill near Lakhbahal village in Thuamul Rampur block of Kalahandi District. It touches Nakrundi, Kerpai areas of Kalahandi, Kalyansinghpur, Jaykaypur, and Rayagada of Rayagada district of Odisha and merged in Bay of Bengal near Kallepalli village near Srikakulam after crossing by the side of Srikakulam of Andhra Pradesh. It is an independent river with its own basin. The total length of the river is about 256 kilometers (159 mi), of which 161 kilometers are in Odisha and the rest in Andhra Pradesh. The catchment area of the basin is 9,510 square kilometers. Nagavali is an interstate river with 4,462 square kilometers and 5,048 square kilometers river basin area located in Odisha and Andhra Pradesh respectively. The river basin receives 1,000 millimeters (39 in) average rainfall annually. The yearly water availability in the river basin at Narayanapuram barrage is 1.117 billion cubic meters on average. It drains parts of the Kalahandi, Rayagada and

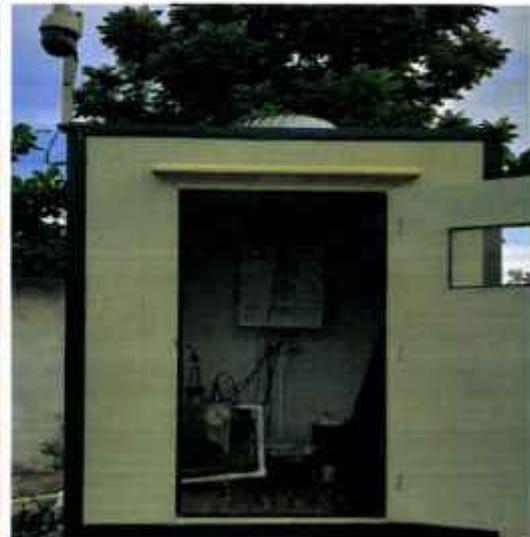
Koraput districts of Odisha and Srikakulam, Vizianagaram districts of Andhra Pradesh.

The APPCB is monitoring the river quality of River Nagavali on monthly basis at the following locations fixed by the CPCB and uploading the data in the website.

| S. No. | Code | Location Point                               |
|--------|------|--|
| 1      | 4351 | River Nagavali at Kureru, Vizianagaram Dist. |
| 2      | 1448 | Thotapalli, Vizianagaram Dist.               |
| 3      | 4346 | River Nagavali U/S of Srikakulam town.       |
| 4      | 4347 | River Nagavali D/S of Srikakulam town.       |



**Location of RTWQM station installed at upstream of River Nagavali**



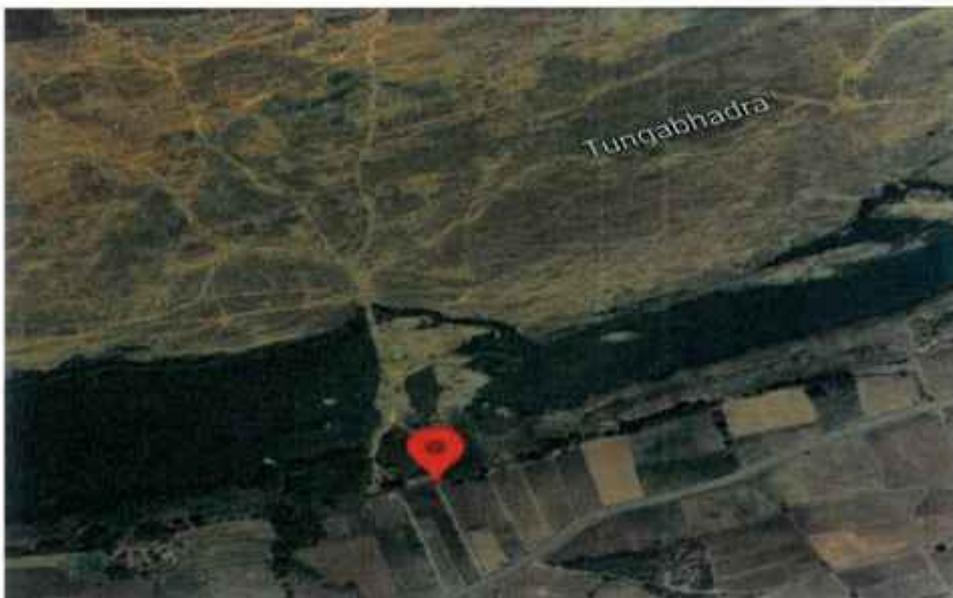
**RTWQM station in operation at upstream of River Nagavali**

The online data generated from the RTWQM station is connected to website of APPCB for public information.

**b) RTWQM Station at Downstream of River Tungabhadra after joining of Kurnool City Domestic Sewage at Padidempadu (V):**

Tungabhadra River starts and flows through the state of Karnataka, India, during most of its course, then through Andhra Pradesh, and ultimately joins the Krishna River near Murvakonda in Andhra Pradesh. The river Tungabhadra derives its name from two streams, the Tunga, about 147 km long, and the Bhadra, about 178 km long, which rise in the Western Ghats. The river after the confluence of the two streams near Shimoga runs for about 531 km till it joins the river Krishna at Sangamaleshwaram in Andhra Pradesh. It runs for 382 km in Karnataka, forms the boundary between Karnataka and Andhra Pradesh for 58 km and further runs for the next 91 km in Andhra Pradesh. The total catchment area of the river is 69,552 km<sup>2</sup> up to its confluence with the Krishna and it is 28,177 km<sup>2</sup> up to Tungabhadra Dam. It is influenced mainly by the South-West monsoon.

The APPCB installed RTWQM station at Downstream of River Tungabhadra after joining of Kurnool City Domestic Sewage at Padidempadu (V) to monitor the water quality on real time basis. The online data generated from the RTWQM station is connected to website of APPCB for public information.



**Downstream of River Tungabhadra**

**c) RTWQM Station at Downstream of River Godavari near Dowleiswaram (V), Rajahmundry (M)**

The Godavari is India's second longest river after the Ganga River and drains the third largest basin in India, covering about 10% of India's total geographical area. Its source is in Trimbakeshwar, Nashik, Maharashtra. It flows east for 1,465 kilometers, draining the states of Maharashtra (48.6%), Telangana (18.8%), Andhra Pradesh (4.5%), Chhattisgarh (10.9%) and Odisha (5.7%). The river ultimately join into the Bay of Bengal through an extensive network of distributaries. Measuring up to 312,812 km<sup>2</sup>, it forms one of the largest river basins in the Indian subcontinent, with only the Ganga and Indus rivers having a larger drainage basin. In terms of length, catchment area and discharge, the Godavari is the largest in peninsular India, and had been dubbed as the Dakshina Ganga (Southern Ganges).

The APPCB is monitoring the river quality of River Godavari on monthly basis at the following locations fixed by the CPCB and uploading the data in the website.

| S. No. | Code | Location Point   |
|--------|------|--|
| 1      | 4367 | Koundinyamukti (Kukunur) border point between Andhra Pradesh & Telangana States, West Godavari Dist. |
| 2      | 4359 | After confluence with Sabari at Kunavaram (waddigudem), East Godavari Dist.                          |
| 3      | 0014 | Polavaram, West Godavari Dist.   |
| 4      | 1218 | Upstream of Rajahmundry at Kumaradevam   |
| 5      | 2370 | At Rajahmundry Upstream of Nalla channel   |
| 6      | 2371 | At Rajahmundry Downstream of Nalla channel   |
| 7      | 1219 | Downstream of Rajahmundry at Dhawaleswaram   |

|    |      |   |
|----|------|---|
| 8  | 4365 | Upstream of Narasapuram town before confluence with sewage, West Godavari Dist.       |
| 9  | 4366 | Downstream of Narasapuram town after confluence with town sewage, West Godavari Dist. |
| 10 | 4358 | Near GMC Balayogi bridge, Govalanka, East Godavari Dist.                              |

The APPCB installed RTWQM station at upstream of River Godavari near Dowleiswaram (V), Rajahmundry (M), East Godavari District to monitor the river water quality. The online data generated from the RTWQM station is connected to website of APPCB for public information.



**Location of RTWQMS installed at River Godavari**

**d) RTWQM Station at Upstream of River Krishna near Prakasham barrage, Vijayawada**

The Krishna River in the Deccan plateau is the third-longest river in India, after the Ganga and Godavari. It is also the fourth-largest in terms of water inflows and river basin area in India, after the Ganges, Indus and Godavari. The river, also called Krishnaveni, is 1,400 kilometers long and its length in

Maharashtra is 282 kilometers. It is a major source of irrigation in the Indian states of Maharashtra, Karnataka, Telangana and Andhra Pradesh. The Krishna River originates in the Western Ghats near Mahabaleshwar at an elevation of about 1,300 meters, in the state of Maharashtra in central India. The Krishna River passes through the Indian states of Maharashtra, Karnataka, Andhra Pradesh, and Telangana. Over its 1,400 kilometers length, it flows for 305 km in Maharashtra, 483 km in Karnataka and 612 km in Andhra Pradesh.

The APPCB is monitoring the river quality of River Krishna on monthly basis at the following locations fixed by the CPCB and uploading the data in the website.

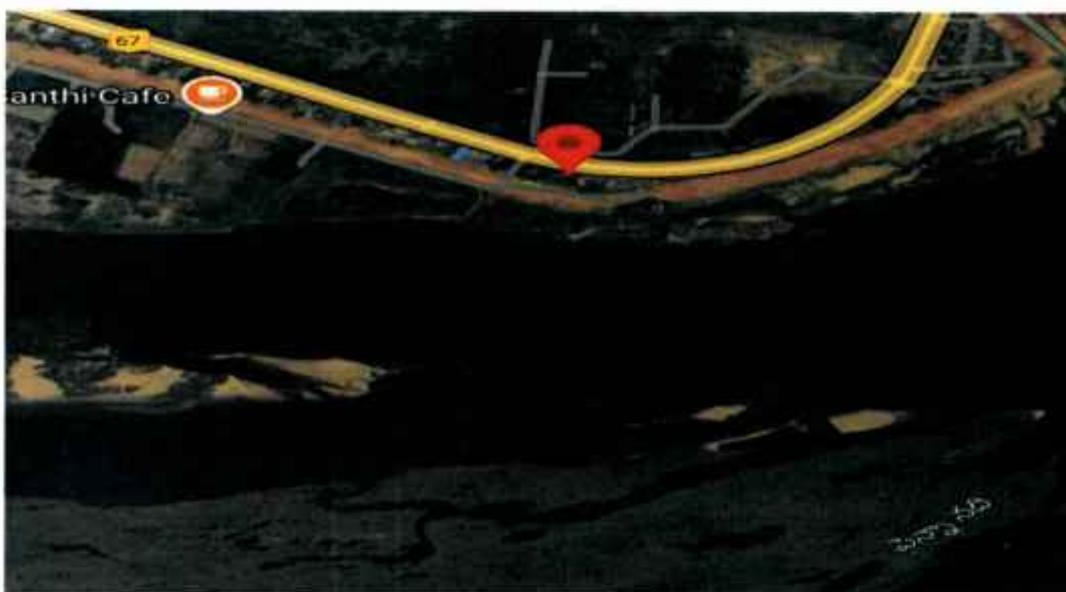
| S. No. | Code | Location Point  |
|--------|------|---|
| 1      | 1175 | Sangameswaram, Kurnool Dist.                                |
| 2      | 3083 | Srisailam, Kurnool Dist.                                    |
| 3      | 4381 | After confluence with river Musi at Vadapalli, Guntur Dist. |
| 4      | 1786 | Vedadri, Krishna Dist.                                      |
| 5      | 1787 | Amaravathi, Guntur Dist.                                    |
| 6      | 0025 | Prakasham barrage, Vijayawada, Krishna Dist.                |
| 7      | 4375 | Pavitrasangamam at Ibrahimpatnam, Krishna Dist.             |
| 8      | 1782 | Hamsaladeevi, Krishna Dist.                                 |

The APPCB installed RTWQM station at upstream of River Krishna near Prakasham barrage, Vijayawada, Krishna District to monitor the river water quality. The online data generated from the RTWQM station is connected to website of APPCB for public information.



**e) RTWQM Station at Upstream of River Penna near Nellore barrage.**

Penna (also known as Pinakini, Penneru, Penner, Pennar, Pennai) is a river of southern India. This is a unique river in world where after originating from Nandi hills, it flows as two different streams, one in North and South directions. The Penna rises in the Nandi Hills in Chikkaballapur District of Karnataka state, and runs north and east through the states of Karnataka and Andhra Pradesh to empty into Bay of Bengal in Andhra Pradesh. It is 597 kilometers long, with a drainage basin covering 55,213 km<sup>2</sup>. Along with this main stream there is another stream south towards Tamilnadu with the name Then Pennai or south Pennar which further moves towards the east to empty into the Bay of Bengal. The Penna river basin lies in the rain shadow region of Eastern Ghats and receives 500 mm average rainfall annually.



**Location of RTWQMS on River Penna**

The APPCB installed RTWQM station at upstream of River Penna near Nellore barrage to monitor the river water quality. The online data generated from the RTWQM station is connected to website of APPCB for public information.

The APPCB procured 5 No. of Real Time Water Quality Monitoring (RTWQM) stations duly utilizing the EC fund of Rs. 7,85,27,857.00/-. A copy of the purchase order is placed herewith at **Annexure A-6**.

#### **B. RTWQM STATIONS (2 NOS.) ON MARINE OUTFALL OF CETPS:**

About 9 No. of Common Effluent Treatment Plants (CETPs) are functioning in the state to cater treatment to the waste water generated from the industries. Out of the above, CETP operating in the name of M/s. Atchuthapuram Effluent Treatment Plant (AETL) at Atchuthapuram, SEZ, Anakpalli District and another CETP operating in the name of M/s Visakha Pharma Ltd (formerly M/s. JN Pharma city) at Parawada, Anakapalli District. The above 2 CETPs are catering treatment to the waste water generated from Bulk drug/API manufacturing units housed at SEZ, atchuthapuram (130 industries) and Parawada (90 industries) respectively. After

required treatment of the waste water and subjected to compliance to the prescribed discharge standards, the CETPs are permitted to dispose the treated waste water through Marine outfalls in Bay of Bengal. The landfall point of marine discharge pipeline of M/s. AETL is located at Thikkavanipalem (V), Parawada (M), Anakapalli District after passing onshore to a length of 2.3 KM and off-shore 3.5 KM (17°29'11.00"N, 83°02'18.00"E).

The landfall point of marine discharge pipeline of M/s. VPL is located at Pudimadaka (V), Rambilli (M), Anakapalli District after passing onshore to a length of 16 KM and off-shore 1.75 KM (17°32'10.02"N, 83° 7'10.02"E).



**Landfall point of marine discharge pipeline of M/s. AETL located at Anakapalli District**



**Landfall point of marine discharge pipeline of M/s. VPL located at Anakapalli District**

The CETPs of M/s. AETL and M/s. VPL has provided CEMS for online continuous effluent monitoring system for various parameters COD, BOD, TSS, Al, NH<sub>3</sub>, Cl, Fe, etc., at the outlet of CETPs. The outlet of the CETPs are kept under lock and key and web camera surveillance, to ensure conformity of the discharge standards before allowing treated waste water discharge through marine outfall into Sea. In order to further strengthen the monitoring mechanism of the treated waste water of CETPs, it is proposed to install RTWQMS for continuous monitoring of the treated waste water for different polluting parameters near landfall point of pipeline path way of the marine outfall, to prevent pilferage or cross check the

possible leakages of treated waste water pumped from the premises of the CETP to marine outfall.

| S. No. | District   | Location  | Quantity | Status  |
|--------|------------|---|----------|---|
| 1      | Anakapalli | M/s. AETL, APSEZ, Atchutapuram pipeline at Thikkavanipalem (V), Parawada (M), Anakapalli (D). | 1        | Site identified. Approval of site is awaited from Collectorate. |
| 2      | Anakapalli | M/s. JN Pharma city CETP, Parawada at Pudimadaka (V), Rambilli (M), Anakapalli (D).           | 1        |   |

In this regard, the APPCB has purchased 2 No. of RTWQMS to install near landfall point of marine discharge pipeline of M/s. AETL and M/s. VPL at Anakapalli District and incurred expenditure from EC funds for an amount of **Rs. 1,46,84,274/**. The equipment arrived at onsite and installation of RTWQMS are under progress at the above locations for continuous monitoring of treated waste water from M/s. AETL and M/s. VPL. A copy of the purchase order is placed at **Annexure A-7**.

### C. RTWQM STATIONS (9 NOS.) AT STP OUTLETS:

The Municipal Administration and Urban Development Department (MA& UD), GoAP completed construction of 122 Sewage Treatment Plants (STPs) to cater treatment to the sewage generated at urban local bodies (ULBs) in the State to ensure compliance to the Hon'ble NGT order dt. 24.09.2020 in OA. NO. 670 of 2018. Construction of the remaining 172 STPs are under progress at different ULBs.

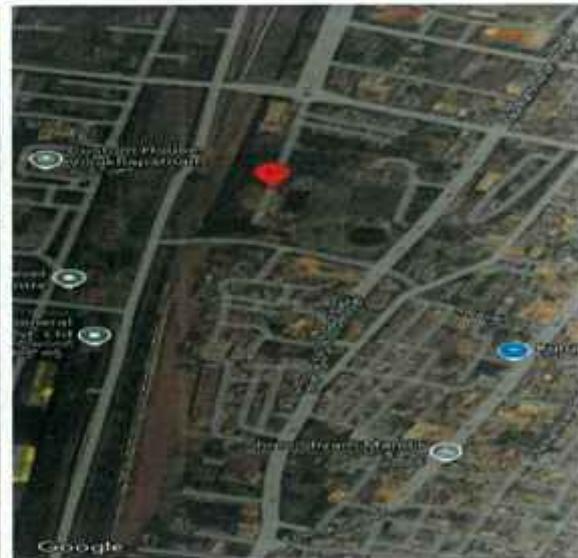
### LOCATION OF RTWQMS AT OUTLET OF STPS:

**Visakhapatnam City:** Visakhapatnam (formerly known as Vizagapatam), also known as Vizag, Visakhapatnam or Waltair is the largest and most populous

metropolitan city in the Indian state of Andhra Pradesh. It is between the Eastern Ghats and the coast of the Bay of Bengal. It is the second largest city on the east coast of India after Chennai, and the fourth largest in South India. It is one of the four smart cities of Andhra Pradesh selected under the Smart Cities Mission and is the headquarters of Visakhapatnam district. With an estimated output of \$43.5 billion, it is the ninth largest contributor to India's gross domestic product as of 2016. Vizag is popularly known as shipbuilding capital of India due to presence of multiple shipyard such as Hindustan Shipyard, Naval Dockyard and being the central naval command of the east coast. Visakhapatnam city covers an area of 681 km<sup>2</sup> and has a population of 2,358,412 as of 2021. GVMC Constructed 18 No. of STPs to cater treatment to the sewage generated at Visakhapatnam City. The APPCB has installed 3 RTQWM Station at outlet of STP of 54 MLD capacity located at Narava, Visakhapatnam; STP of 38 MLD capacity located at old town and another STP of 25 MLD capacity located at Appughar, Visakhapatnam.



**RTQWM Station at outlet of STP of 54 MLD capacity located at Narava, Visakhapatnam**



**RTQWM Station at outlet of STP of 38 MLD capacity located at old town, Visakhapatnam.**



**RTQWM Station at outlet of STP of 25 MLD capacity located at Appughar, Visakhapatnam**

Installation of RTQWM stations at all the above 3 STPs at Visakhapatnam city completed and they are in operation.

**Rajahmundry city:** Rajahmundry is a city in the Indian state of Andhra Pradesh and district headquarters of East Godavari district. It is the seventh most populated city in the state. During British rule, the district of Rajahmundry was created in the Madras Presidency in 1823. It was reorganized in 1859 and bifurcated into the Godavari and Krishna Districts. Kakinada was the headquarters of Godavari District, which was further bifurcated into East Godavari and West Godavari districts in 1925. Rajahmundry city covers an area of 238.5 km<sup>2</sup> and has a population of 8,18,704 as of 2021. The Municipal Corporation, Rajahmundry constructed STP to cater treatment to the sewage generated at Rajahmundry City. The APPCB has installed 1 RTQWM Station at outlet of STP of 30 MLD capacity located at Hukumpet, Rajamahendravaram. Installation of RTQWM stations at the above STP is completed and they are in operation.

**Vijayawada City:** Vijayawada also known by its colonial name Bezawada, is the second largest city and commercial hub in the Indian state of Andhra Pradesh. The city is part of the Andhra Pradesh Capital Region and is located on the banks of the Krishna River surrounded by the hills of the Eastern Ghats, known as the

Indrakeeladri Hills. The city is home to the important Hindu shrine of Kanaka Durga Temple. It geographically lies on the center spot of Andhra Pradesh. The city has been described as the commercial, political, cultural and educational capital of Andhra Pradesh. Vijayawada city covers an area of 230 km<sup>2</sup> and has a population of 8,18,704 as of 2021. The APPCB has installed 2 RTQWM Station at outlet of STP of 40 MLD capacity located at Ajith Singnagar, Vijayawada and STP of 20 MLD capacity located at Ramalingeswar Nagar, Vijayawada. Installation of RTQWM stations at all the above 2 STPs completed and they are in operation.



RTQWM Station at outlet of STP of 40 MLD capacity at Ajith Singnagar, Vijayawada



RTQWM Station at outlet of STP of 20 MLD capacity at Ramalingeswar Nagar, Vijayawada

**Pulivendula:** Pulivendula is a town located in the YSR Kadapa District, Andhra Pradesh, India. It is a small town which became 3rd grade municipality in 2008 from Nagar Panchayat. It is located in Pulivendula Mandal and is the headquarters of the Pulivendula revenue division. It is located near Kadiri which is around 40 km Away. Pulivendula city covers an area of 87.17 km<sup>2</sup> and has a population of 91,000 as of 2021. The Municipal Corporation, Pulivendula constructed STP to cater treatment to the sewage generated at Pulivendula City. The APPCB has installed 1 RTQWM Station at outlet of STP of 10 MLD capacity located at Pulivendula. Installation of RTQWM stations at the above STP is completed and they are in operation.



**RTQWM Station at outlet of STP of 10 MLD capacity located at Pulivendula**



**RTWQMS on STP outlet at Pulivendula, YSR Kadapa District**

**Nellore:** Nellore is a city located on the banks of Penna River, in Nellore District of Andhra Pradesh, India. It serves as the headquarters of the district, as well as Nellore Mandal and Nellore revenue division. It is the fourth most populous city in the state. It is at a distance of 279 kilometers (173 mi) from Vijayawada, 660 kilometers (410 mi) from Visakhapatnam, 455 kilometers (283 mi) from Hyderabad and about 170 km (110 mi) north of Chennai, Tamil Nadu and also about 380 km (240 mi) east-northeast of Bangalore, Karnataka. It is the administrative headquarters of Nellore District. Nellore city covers an area of 149.2 km<sup>2</sup> and has a population of 7,75,000 as of 2024. The Municipal Corporation, SPSR Nellore constructed STP to cater treatment to the sewage generated at SPSR Nellore City. The APPCB has installed 1 RTQWM Station at outlet of STP of 11 MLD capacity located at Janardhanreddy Colony, SPSR Nellore. Installation of RTQWM stations at the above STP is completed and they are in operation.



Location RTQWM Station at outlet of STP of 11 MLD capacity at Janardhanreddy Colony, SPSR Nellore

**Ongole:** Ongole is a city in Prakasam District of the Indian state of Andhra Pradesh. It is the headquarters of Prakasam district. It is known for Ongole cattle, an indigenous breed of oxen. Ongole city covers an area of 149.2 km<sup>2</sup> and has a population of 2,94,000 as of 2024. The Municipal Corporation, Ongole constructed STP to cater treatment to the sewage generated at Ongole City. The APPCB has installed 1 RTQWM Station at outlet of STP of 15 MLD capacity located at Ongole. Installation of RTQWM stations at the above STP is completed and they are in operation.



Location of RTQWM Station at outlet of STP of 15 MLD capacity at Ongole

The APPCB installed RTWQM stations at outlet of the following 9 STPs to strengthen the monitoring mechanism of the treated sewage at outlet of STPs for continuous monitoring of the pollutant parameters BOD, pH, TSS, F.Coli, NH<sub>3</sub><sup>-</sup>, etc.,

| S. No. | District      | Location                                     | Quantity | Status                 |
|--------|---------------|--|----------|------------------------|
| 1      | Visakhapatnam | 54 MLD STP, Narava / 108,                    | 1        | Installation completed |
| 2      |               | 38 MLD STP, Old town                         | 1        | Installation completed |
| 3      |               | 25 MLD STP, Appughar                         | 1        | Installation completed |
| 4      | East Godavari | 30 MLD STP, Hukumpet, Rajamahendravaram.     | 1        | Installation completed |
| 5      | NTR           | 40 MLD STP, Ajith Singnagar, Vijayawada.     | 1        | Installation completed |
| 6      | NTR           | 20 MLD STP, Ramalingeswar Nagar, Vijayawada. | 1        | Installation completed |
| 7      | Kadapa        | 10 MLD STP, Pulivendula.                     | 1        | Installation completed |
| 8      | SPSR Nellore  | 11 MLD STP, Janardhanreddy Colony, Nellore.  | 1        | Installation completed |
| 9      | Prakasam      | 15 MLD STP, Ongole.                          | 1        | Installation completed |

The APPCB incurred an amount of **Rs. 3,46,43,583/-** from EC fund for installation of RTWQMS at outlet of 9 No. of STPs. The copy of the purchase order is herewith placed at **Annexure A-8**.

**REMEDICATION OF  
CONTAMINATED SITES**

## 2. REMEDIATION OF CONTAMINATED SITES

A application numbered O.A. No. 175 of 2020 (SZ) was filed by Sri. Venkatapathi Raja Yenumula before the Hon'ble NGT regarding alleged pollution by M/s ONGC (Oil & Natural Gas Corporation Ltd) units in the State of Andhra Pradesh along the Krishna-Godavari Basin located in East Godavari and West Godavari District of Andhra Pradesh. The Hon'ble NGT appointed a Joint Committee and the said committee submitted its reports (09.04.2021 & 23.03.2022) to Hon'ble NGT. The Hon'ble NGT accepted the Joint committee recommendations to levy EC on 4 No. of facilities operating by M/s. ONGC. The operative part of the order as follows -

“On recovery of the compensation amount from the 3rd respondent (ONGC), the State Pollution Control Board in coordination with the District Collector of the concerned district, is directed to prepare an action plan for providing remedial measures, if any, required in the project affected area and utilize the amount for carrying out that action plan in a scientific manner”.

Accordingly, the APPCB requested the District Collector, Dr. B.R. Ambedkar Konaseema District, Amalapuram vide letter dt. 12.01.2023 to arrange to send detailed proposals for utilization of environmental compensation amount along with DPR duly considering the reasons for non- compliance's noticed by the Joint Committee, based on which the environmental compensation was levied on M/s. ONGC and the CPCB methodology to utilize the environmental compensation funds. Further informed that the services of the reputed agencies or recognized universities may be utilized for preparation of action plan. Sri. Venkatapathi Raja Yenumula (applicant in NGT) and M/s. ONGC may also be involved in preparation of the action plan.

In response to the above, the District Collector, Dr. B.R. Ambedkar Konaseema District, Amalapuram vide letter dated. February, 2023 informed that an expert committee was constituted for preparation of action plan to utilize the EC fund paid by the ONGC under the chairmanship of the District Collector; with members consisting of Prof. Dept of Civil Engg, JNTU Kakinada (ex-member of SEAC), Sri Venkatapathi Raja Yanumula (applicant in NGT); Head- EHS, ONGC and HoDs from various departments at District level viz., Industries Dept.; Agriculture Dept.; Irrigation; RWS; Panchayat Raj; DCHS; Dist. Panchayat officer and EE, APPCB (Member convener). Further informed that the committee meeting was convened on 01.02.2023 at Konaseema Collectorate to examine various proposals and forwarded the minutes of the expert committee meeting. Wherein the committee has examined 7 proposals to utilize the EC funds. Out of the 7, one proposal was rejected and recommended 6 proposals to the Board for release of EC fund to utilize at Dr. B.R. Ambedkar Konaseema District. On the request of the Collector & District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram, Andhra Pradesh, the APPCB sanctioned an amount of Rs. 3,96,20,000/- for 3 different proposals, as detailed below -

a) APPCB vide proceeding Dt. 19.06.2023 sanctioned an amount of Rs.94,60,000/-

to the Collector and District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram (in connection with O.A. No. 175 of 2020) towards earth work excavation of Rangaraju codum medium drain from 0 KM to 6.20 KM in GC delta from EC fund. An amount of Rs. 47,30,000/- (50% of the sanctioned amount) was released to the Collector and District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram as 1<sup>st</sup> installment and the balance 50% amount was released on dt. 17.11.2023 upon receipt of Utilization certificate for the 1<sup>st</sup> installment amount from the District Collector, Dr. B.R. Ambedkar Konaseema District, Amalapuram. The works are being implemented by Irrigation Dept., Government of Andhra Pradesh and the same are under progress. Copy of

the sanctioned proceedings of Rs.94,60,000/- from EC Fund and utilization certificate for Rs. 47,30,000/- received from the District collector, Dr.B.R.AmbedkarKonaseema District, Amalapuram are herewith placed at **Annexure A-10.**

- b) On the request of the District collector, Dr.B.R.AmbedkarKonaseema District, Amalapuram, the APPCB vide proceeding Dt.01.08.2023 sanctioned an amount of Rs.1,51,50,000/- to the Collector and District Magistrate, Dr.B.R.AmbedkarKonaseema District, Amalapuram (in connection with O.A.No.175 of 2020) towards Establishments of 4 bedded dialysis center at CHC, Razole, Dr. B. R. Ambedkar Konaseema District and construction of OHSR at Rudravari Meraka, Chintalapalli village, Razole Mandal in Diramma colony of Gudimula GP of Sakhinetipalli. An amount of Rs. 75,75,000/- (50% of the sanctioned amount) was released to the Collector and District Magistrate, Dr.B.R.AmbedkarKonaseema District, Amalapuram as 1<sup>st</sup> installment and the balance 50% amount will be released subjected to submission of Utilization certificate for the 1<sup>st</sup> installment amount. The works pertaining to establishment of 4 bedded dialysis center at CHC, Razole, Dr. B. R. Ambedkar Konaseema District being implemented by Medical and Health Department, Government of Andhra Pradesh and the same is under progress. The works pertaining to construction of OHSR at Rudravari Meraka, Chintalapalli village, Razole Mandal in Diramma colony of Gudimula GP of Sakhinetipalli being implemented by Rural Water Supply (RWS) Dept., Government of Andhra Pradesh and the same are under progress. Copy of the sanctioned proceedings for Rs.1,51,50,000/- in favor of District collector, Dr.B.R.AmbedkarKonaseema District, Amalapuram are herewith placed at **Annexure A-10.**

- c) APPCB vide proceeding Dt.12.08.2024 sanctioned an amount of

Rs.1,50,10,000/-

to the Collector and District Magistrate, Dr. B. R. Ambedkar Konaseema District, Amalapuram (in connection with O.A.No.175 of 2020) towards construction of 5 No. of OHSR tanks in 5 No. of villages, Amalapuram District. An amount of Rs. 75,05,000/- (50% of the sanctioned amount) was released to the Collector and District Magistrate, Dr. B. R. Ambedkar Konaseema District, Amalapuram as 1<sup>st</sup> installment and the balance 50% amount will be released subjected to submission of Utilization certificate for the 1<sup>st</sup> installment amount. The works are being implemented by RWS Dept., Government of Andhra Pradesh and the same are under progress. Copy of the sanctioned proceedings for Rs.1,50,10,000/- in favor of District collector, Dr. B. R. Ambedkar Konaseema District, Amalapuram are herewith placed at **Annexure A-11.**

**SPECIFIC INVESTIGATIONS AND STUDIES  
WITH REGARD TO ENVIRONMENT AND  
ECOLOGY**

### 3. SPECIFIC INVESTIGATIONS AND STUDIES WITH REGARD TO ENVIRONMENT AND ECOLOGY:

The APPCB has incurred an amount of Rs. 1,23,33,360/- from EC fund towards specific investigations and studies with regard to environment and ecology from EC fund. The details of the studies are as follows

#### a) **Comprehensive scientific study on Kolleru Lake pollution:**

Kolleru Lake is one of the largest freshwater lakes in India and forms the largest shallow freshwater lake in Asia (with 245 km<sup>2</sup> of lake area and 302 km<sup>2</sup> of total Ramsar designated wetland). 15 kilometers away from Eluru and 65 km from Rajamahendravaram, the lake is located between the Krishna and Godavari river deltas. Kolleru Lake is located in the Eluru district in the state of Andhra Pradesh. The lake is fed directly by water from the Easonal Budameru and Tammileru rivulets, and is connected to the Krishna and Godavari irrigation systems by over 67 major and minor irrigation canals. This lake is a major tourist attraction. Many birds migrate here in winter, such as Siberian crane, ibis, and painted storks. The lake was an important habitat for an estimated 20 million resident and migratory birds, including the grey or spot-billed pelican (*Pelecanus philippensis*). The lake was declared as a wildlife sanctuary in November 1999 under India's Wildlife Protection Act of 1972, and designated a wetland of international importance in November 2002 under the international Ramsar Convention. The wildlife sanctuary covers an area of 308 km<sup>2</sup>.

The Hon'ble NGT (SZ) vide order dt: 03.01.2022 in O.A No. 259 of 2020 and O.A.No. 2 of 2021, directed the Government of Andhra Pradesh to conduct comprehensive scientific study in order to protect the water body and remove the encroachments and handover the entire area to the Forest Department so as

to maintain the Lake area in the wildlife sanctuary in an effective manner and to make the Lake pollution free. Further the EFST Department, GoAP requested APPCB to entrust the above study to CSIR - NEERI, Nagpur or any other reputed institute. Accordingly, the APPCB requested the CSIR - NEERI for the proposal to conduct comprehensive scientific study on Kolleru Lake pollution. Thereafter, the APPCB issued Notification of award to CSIR - NEERI, Nagpur for conducting comprehensive scientific study on Kolleru Lake pollution with total cost of Rs. 96,99,600.00/- from EC fund. CSIR - NEERI, Nagpur submitted draft report on comprehensive scientific study on Kolleru Lake pollution and finalization of the report is under progress. A copy of the NoA issued to the CSIR - NEERI, Nagpur is herewith placed at **Annexure A-12**.

**b) Environmental Impact Assessment study conducted by Andhra University, Visakhapatnam to assess the environmental impacts due to gas leakage incident from M/s. Brandix India Apparel City Pvt. Ltd, Anakapalli District:**

The Hon'ble NGT, New Delhi taken up suo-moto matter vide OA No. 448 of 2022 (PB) on gas leakage incidents in M/s. Seeds Intimate Apparel India Pvt. Ltd., located at Plot No.11 of M/s.Brandix India Apparel City Pvt. Ltd., SEZ, Pudimadaka Road, Atchtuthapuram, Anakapalli District, A.P. further, the Hon'ble NGT by order dt. 03.08.2022 constituted a six-member Joint Committee headed by Chairman State PCB with Regional Director CPCB; nominee of NDMA; Prof. P. Jagannadha Rao, Dept., of Chemical Engineering, Andhra University, Visakhapatnam; District Magistrate, Anakapalli; Director Industrial Safety and IICT, Hyderabad. State PCB is the Nodal agency. The Joint Committee submitted preliminary report and later the committee felt necessity for scientific study to ascertain specific source of gas release and environmental impacts in the surroundings of the incident site. Consequently, the APPCB engaged Andhra University, Visakhapatnam to conduct study within 1 KM radius from M/s.

Brandix India Apparel Pvt Ltd, located in the premises of M/s. Brandix Apparel India Pvt Ltd, SEZ, Atchthapuram, Anakapalli District with a total cost of the study of Rs. 26,33,760/- from EC fund available with APPCB. The Objectives of the study are:

1. Ascertaining the cause of the incident.
2. Suggestion of measures to prevent such incident.
3. Identifying & marking of areas prone to such incident.
4. Identifying & marking of vulnerable industries.
5. Identification of marker pollutants in case of mishap.
6. Future crisis management measures.

Accordingly, the Andhra University, Visakhapatnam submitted report which was part of the committee report submitted to the Hon'ble Supreme Court in the matter of CA Nos. 4108-4109 of 2023. Copy of the Work order dt. 15.08.2023 is placed here with at **Annexure A-13**.

**SPECIALIZED STUDIES ON ACCIDENTAL  
SPILL AREAS, HEALTH IMPACT  
ASSESSMENT, RECALCITRANT  
POLLUTANTS, ETC:**

**4. SPECIALIZED STUDIES ON ACCIDENTAL SPILL AREAS, HEALTH IMPACT ASSESSMENT, RECALCITRANT POLLUTANTS, ETC:**

The APPCB undertaken specialized studies on accidental spill areas, health impact assessment, recalcitrant pollutants duly incurring an amount of Rs.48,20,607/- from EC fund for the following studies

The issue of pollution problems from tailing pond of M/s. Uranium Corporation India Ltd (UCIL) Thummalapalli Project, YSR District was reviewed on 30.10.2019. Accordingly, an expert committee was constituted to study the impact of tailings pond of M/s. Uranium Corporation of India Limited. Based on the recommendations of the expert committee, the APPCB has entrusted the following studies -

- a. IIT Madras to conclusively establish the source of ground water contamination in the neighboring villages surrounding the tailing pond of M/s. UCIL.
- b. SVIMS, Tirupati to study of health effects in the surrounding areas of the tailing pond of UCIL.
- c. Indian Council of Agricultural Research – National Research Centre for Banana (NRCB) to study the low yield / stunted growth of Agriculture crop in the surrounding villages of M/s. UCIL, Tailings pond.

**Details of the studies and EC fund incurred:**

**a) IIT Madras Study, UCIL:**

The APPCB entrusted a study to IIT Madras to conclusively establish the source of ground water contamination in the neighboring villages surrounding the tailing pond of M/s. UCIL. The IIT Madras conducted extensive monitoring of the Borewells in the surroundings of the tailing pond

of M/s. UCIL and furnished study report. The following conclusions are drawn from this study -

1. There is no discernible dissolved uranium plume emanating from the tailing pond. This suggests that the tailing pond may not be the probable cause of groundwater contamination in the nearby wells.
2. To establish beyond doubt that the tailing pond is not the cause of uranium contamination in the vicinity, there is a need to install new monitoring wells upstream and downstream of the tailing pond.
3. The presence of high groundwater uranium concentrations in upstream areas indicates that there is significant contamination of uranium due to natural ore deposits in that area resulting in poor water quality.
4. Kannampalli village which is located 2-3 [km] northwest of the tailing pond has shown high concentrations of uranium in the groundwater. This village is not located downstream of the tailing pond but rather located near the strike area of the uranium ore. To establish that the probable cause of uranium contamination here is due to natural geological causes, a geological map of uranium ore deposits within the soil strata in this region is essential.
5. Water balance analysis performed earlier in the interim report with preliminary data was inconclusive. To accurately assess the pond water balance calculations, additional data like water and tailing slurry flow rate in and out of the tailing pond is required from UCIL.

The APPCB incurred expenditure of Rs. 61,40,000/-, out of the above part of the payment for Rs. 30,70,047.20/- incurred from the EC fund **(Annexure A-14)**.

**b) Epidemiological studies by SVIMS, Tirupathi around tailing pond of M/s. UCIL:**

APPCB entrusted a study to Sri Venkateswara Institute of Medical Science (SVIMS), Tirupati to study of health effects in the surrounding areas of the tailing pond of UCIL. M/s. SVIMS submitted final report vide letter dt. 05.07.2023, wherein it was submitted that a cross sectional epidemiological study was carried in the 6 villages, surroundings of the tailing pond of M/s UCIL, Velpula, Medipentla&Kotala Villages, Vemula (M), YSR District. The details are as follows -

1. Epidemiological study was carried in the following 6 villages - Thummalapalli, Kanampalli, K.K.Kottala, Mabbuchinthapalli, Rachakuntapalli, Bhumayagaripalli
2. Health problems were examined system wise in the study area and reported that 16.6% have problem with musculo-skeletal system; 12.8% with skin problem; 11.9% with eye problem; 11.4% with cardiovascular system; 7% with respiratory system
3. The present health study conducted by SVIMS is compared with previous health studies and the findings are also submitted as:
  - a. In the present study area, problems related to respiratory system is lower (6.7%) as compared to 17.28% reported by Suman Kanungo et al.
  - b. Most common ailments were related to musculo skeletal system - 27.7% in Bhumayagaripalli; 21.9% in Rachakuntapalli; 20.0% in Kanampalli
  - c. Most common ailment was related to skin in KK Kottala.
  - d. Most common ailment was related to eye in Mobbuchintalapalli&Thummalapalli
  - e. In all villages, the ailments related to Gastro intestinal system, endocrine system and haematological system was in least proportion.

- f. In all villages the percentage of live births is 88.1% and abortions is 4.8%.
- g. It is reported that the abortions (4.8%) percent among total no. of pregnancies is lower compared to findings of National Family Health Survey (NFHS-1, 1992-93) 13, NFHS-2 (1998-99) 14, in which abortion percent was reported to be 7.9%, 11.4% respectively.
- h. However, abortion percentage is high (4.8%) as compared with findings of NFHS-4 (2015-16) 16 which reported as 3.4%

The APPCB incurred expenditure of Rs. 27,27,800/- out of the above part of the payment for Rs. 5,45,560.00/- incurred from the EC fund **(Annexure A-15)**.

**c) Study on assessing the impact of effluents from M/s. Sentini Bio Pvt. Ltd., Krishna District, Andhra Pradesh by Acharya N.G. Ranga Agricultural University (ANGRAU), LAM, Guntur.**

APPCB entrusted a study to Acharya N.G. Ranga Agricultural University (ANGRAU), LAM, Guntur to conduct study on assessing the impact of effluents from M/s. Sentini Bio Pvt. Ltd., Krishna District, Andhra Pradesh. An amount of Rs. 12,05,000/- is sanctioned from the EC funds to conduct the study. The university has completed study and submitted draft report on impacts of the effluents from grain based distillery operating in the name of M/s. Sentini Bio Pvt. Ltd., Krishna District on the surrounding agriculture fields. Copy of the work order issued to the Acharya N.G. Ranga Agricultural University (ANGRAU), LAM, Guntur vide order dt: 20.07.2023 is herewith placed at **Annexure A-16**.

**SUMMARY OF THE  
ENVIRONMENT COMPENSATION FUND UT  
ILIZED BY APPCB  
FOR VARIOUS ACTIVITIES**

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**SUMMARY OF THE ENVIRONMENT COMPENSATION FUND UTILIZED BY  
APPCB FOR VARIOUS ACTIVITIES**

| S.No | Broader category of projects /activities   | Details of activities in which the amount was utilized  | Amount of EC fund utilized | Total EC amount Spent on particular broader area (in Rs.) |
|------|--|---|----------------------------|---|
| 1    | Strengthening of Monitoring Infrastructure | a) Towards payment for supply of 5 Nos. Real Time Water Quality Monitoring system to install on river stretches for water quality monitoring by Swan Environment pvt Ltd., Hyderabad vide proceeding dated. 02.04.2024  | Rs. 2,92,00,000/-          | Rs. 7,85,27,857.00  |
|      |  | b) Towards payment for supply of 9 Nos of RTWWQM to install on STPs for the districts/cities of Visakhapatnam, East Godavari, NTR, kadapa, SPSR Nellore & Ongole by M/s. Axis Nano Technologies pvt, ltd., Noida, UP, Delhi, Vide proceeding date: 07.04.2024 | Rs. 3,46,43,583.00/-       |   |
|      |  | c) Towards payment of supply of 02 Nos RTWQM stations for installation at marine discharge pipelines discharging treated effluents into the sea at Tikkavaram (v) by Swan Environmental pvt, ltd, Hyderabad vide proceeding date: 07.08.2024                  | Rs. 1,46,84,274.00/-       |   |
| 2    | Remediation of Contaminated Sites          | a) Payment to the Collector and District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram towards earth work excavation of Rangaraju Codumedium drain from 0 KM to 6.20 KM in GC delta in connection with OA                                      | Rs. 94,60,000/-            | Rs. 3,96,20,000/-   |

|   |   |  |                  |                   |
|---|---|--|------------------|-------------------|
|   |   | No.175of 2020(vide procdsDt. 19.06.2023).  |                  |                   |
|   |   | b)PaymenttotheCollector&District Magistrate,Dr.B.R.AmbedkarKonaseema District, Amalapuram towardsconstructionofOHSRatRudravariMeraka,Chintalapal livillage.RazolemandalIndira mmacolonyofGudimulaGPofSakhinetipalli&Establishmentsof 4beddeddialysiscenteratCHC, Razole,Dr.B. R. Ambedkar konaseema District inconnectionwithOANo.175of 2020(vide procdsdt.01.08.23) | Rs.1,51,50,000/- |                   |
|   |   | c)PaymenttotheCollector&District Magistrate,Dr.B.R.AmbedkarKonaseema District, Amalapuram towardsconstruction of 5 No. of OHSR tanks in 5No. ofvillages,Amalapuram DistrictinconnectionwithOAN o.175of2020(videprocdsdate d.12.08.2024)  | Rs.1,50,10,000/- |                   |
| 3 | Specificinvestigations andstudies withregard toenvironment andecology | a)Towardspaymentofprojectcostfor conducting comprehensive scientific studyonKollerulakepollutionin favorofCSIR- NEERI,Nagapur(videprocdsdate d. 22.12.2022).   | Rs. 96,99,600/-  | Rs.1,23,33, 360/- |
|   |   | b)Towards study conducted by Andhra University, Visakhapatnam to environmental impact assessment from accident occurred at M/s Brandix Intimate India Pvt Limited,   | Rs.26,33,760/-   |                   |

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|                                |  |  |                 |                           |
|--------------------------------|--|--|-----------------|---------------------------|
|                                |  | SEZ, Actuthpuram, Anakapalli<br>District vide proceeding date:<br>15.08.2023   |                 |                           |
| 5                              | Specialized studies on accidental spill areas, health impact assessment, recalcitrant pollutants, etc. | a) Towards part payment to Sri Venkateswara Institute of Medical Sciences (SVIMS), Tirupathi to conduct Epidemiological studies in the villages near by tailing pond of M/s. Uranium Corporation of India Ltd, Thummalapalli project, vide proceeding dated. 12.10.2022. | Rs. 5,45,560/-  | Rs. 48,20,607.20          |
|                                |  | b) Towards part payment to Indian Institute of Technology, IIT Madras for sampling and study of groundwater contamination at M/s. Uranium Corporation of India Ltd (vide proceeding dated. 04.11.2022).  | Rs. 30,70,047/- |                           |
|                                |  | c) Towards payment to conduct study on assessing the impact of effluents from M/s. Sentini Bio Pvt. Ltd., in favor of comptroller ANGRA U (vide proceeding date. 20.07.2023), LAM, Guntur District.  | Rs. 12,05,000/- |                           |
| <b>Total EC Fund utilized:</b> |  |  |                 | <b>Rs. 14,08,01,824/-</b> |

From the above, it may be noted that the APPCB has incurred an amount of Rs. 14,08,01,824/- from EC fund. It may kindly peruse that the APPCB has been utilizing the Environmental compensation fund for benefit to the environment in accordance to Hon'ble NGT directives to utilize the Environmental compensation fund for the purposes if any specified on case to case basis. In the case of environmental compensation is levied by the Hon'ble NGT, but no specific directions on utilization of EC fund, in such cases the APPCB is following methodology prescribe by CPCB for utilization of EC fund.

In the case of directions issued by the Hon'ble NGT for utilization of EC fund for specific purpose, the same is being is utilized by APPCB in co-ordination with Government departments, which are holding stake in the activity on case to case basis viz., Forest Department, Urban Local Bodies (Municipal Administration), Revenue Department (or) Irrigation Department, etc.

**NGT ORDER IN O.A. NO 107 OF 2020**

**NGT ORDER IN O.A. NO 107 OF 2020:**

21. The Hon'ble NGT vide order dt: 08.01.2021 in O.A No. 107 of 2020 accepted the joint committee report and levied Environmental compensation of Rs.51,00,000/- (Rupees Fifty-One Lakhs only) on M/s. S.P.Y. Agro Industries Ltd., Nandyala, Nandyala District (erstwhile Kurnool District) and disposed the Original Application No. 107 of 2020(PB) through order dt. 08.01.2021. The operative part of the order placed below .....

***IX. (e) Suggestions for restoration of Environment:***

*The committee did not observe any physical damage or damage to properties/vegetation during the visit. Hence other than cleaning and proper maintenance of fermenters, distillation columns and proper operation of ETP, the committee does not suggest any restoration measure but however from safety point of view the committee recommends the unit to establish proper effluent conveyance system to transfer effluent from production block to ETP, to store coal in covered shed, to prevent odour nuisance by properly handling the dried fermented solids and to increase the vegetation cover in the unit, to place the online continuous emission and effluent monitoring systems as per CPCB guidelines. To improve ventilation in the CO2 plant. The machineries are compactly housed in the CO2 plant. The unit shall ensure that the machineries are so housed that adequate space is there for the personnel to operate and move to safe places during any mishap.*

*The storage capacity of ammonia in the CO2 recovery plant is 2000 Kgs. At the time of accident, there was 750Kgs of ammonia. Out of 750*

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*Kgs, 500 Kgs was released into environment at the time of accident and the remaining 250 Kgs was treated in the ETP.*

*The Ambient Air Quality monitoring was carried out by the officials of A.P. Pollution Control Board, Kurnool for the parameter ammonia in and around of M/s S.P.Y Agro Industries Limited from 27th day of June, 2020 to 28th day of June, 2020. The concentration of ammonia recorded was 610.61  $\mu\text{g}/\text{m}^3$  (as against the standard of 400 $\mu\text{g}/\text{m}^3$ ) after the accident at about 2.00 p.m and the levels of ammonia has come down to the level below the standard of 400  $\mu\text{g}/\text{m}^3$  at 9.00 p.m on 27.06.2020. During the accident, the predominant wind direction was towards North-East direction, where there is no habitations upto 1.5 Kms. It was observed that there was only a localized impact very nearer to the CO<sub>2</sub> recovery plant and the restoration measures were taken by the industry by collecting and treating the left over ammonia in the storage tanks & used fire hydrant water in their Effluent Treatment Plant (ETP).*

*IX. f. View Points of Stakeholders:*

*The unit has positive attitude and intends to implement corrective measures. The unit has submitted that temporary revocation order was issued by Inspector of Factories and prohibitory order by Inspector of Factories was issued only to M/s Nandyala Gases Pvt Ltd. To prevent putrefaction of in-process solids, it was essential to operate the plant. Hence the unit has requested not to treat this as violation of APPCB directions.*

*X. Suggested remedies to avert such accidents in future:*

1. *Standard Operating Procedure shall be prepared for all industrial activities handling hazardous chemicals. To ensure that pressure test and leak test are conducted after replacement of valves, pipes, joints etc. as per the instrument manual or as per standard established procedure.*
2. *The unit shall conduct comprehensive safety & hazard audit, identify the non-compliances and take corrective actions for the non-compliances identified. Emergency plans shall be established to deal with leaks. The risk assessment should identify the control measures necessary in an emergency. These are likely to include, for example instructions to identify the leak and close key valves. Such valves should be marked and identified on drawings. Regular checks of such valves should be undertaken to ensure correct operation. A clear documented emergency procedure should be drawn up which details the precise duties of all staff and arrangements for evacuation, rescue, first aid, resuscitation, plant isolation etc.*
3. *The CO<sub>2</sub> plant where the ammonia tanks are placed is very congested and during any unwarranted situations, it is difficult to escape. The unit shall re-design ammonia refrigeration unit to have more working space for the personnel. Adequate means of escape and rescue shall be provided.*
4. *To install Emergency warm water showers and eyewash stations in locations where ammonia is handled for decontamination. They allow workers to flush away ammonia that can cause injury.*
5. *To install automatic tripping system during pressure build- up, leaks etc.*
6. *All pipework containing ammonia shall be identified by colour coding or labelling and positioned and protected to prevent damage. It is good practice to uniquely identify part of the system that contain gas or liquid and the direction of flow.*

7. *The CO<sub>2</sub> plant was poorly ventilated. Machinery rooms should be provided with sufficient permanent ventilation during normal operations to prevent the build-up of toxic concentrations of ammonia from any small operational releases (for example from seals, glands etc.). The unit shall improve the mechanical ventilation to facilitate natural circulation. In addition, the unit shall provide emergency ventilation to prevent flammable ammonia and air mixtures accumulating in the event of reasonably foreseeable plant or operational failure, like valve failure etc. The unit may install ammonia sensor and emergency ventilation may be interlinked with ammonia sensor.*
8. *To install check valves, relief valves at appropriate locations. Flow meters, sensors, measuring devices have to be regularly calibrated. Vents from relief valves shall be directed to a safe place.*
9. *Seals, glands and gaskets shall be regularly inspected, without dismantling. Leak test should be conducted in all piping, valves, seals, flanges, and other pertinent equipment at least four times a year. Some methods that can be used for leak testing are sulphur sticks, litmus paper, or a portable meter equipped with a flexible probe.*
10. *After the repair work is completed, it shall be verified by a strength pressure test followed by a tightness test and leak test.*
11. *Anhydrous ammonia is very corrosive to copper, brass, and galvanized surfaces and materials. The unit shall not use copper, brass, zinc, and galvanized components in any part of an anhydrous ammonia refrigeration system. Support structure components should be readily visible such that they can be inspected for deterioration and replaced before a failure event can occur. All refrigeration piping should be periodically inspected for failed insulation/vapour barrier, rust, and corrosion. Ammonia piping underneath failed insulation should be carefully inspected for corrosion. Damaged and deteriorated*

*ammonia piping should be replaced. All uninsulated piping should be cleaned, primed, and painted with an appropriate coating to protect the pipe from corrosion as well as being consistent with the colour coding scheme. "*

#### **ACTION TAKEN BY APPCB FOR UTILIZATION OF EC FUNDS:**

22. From the above order of the Hon'ble NGT, it may kindly be note that the joint committee did not observe any physical damage or damage to properties/ vegetation during the visit and the environmental compensation of Rs. 51 Lakhs is arrived based on the pollution index. Further, it may also note that the Hon'ble NGT order has not stipulated any specific utilization of EC fund paid by M/s. S.P.Y Agro Industries limited, in the instant order issued dt: 08.01.2021 in O.A No. 107 of 2020.
23. It is also to submit that, CPCB prescribed methodology for utilization of EC fund in 2 categories. In the first instance, where Environmental Compensation is arrived based on the pollution index, the fund shall be utilized for a) Industrial Inspections for compliance verification; b) Installation of Continuous water quality monitoring stations / Continuous ambient air quality monitoring stations for strengthening of existing monitoring network; c) Preparation of Comprehensive Industry Documents on Industrial Sectors / clean technology; d) Investigations of environmental damages, preparation of DPRs; e) Remediation of contaminated sites; f) Infrastructure augmentation of Urban Local Bodies (ULBs) /capacity building of SPCBs/PCCs and other schemes also, depending upon the requirement. In the second instance, when Environmental Compensation is assessed based on actual damage to the environment by Expert Organization/ Agency, the amount of Environmental Compensation under this case will be remediation costs, measures requiring immediate and short-term actions, compensation towards loss of ecology, etc., and will be

utilized exclusively for the purpose at specific site, based on the detailed investigations by the Expert Organizations/ agencies.

24. In the instant case, the joint committee recommended levy to EC on M/s. S.P.Y Agro Industries Limited based on the pollution index and observed no specific environmental damage in the incident. Thus, the EC fund of Rs. 51,00,000/- paid by M/s. S.P.Y Agro Industries Limited is also deposited in the separate bank account operated in State Bank of India, Vijayawada for receipts and payment of EC funds and utilized the EC fund from the account for various purposes in accordance to CPCB guidelines. The APPCB utilized the EC funds (summary of the statement) for various activities for benefit of the environment. However, the APPCB do not found any scope for exclusive utilization of EC fund of M/s. S.P.Y Agro Industries Limited, since the EC was levied based on the pollution index, not due to damage to the environment.
25. The APPCB has utilized an amount of Rs. 14.08 crores from the EC fund for benefit of environment, specific utilization being done in the case of Hon'ble NGT orders on EC fund utilization for specific purpose and also strictly adhere to CPCB guidelines on methodology for utilization of EC fund in other prescribed activities.

However, in obedience to Hon'ble NGT order dt: 13.11.2024 in M.A.No. 112 of 2024 in O.A. No. 107/2020, the following proposals to utilize EC fund Rs. 51,00,000/- at Nandyala District is submitted for kind perusal and approval -

## **PROPOSAL ON UTILIZATION OF EC FUND**

- (i) Establishment of "Construction and Demolish (C&D) Waste Processing Plant" to reuse the Construction and Demolition waste generated in Nandyala Municipality, Nandyala; and**
- (ii) To develop plantation in and around Integrated Infrastructure Development Center (IIDC), Industrial Area, Nandyala, Nandyala District in Andhra Pradesh.**

Details on proposed utilization of Environment Compensation fund of Rs. 51 Lakhs paid by M/s. S.P.Y. Agro Industries Ltd., APIIC, Integrated Infrastructure Development Center (IIDC), Udumulapuram Village, Nandyala Mandal, Nandyala District (erstwhile Kurnool District), Andhra Pradesh.

**A. Category of the projects / Activities:** Remediation of contaminated sites

**B. Details of activities in which the amount proposes to utilize:**

**1. ESTABLISHMENT OF "CONSTRUCTION AND DEMOLISH (C&D) WASTE PROCESSING PLANT" TO REUSE THE CONSTRUCTION AND DEMOLISHED WASTE GENERATED AT NANDYALA MUNICIPALITY, NANDYALA:**

The MSW dumpsite of Nandyala Municipality spread in an extent of about 18 acres and located at a distance of about 2.4 KM from the Municipality. The common types of recyclable C&D material are bricks, concrete and asphalt, wood, glass and metals etc., Construction and demolition waste is a major environmental concern, which need to be processed to make it usable form i.e., recovery of usable materials for recycling in construction activity, preparation of value added products like pavement tiles, filler material for construction and road projects etc. The processed C&D waste is suitable for reuse and substantially helps to conserve precious natural resources.

Nandyala Municipality is generating about 150 Tons of construction and demolish waste per annum. At present, the waste is stored in the existing dumpsite of the Nandyala Municipality and occasionally used for filling up of low lying area. It is proposed establish Construction and Demolish waste processing plant (C & D plant) for processing and recycling of construction

and demolished waste generated at Nandyala Municipality, to cater processing of the existing waste and future needs. The following benefits are envisaged from the proposed establishment of C&D waste processing plant –

- a. Helps to conserve natural resources and minerals and helps in promoting use of recycled products for construction & other infrastructural projects.
- b. A circular economy exists when products are used and repurposed after their original intent has been fulfilled. Emerging potential resource for circular economy can be achieved by reducing the negative impacts of the C & D waste on the environment.
- c. Helps to maximize the production of high quality, high value recycled sand and aggregates, can be used as a replacement for natural materials in a range of construction applications including concrete and asphalt production
- d. Recycling C&D waste decreases costs, landfill, energy consumption and emissions.
- e. Helps to mitigate menace due to mis-management of Municipal Solid Waste and accidental fire at dump sites of Municipality.

It is proposed to incur an amount of Rs. 45,00,000/- from EC fund for establishment of C&D waste processing plant at Nandyala Municipality which directly benefits to the environment to curb the pollution and improve the Municipal Solid Waste Management at Nandyala Municipality.

**2. TO DEVELOP PLANATION IN AND AROUND INTEGRATED INFRASTRUCTURE DEVELOPMENT CENTER (IIDC), INDUSTRIAL AREA, NANDYALA, NANDYALA DISTRICT.**

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Integrated Infrastructure Development Center (IIDC), Nandyala is developed in an extent of about 100 acres to house Large, Medium and small scale industries at Nandyala Town, Nandyala District. About 15 No. of Large, Medium and small scale industries are in operation at present at IIDC, Nandyala. The proposal for plantation development in and around industrial area of APIIC, Integrated Infrastructure Development Center (IIDC), Nandyal, Nandyal District will benefit to surrounding environment to control dust emissions due to flying of vehicles, industrial activities and act as filter to prevent fugitive emissions.

It is proposed to incur an amount of Rs. 5,50,000/- from EC fund for development of greenbelt in and around APIIC, Integrated Infrastructure Development Center (IIDC), Nandyal, Nandyal District, which directly benefits to environment by controlling the dust emissions.

| S.No. | Details of activities in which the amount proposes to utilize  | Tentative Expenditure for implementation of the scheme | Location of implementation of the scheme                           | Implementing agency / stake holder                       | Tentative time for completion |
|-------|--|--|--|--|-------------------------------|
| 1.    | To establish Construction and Demolish waste processing plant (C & D plant) for processing and recycling of construction and demolished waste in dumping yard of Nandyal Municipality, Nandyala District.(Annexure A-17) | Rs. 45,00,000/-  | MSW Dumpsite of Nandyala Municipality, Nandyala, Nandyala District | Nandyala Municipality (ULB), Nandyala, Nandyala District | 12 - 18 months                |
| 2.    | To develop plantation in and around APIIC, Integrated Infrastructure Development Center (IIDC), Nandyal, Nandyal District,   | Rs. 5,50,000/-   | APIIC, Integrated Infrastructure Development                       | A.P. Industrial Infrastructure Corporation               | 6 months                      |

|                               |                                    |  |   |  |  |
|-------------------------------|------------------------------------|--|---|--|--|
|                               | Andhra Pradesh.<br>(Annexure A-18) |  | nt Center<br>(IIDC),<br>Nandyal,<br>Nandyal<br>District |  |  |
| <b>Total: Rs. 50,50,000/-</b> |                                    |  |   |  |  |

It is estimated to incur an amount of approximately Rs. 50.5 Lakhs from the EC fund for implementation of the above schemes, in accordance to methodology prescribed by the CPCB for utilization of EC funds (collected based on the pollution index). The above proposal is submitted for kind perusal; consideration and approval.

The APPCB is herewith undertaking to furnish periodical status report to Hon'ble NGT on implementation progress of the above remedial measures for every 3 months and shall co-ordinate with the stakeholders for expeditious action for completion of the above proposed activities being undertaken with the EC fund.

The above status is submitted for kind perusal and consideration.

Place: Vijayawada

Dt: 03.01.2025

  
Member Secretary

**A.P. Pollution Control Board**

 **Vijayawada**

MEMBER SECRETARY  
A.P. Pollution Control Board  
VIJAYAWADA-520 007.

ITEM NO.2

Court 5 (Video Conferencing)

SECTION XVII

S U P R E M E C O U R T O F I N D I A  
R E C O R D O F P R O C E E D I N G S

Civil Appeal No.1778/2021

SPY AGRO INDUSTRIES LTD.

Appellant(s)

VERSUS

THE CHAIRMAN ANDHRA PRADESH POLLUTION  
CONTROL BOARD & ANR.

Respondent(s)

(With appln.(s) for IA No.61205/2021-EXEMPTION FROM FILING C/C OF  
THE IMPUGNED JUDGMENT and IA No.61206/2021-EX-PARTE STAY)

Date : 02-07-2021 This appeal was called on for hearing today.

CORAM :

HON'BLE DR. JUSTICE D.Y. CHANDRACHUD  
HON'BLE MR. JUSTICE M.R. SHAH

For Appellant(s) Mr. R. Venkataramani, Sr. Adv.  
Mr. Ravi Shankar, Adv.  
Mr. G. N. Reddy, AOR

For Respondent(s)

UPON hearing the counsel the Court made the following  
O R D E R

- 1 We have heard Mr R Venkataramani, learned senior counsel appearing on behalf of the appellant.
- 2 In order to test the bona fides of the appellant, we direct that it shall deposit an amount of Rs 51 lakhs in terms of the order of the National Green Tribunal before the appropriate authority. The amount shall be deposited in three equal instalments, payable on or before 20 July 2021, 20 August 2021 and 10

September 2021. The appellant shall produce proof of deposit before the Registry of this Court, failing which the appeal shall stand dismissed for want of prosecution without further reference to the Court. In the event of the deposit being made, the appeal shall be listed for further hearing at the stage of admission, on 20 September 2021.

**(CHETAN KUMAR)**  
A.R. -cum-P.S.

**(SAROJ KUMARI GAUR)**  
Court Master

ITEM NO.5

Court 4 (Video Conferencing)

SECTION XVII

S U P R E M E C O U R T O F I N D I A  
R E C O R D O F P R O C E E D I N G S

Civil Appeal No.1778/2021

SPY AGRO INDUSTRIES LTD.

Appellant(s)

VERSUS

THE CHAIRMAN ANDHRA PRADESH POLLUTION  
CONTROL BOARD & ANR.

Respondent(s)

(With appln.(s) for IA No.61205/2021-EXEMPTION FROM FILING C/C OF  
THE IMPUGNED JUDGMENT and IA No.61206/2021-EX-PARTE STAY)

Date : 20-09-2021 This appeal was called on for hearing today.

CORAM :

HON'BLE DR. JUSTICE D.Y. CHANDRACHUD  
HON'BLE MRS. JUSTICE B.V. NAGARATHNA

For Appellant(s) Mr. R. Venkataramani, Sr. Adv.  
Mr. G. N. Reddy, AOR  
Mr. Ravi Shankar, Adv.

For Respondent(s)

UPON hearing the counsel the Court made the following  
O R D E R

- 1 The issue as to whether the National Green Tribunal can exercise *suo moto* jurisdiction is pending before a coordinate Bench of this Court. Mr R Venkataramani, learned senior counsel appearing on behalf of the appellant states that the judgment has been reserved.
- 2 List the Civil Appeal on 18 October 2021.



(CHETAN KUMAR)  
A.R. - cum - P.S.

(SAROJ KUMARI GAUR)  
Court Master

I

IN THE SUPREME COURT OF INDIA  
CIVIL APPELLATE JURISDICTION

Civil Appeal No 1778 of 2021

**Spy Agro Industries Ltd**

.... Appellant(s)

**Versus**

**The Chairman, Andhra Pradesh Pollution  
Control Board & Anr**

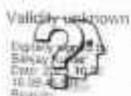
....Respondent(s)

**ORDER**

- 1 The principal issue which was sought to be canvassed in the Civil Appeal was whether the National Green Tribunal<sup>1</sup> has the jurisdiction to entertain proceedings on its own initiative or *suo motu*.
- 2 This issue has been resolved in a judgment of a three-Judge Bench of this Court in **Municipal Corporation of Greater Mumbai v Ankita Sinha**<sup>2</sup>. This Court has held that:

"40... the NGT is vested with *suo motu* power in discharge of its functions under the NGT Act."

- 3 The NGT had constituted a Joint Committee, which in its report, *inter alia*, directed the appellant to pay environmental compensation quantified at Rs 51 lakhs for operating the unit in violation of the 'Stop Production Order' issued by the Andhra Pradesh Pollution Control Board<sup>3</sup>, causing an accident in the unit. As a matter of fact, there was a loss of human lives as a result of the accident. In a detailed report replete with reasons, the Joint Committee has found the unit to



- 1 "NGT"
- 2 Civil Appeal Nos 12122-12123 of 2018, decided on 7 October 2021
- 3 "APPCB"

be negligent in performing its statutory obligations to ensure the safe operation of the unit. The findings are based on a careful appraisal. In this backdrop, the imposition of a fine of Rs 51 lakhs on the basis of the polluter pays principle cannot be faulted.

- 4 In the course of these proceedings, this Court, by its order dated 2 July 2021, had directed the appellant to deposit an amount of Rs 51 lakhs in terms of the order of the NGT before the appropriate authority.
- 5 Mr R Venkataramani, Senior Counsel appearing on behalf of the appellant, states that the amount has been deposited and proof has been filed before the Registry of this Court in terms of the earlier order.
- 6 In order to enable the NGT to have control over the manner in which the funds would be utilized, we direct the APPCB to place before the NGT, within a period of six weeks from the date of receipt of this order, a statement indicating the manner in which the funds which have been deposited by the appellant would be utilized for purposes beneficial to the environment.
- 7 We request the NGT to ensure that the funds are properly utilized by APPCB. We close the appeal as we are in agreement with the reasons which weighed with the NGT in affirming the report of the Joint Committee insofar as the culpability of the appellant and the levy of compensation are concerned.
- 8 The appeal is disposed of.
- 9 A copy of this order shall be remitted by the appellant and, in addition, by the Registrar (Judicial) of this Court, to the NGT and the APPCB.

10 Pending application, if any, stands disposed of.

.....J.  
[Dr Dhananjaya Y Chandrachud]

.....J.  
[B V Nagarathna]

New Delhi;  
October 20, 2021  
-S-

ITEM NO.5 Court 4 (Video Conferencing) SECTION XVII

S U P R E M E C O U R T O F I N D I A  
R E C O R D O F P R O C E E D I N G S

Civil Appeal No(s).1778/2021

SPY AGRO INDUSTRIES LTD.

Appellant(s)

VERSUS

THE CHAIRMAN ANDHRA PRADESH POLLUTION  
CONTROL BOARD & ANR.

Respondent(s)

(WITH IA No.61205/2021-EXEMPTION FROM FILING C/C OF THE IMPUGNED  
JUDGMENT and IA No.61206/2021-EX-PARTE STAY)

Date : 20-10-2021 This appeal was called on for hearing today.

CORAM :

HON'BLE DR. JUSTICE D.Y. CHANDRACHUD  
HON'BLE MRS. JUSTICE B.V. NAGARATHNA

For Appellant(s) Mr. R. Venkataramani, Sr. Adv.  
Mr. G. N. Reddy, AOR  
Mr. Ravi Shankar, Adv.

For Respondent(s)

UPON hearing the counsel the Court made the following  
O R D E R

- 1 The appeal is disposed of in terms of the signed order.
- 2 Pending application, if any, stands disposed of.

(SANJAY KUMAR-I)  
AR-CUM-PS

(SAROJ KUMARI GAUR)  
COURT MASTER

(Signed order is placed on the file)

Item No. 10

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

M.A. No. 112/2024

In

Original Application No. 107/2020

News item in Indian Express Newspaper Sunday Express Edition dated  
28th June 2020 Title Gas leak in agro company claims life of one

Date of hearing: 13.11.2024

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON  
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER  
HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER  
HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER**

Respondents: Mr. TVS Raghavendra Sreyas & Mr. Siddharth Vasudev, Advs. for AP  
PCB (Through VC)

**ORDER**

1. This M.A. has been registered in pursuance to and in compliance of the order of the Hon'ble Supreme Court dated 20.10.2021 passed in Civil Appeal No. 1778/2021 in the matter of Spy Agro Industries Ltd. Vs. The Chairman, Andhra Pradesh Pollution Control Board & Anr. In that Civil Appeal, the order of the Tribunal dated 08.01.2021 passed in O.A. No. 107/2020 appears to be under challenge. In the O.A. the issue was in respect of the award of compensation to the family members of the deceased victims and injured workers on account of the ammonia gas leakage accident at Nandyal in Kurnool District, Andhra Pradesh, in the S.P.Y. Agro Industry on 26.06.2020. The Five Member Expert Committee had submitted the report and also assessed the compensation for damage to the environment apart from the compensation which was paid to the victims.

2. The Tribunal vide order dated 08.01.2021 while disposing of the O.A. No. 107/2020 had accepted the report of the committee and directed due compliance of the recommendations of the committee.

3. The Hon'ble Supreme Court while disposing of the Civil Appeal No. 1778/2021 against that order has observed as under:

*"1. The principal issue which was sought to be canvassed in the Civil Appeal was whether the National Green Tribunal has the jurisdiction to entertain proceedings on its own initiative or suo motu.*

*2. This issue has been resolved in a judgment of a three-Judge Bench of this Court in Municipal Corporation of Greater Mumbai v Ankita Sinha. This Court has held that:*

*"40... the NGT is vested with suo motu power in discharge of its functions under the NGT Act."*

*3. The NGT had constituted a Joint Committee, which in its report, inter alia, directed the appellant to pay environmental compensation quantified at Rs 51 lakhs for operating the unit in violation of the 'Stop Production Order' issued by the Andhra Pradesh Pollution Control Board, causing an accident in the unit. As a matter of fact, there was a loss of human lives as a result of the accident. In a detailed report replete with reasons, the Joint Committee has found the unit to be negligent in performing its statutory obligations to ensure the safe operation of the unit. The findings are based on a careful appraisal. In this backdrop, the imposition of a fine of Rs 51 lakhs on the basis of the polluter pays principle cannot be faulted.*

*4. In the course of these proceedings, this Court, by its order dated 2 July 2021, had directed the appellant to deposit an amount of Rs 51 lakhs in terms of the order of the NGT before the appropriate authority.*

*5. Mr. R Venkataramani, Senior Counsel appearing on behalf of the appellant, states that the amount has been deposited and proof has been filed before the Registry of this Court in terms of the earlier order.*

*6. In order to enable the NGT to have control over the manner in which the funds would be utilized, we direct the APPCB to place before the NGT, within a period of six weeks from the date of receipt of this order, a statement indicating the manner in which the funds which have been deposited by the appellant would be utilized for purposes beneficial to the environment.*

*7. We request the NGT to ensure that the funds are properly utilized by APPCB. We close the appeal as we are in agreement with the reasons which weighed with the NGT in affirming the report of*

*the Joint Committee insofar as the culpability of the appellant and the levy of compensation are concerned.*

8. *The appeal is disposed of.*

9. *A copy of this order shall be remitted by the appellant and, in addition, by the Registrar (Judicial) of this Court, to the NGT and the APPCB.*

10. *Pending application, if any, stands disposed of.\**

4. In terms of the above order, the APPCB was required to place before the NGT within six weeks from the date of receipt of the order, a statement indicating how the fund of Rs. 51 Lakhs deposited by the S.P.Y. Agro Industry Limited would be utilised for the purposes beneficial to the environment and NGT was given control to oversee the manner in which the funds would be utilized and to ensure that the fund are properly utilized by the APPCB.

5. Though the Hon'ble Supreme Court had given only six weeks but the report containing the proposal for utilization of the fund deposited by M/s S.P.Y. Agro Industry has been filed before the NGT on 24.10.2024. The APPCB is required to explain why the report has been filed with such a delay. We also find that the proposal for utilization of the EC funds given in the said report is vague and unspecific which does not disclose the head-wise utilization of the funds for the purpose beneficial to the environment. The APPCB is required to show that the sum of Rs. 51 lakhs received from the Project Proponent was kept separately and it was separately utilized for the purpose beneficial to the environment as directed by the Hon'ble Supreme Court instead of mixing it with the other funds and using it for the general purposes.

6. Learned Counsel for the UPPCB seeks 4 weeks to file the fresh report in compliance of the direction of the Hon'ble Supreme Court keeping in view the observations made above.

7. List on 06.03.2025.

Prakash Shrivastava, CP

Sudhir Agarwal, JM

Arun Kumar Tyagi, JM

Dr. Afroz Ahmad, EM

November 13, 2024  
M.A. No. 112/2024  
In Original Application No. 107/2020  
hb.,

**Report of the CPCB In-house Committee on  
Methodology for Assessing Environmental  
Compensation and Action Plan to Utilize the Fund**



**CENTRAL POLLUTION CONTROL BOARD**  
"Parivesh Bhawan", East Arjun Nagar,  
Delhi-110032

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## Abstract

Environmental compensation is a policy instrument for the protection of the environment which works on the Polluter Pay Principal. Environmental compensation has already been implemented in various countries, although limited in scope. Experiences from these implementations are mixed and tend to stress the importance of certain principles in order to achieve the overall objective of protection of the environment.

The Hon'ble National Green Tribunal through its various judgments has empowered the Central Pollution Control Board to lay down the methodology to assess and recover compensation for damage to the environment and utilize such amount in terms of an action plan for protection of the environment.

An attempt has been made by the CPCB in-house Committee to develop a methodology for assessing environmental compensation to be levied on concerned industry, authority, individual etc. for the protection of environment. Expert institutions/ NGOs like The Energy and Resources Institute, Centre for Science and Environment-India, Institute of Economic Growth etc. were also consulted to finalize the report. Overall objective is to develop self-sense of responsibility towards the environment and to make defaulters realize their mistake by imposing compensation, which will be utilized for the protection/restoration of the environment.

Although, this is the first attempt in India towards development of methodology for assessing environmental compensation, however, efforts have been made to simplifying the process so that regulatory institutions can easily adopt the methodology for implementation.

## Chapter-I: Environment Compensation to be levied on Industrial Units

---

### 1.1 Background

The Hon'ble National Green Tribunal (NGT), Principal Bench in the matter of OA No. 593/2017 (WP (CIVIL) No. 375/2012, Paryavaran Suraksha Samiti & Anr. Vs. Union of India & Ors. directed Central Pollution Control Board (CPCB) that:

*"The CPCB may take penal action for failure, if any, against those accountable for setting up and maintaining STPs, CETPs and ETPs. CPCB may also assess and recover compensation for damage to the environment and said fund may be kept in a separate account and utilized in terms of an action plan for protection of the environment. Such action plan may be prepared by the CPCB within three months" (Annexure-I).*

### 1.2 Constitution of the Committee

In this context, Chairman, CPCB constituted a Committee under the Chairmanship of Shri A. Sudhakar, I/c WQM-I with Shri A. K. Vidyarthi, I/c WQM-II, Shri P. K. Gupta, I/c IPC-VI, Shri Nazimuddin I/c IPC-II and Dr. S. K. Paliwal, Scientist 'D' as members. The Committee was asked to deliberate on this issue and come up with a draft formulation before 15.9.2018.

### 1.3 Methodology for Assessing Environmental Compensation

The Committee discussed the issue on 4.9.2018, 13.9.2018, 17.9.2018 and 09.10.2018. A meeting was also held with Senior Officers of CPCB Head Office and Regional Directorates through video conferencing on 28.09.2018 to discuss the draft report and to seek comments/feedbacks. The comments/feedbacks received and deliberations of the Committee on the same are given in **Annexure-II**.

As per the Hon'ble NGT suggestion, CPCB has invited comments of 3 expert institution, namely, Centre for Science and Environment (CSE), Institute of Economic Growth (IEG) and The Energy Research Institute (TERI). A meeting to incorporate the comments of the expert institutions and to finalize the report, was held on 27/03/2019. The CPCB in-house committee on Environmental Compensation has deliberated on the comments and finalized the report accordingly. The Committee's deliberations are attached as **Annexure-III**.

It was deliberated for developing a formula for imposing environmental compensation on industrial units for violation of directions issued by regulatory bodies and this is the first attempt made. The committee discussed that environmental compensation should be based on "Polluter Pay Principle". The Committee decided to list the instances for taking cognizance of cases fit for violation and levy environmental compensation.

Cases considered for levying Environmental Compensation (EC):

- a) Discharges in violation of consent conditions, mainly prescribed standards / consent limits.
- b) Not complying with the directions issued, such as direction for closure due to non-installation of OCEMS, non-adherence to the action plans submitted etc.
- c) Intentional avoidance of data submission or data manipulation by tampering the Online Continuous Emission / Effluent Monitoring systems.
- d) Accidental discharges lasting for short durations resulting into damage to the environment.
- e) Intentional discharges to the environment -- land, water and air resulting into acute injury or damage to the environment.
- f) Injection of treated/partially treated/ untreated effluents to ground water.

**1.3.1** In the instances as mentioned at *a, b and c* above, Pollution Index may be used as a basis to levy the Environmental Compensation. CPCB has published guidelines for categorization of industries into Red, Orange, Green and White based on concept of Pollution Index (PI). The Pollution Index is arrived after considering quantity & quality of emissions/ effluents generated, types of hazardous wastes generated and consumption of resources. Pollution Index of an industrial sector is a numerical number in the range of 0 to 100 and can be represented as follows:

$$PI = f(\text{Water Pollution Score, Air Pollution Score \& HW Generation Score})$$

*Pollution Index* is a number from 0 to 100 and increasing value of PI denotes the increasing degree of pollution hazard from the industrial sector.

CPCB has issued directions to all SPCBs/PCCs on 07.03.2016 to adopt the methodology and follow guidelines prepared by CPCB for categorization of industrial sectors into Red, Orange, Green and White.

The concept of Pollution Index, which was deliberated widely with all stakeholders and agreed, shall be used for calculating Environmental Compensation. This may help in implementation of such provision throughout the country, a successful initiative in vital field of industrial pollution control.

After considering various factors including the policy implementation issues, Committee has come up with following formula for levying the Environmental Compensation in instances as mentioned at *a, b and c* including non-compliance of the environmental standards / violation of directions.

The Environmental Compensation shall be based on the following formula:

$$EC = PI \times N \times R \times S \times LF$$

Where,

- EC is Environmental Compensation in ₹  
 PI = Pollution Index of industrial sector  
 N = Number of days of violation took place  
 R = A factor in Rupees (₹) for EC  
 S = Factor for scale of operation  
 LF = Location factor

The formula incorporates the anticipated severity of environmental pollution in terms of Pollution Index, duration of violation in terms of number of days, scale of operation in terms of micro & small/medium/large industry and location in terms of proximity to the large habitations.

Note:

- The industrial sectors have been categorized into Red, Orange and Green, based on their Pollution Index in the range of 60 to 100, 41 to 59 and 21 to 40, respectively. It was suggested that the average pollution index of 80, 50 and 30 may be taken for calculating the Environmental Compensation for Red, Orange and Green categories of industries, respectively.
- N, number of days for which violation took place is the period between the day of violation observed/due date of direction's compliance and the day of compliance verified by CPCB/SPCB/PCC.
- R is a factor in Rupees, which may be a minimum of 100 and maximum of 500. It is suggested to consider R as 250, as the Environmental Compensation in cases of violation.
- S could be based on small/medium/large industry categorization, which may be 0.5 for micro or small, 1.0 for medium and 1.5 for large units.
- LF, could be based on population of the city/town and location of the industrial unit. For the industrial unit located within municipal boundary or up to 10 km distance from the municipal boundary of the city/town, following factors (LF) may be used:

**Table No. 1.1: Location Factor Values**

| S. No. | Population*<br>(million) | Location Factor#<br>(LF) |
|--------|--------------------------|--------------------------|
| 1      | 1 to <5                  | 1.25                     |
| 2      | 5 to <10                 | 1.5                      |
| 3      | 10 and above             | 2.0                      |

\*Population of the city/town as per the latest Census of India

#LF will be 1.0 in case unit is located >10km from municipal boundary

LF is presumed as 1 for city/town having population less than one million.

For notified Ecologically Sensitive areas, for beginning, LF may be assumed as 2.0. However, for critically Polluted Areas, LF may be explored in future.

- f. In any case, minimum Environmental Compensation shall be ₹ 5000/day.
- g. In order to include deterrent effect for repeated violations, EC may be increased on exponential basis, i.e. by 2 times on 1<sup>st</sup> repetition, 4 times on 2<sup>nd</sup> repetition and 8 times on further repetitions.
- h. If the operations of the industry are inevitable and violator continues its operations beyond 3 months then for deterrent compensation, EC may be increased by 2, 4 and 8 times for 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quarter, respectively. Even if the operations are inevitable beyond 12 months, violator will not be allowed to operate.
- i. Besides EC, industry may be prosecuted or closure directions may be issued, whenever required.

A sample calculation for Environmental Compensation (without deterrent factor) is given at Table No. 1.2. It can be noticed that for all instances, EC for Red, Orange and Green category of industries varies from 3,750 to 60,000 ₹/day.

Table No. 1.2: A sample calculation for Environmental Compensation

| Industrial Category                | Red           | Orange       | Green        |
|------------------------------------|---------------|--------------|--------------|
| Pollution Index (PI)               | 60-100        | 41-59        | 21-40        |
| Average PI                         | 80            | 50           | 30           |
| R-Factor                           | 250           |              |              |
| S-Factor                           | 0.5-1.5       |              |              |
| L-Factor                           | 1.00-2.00     |              |              |
| Environmental Compensation (₹/day) | 10,000-60,000 | 6,250-37,500 | 5,000-22,500 |

1.3.2 In other instances i.e. *d, e and f*, the environmental compensation may contain two parts – one requires providing immediate relief and other long-term measures such as remediation. In all these cases, detailed investigations are required from expert institutions/organizations based on which environmental compensation will be decided. CPCB shall list the expert institutions for this purpose.

In such cases, comprehensive plan for remediation of environmental pollution may be prepared and executed under the supervision of a committee with representatives of SPCB, CPCB and expert institutions/organizations.

#### 1.4 Action Plan for Utilization of Environmental Compensation Fund

The Committee discussed about the utilization of funds, which will be received by imposing Environmental Compensation. The following Action Plan is proposed to utilize the fund for protection of the environment.

**1.4.1. When Environmental Compensation is calculated through the Pollution Index:**

The amount received by imposing the Environmental Compensation to the industries / organization non-complying with the environmental standards / violating any CPCB's directions shall be deposited in a separate bank account. The amount accumulated will be utilized for Protection of Environment. The following schemes were identified, which may be considered for utilization of Environmental Compensation Fund:

- a. Industrial Inspections for compliance verification
- b. Installation of Continuous water quality monitoring stations / Continuous ambient air quality monitoring stations for strengthening of existing monitoring network
- c. Preparation of Comprehensive Industry Documents on Industrial Sectors / clean technology
- d. Investigations of environmental damages, preparation of DPRs
- e. Remediation of contaminated sites
- f. Infrastructure augmentation of Urban Local Bodies (ULBs) /capacity building of SPCBs/PCCs

The above proposed list may include other schemes also, depending upon the requirement.

Considering the availability of accumulated funds, CPCB will finalize the scheme, keeping in mind the priority, to utilize the funds of Environmental Compensation.

**1.4.2. When Environmental Compensation is assessed based on actual damage to the environment by Expert Organization/ Agency:**

The amount of Environmental Compensation under this case will be remediation costs, measures requiring immediate and short-term actions, compensation towards loss of ecology, etc., and will be utilized exclusively for the purpose at specific site, based on the detailed investigations by the Expert Organizations/ agencies.

**1.5 Recommendations**

The Committee made following recommendations:

- 1.5.1 To begin with, Environmental Compensation may be levied by CPCB only when CPCB has issued the directions under the Environment (Protection) Act, 1986. In case of a, b and c, Environmental Compensation may be calculated based on the formula "EC = PI x N x R x S x LF", wherein, PI may be taken as 80, 50 and 30 for red, orange and green category of industries, respectively, and R may be taken as 250. S and LF may be taken as prescribed in the preceding paragraphs.

- 1.5.2 In case of d, e and f, the Environmental Compensation may be levied based on the detailed investigations by Expert Institutions/Organizations.
- 1.5.3 The Hon'ble Supreme Court in its order dated 22.02.2017 in the matter of Paryavaran Suraksha Samiti and another v/s Union of India and others (Writ Petition (Civil) No. 375 of 2012), directed that all running industrial units which require "consent to operate" from concerned State Pollution Control Board, have a primary effluent treatment plant in place. Therefore, no industry requiring ETP, shall be allowed to operate without ETP.
- 1.5.4 EC is not a substitute for taking actions under EP Act, Water Act or Air Act. In fact, units found polluting should be closed/prosecuted as per the Acts and Rules.

\*\*\*\*\*

## Chapter-II: Environmental Compensation to be levied on all violations of Graded Response Action Plan (GRAP) in NCR.

### 2.1 Background

The CPCB In-house Committee also discussed that the EC shall also be levied on all violations of Graded Response Action Plan (GRAP) in NCR. The implementing agencies for each activity have been identified and the EC will be levied on these agencies. These violations attract graded amounts of EC depending on the state of ambient air quality, which is given in table below:

**Table No. 2.1: Environmental Compensation to be levied on all violations of Graded Response Action Plan (GRAP) in Delhi-NCR.**

| Activity  | State Of Air Quality  | Environmental Compensation (₹) |
|---|-----------------------|--------------------------------|
| <b>Industrial Emissions</b>                                       | Severe +/-Emergency   | Rs 1.0 Crore                   |
|   | Severe                | Rs 50 Lakh                     |
|   | Very Poor             | Rs 25 Lakh                     |
|   | Moderate to Poor      | Rs 10 Lakh                     |
| <b>Vapour Recovery System (VRS) at Outlets of Oil Companies</b>   |                       |                                |
| <b>i. Not installed</b>   | Target Date           | Rs 1.0 Crore                   |
| <b>ii. Non-functional</b>   | Very poor to Severe + | Rs 50.0 Lakh                   |
|   | Moderate to Poor      | Rs 25.0 Lakh                   |
| <b>Construction sites (Offending plot more than 20,000 Sq.m.)</b> | Severe +/-Emergency   | Rs 1.0 Crore                   |
|   | Severe                | Rs 50 Lakh                     |
|   | Very Poor             | Rs 25 Lakh                     |
|   | Moderate to Poor      | Rs 10 Lakh                     |
| <b>Solid waste/ garbage dumping in Industrial Estates</b>         | Very poor to Severe + | Rs 25.0 Lakh                   |
|   | Moderate to Poor      | Rs 10.0 Lakh                   |
| <b>Failure to water sprinkling on unpaved roads</b>               |                       |                                |
| <b>a) Hot-spots</b>   | Very poor to Severe + | Rs 25.0 Lakh                   |
| <b>b) Other than Hot-spots</b>                                    | Very poor to Severe + | Rs 10.0 Lakh                   |

### 2.2 Action Plan for Utilization of Environmental Compensation Fund

EC levied on all violations of Graded Response Action Plan (GRAP) in Delhi NCR will be deposited in the same fund and will be utilized in the same manner as mentioned in para 1.4.1 of Chapter-I of this report.

\*\*\*\*\*

## Chapter-III: Environmental Compensation to be levied in case of failure of preventing the pollutants being discharged in water bodies and failure to implement waste management rules

---

### 3.1 Background

The Hon'ble Supreme Court in its order dated 22.02.2017 in the matter of Paryavaran Suraksha Samiti and another v/s Union of India and others (Writ Petition (Civil) No. 375 of 2012), directed State Governments (including the concerned Union Territories) to set-up Sewage Treatment Plants (STPs), which are already under implementation, within the time lines already postulated. Further, the STPs, which are yet to set-up, to be completed within a period of three years, from today, i.e. by 22.02.2020.

The Hon'ble NGT in its order dated 06.12.2018 (**Annexure-III**) in the matter of Court of its own motion v/s State of Karnataka (Original Application No. 125/2017 and M.A. No. 1337/2018) has given following directions:

*"Since failure of preventing the pollutants being discharged in water bodies (including lakes) and failure to implement solid and other waste management rules are too frequent and widespread, the CPCB must lay down specific guidelines to deal with the same, throughout India, including the scale of compensation to be recovered from different individuals/authorities, in addition to or as alternative to prosecution. The scale may have slabs, depending on extent of pollution caused, economic viability, etc. Deterrent effect for repeated wrongs may also be provided."*

### 3.2 Ideology of Environmental Compensation Formula

In compliance of the directions of the Hon'ble Tribunal, the Committee deliberated on the issue of environmental compensation to be recovered from individuals/authorities in case of failure of preventing the pollutants being discharged in water bodies and failure to implement solid and other waste management rules. The Committee has suggested that environmental compensation in these cases should be comprised of two components i.e.

1. Cost saved/benefits achieved by the concerned individual/authority by not having proper waste/sewage management system; and
2. Cost to the environment (environmental externality) due to untreated/partially treated waste/sewage because of insufficient capacity of waste/sewage management/treatment facility.

Cost saved/benefits achieved by not having proper waste/sewage management system includes the interest on capital cost of the waste/sewage management facility and daily operation and maintenance (O&M) cost associated with the facility.

The Committee suggested that annual interest rate as 10% on loan amount, borrowed by concerned individual/authority for setting-up waste/sewage management facility, may be assumed as Capital Cost Factor for calculation of environment compensation. Further, as whole O&M cost is saved by concerned individual/authority for not managing required waste/sewage management system, 100% of the O&M cost saved may be considered as O&M cost factor.

Therefore, generalized formula for Environmental Compensation may be described as:

$$EC = \text{Capital Cost Factor} \times \text{Marginal Average Capital Cost for Establishment of Waste or Sewage Management or Treatment Facility} \times (\text{Waste or Sewage Management or Treatment Capacity Gap}) + \text{O\&M Cost Factor} \times \text{Marginal Average O\&M Cost} \times (\text{Waste or Sewage Management or Treatment Capacity Gap}) \times \text{No. of Days for which facility was not available} + \text{Environmental Externality}$$

Cost to the environment due to untreated/partially treated waste/sewage discharge by concerned individual/authority may be assumed as recommended by the committee, which is mentioned below:

**Table No. 3.1: Environmental externality for untreated/partially treated sewage discharge**

| Sewage Treatment Capacity Gap (MLD) | Marginal Cost of Environmental Externality (Rs. per MLD/day) | Minimum and Maximum value of Environmental Externality recommended by the Committee (Lacs Rs. Per Day) |
|-------------------------------------|--|--|
| Up to 200                           | 75   | Min. 0.05, Max. 0.10   |
| 201-500                             | 85   | Min. 0.25, Max. 0.35   |
| 501 and above                       | 90   | Min. 0.60, Max. 0.80   |

**Table No. 3.2: Environmental externality for improper municipal solid waste management**

| Municipal Solid Waste Management Capacity Gap (TPD) | Marginal Cost of Environmental Externality (Rs. per ton per day) | Minimum and Maximum value of Environmental Externality recommended by the Committee (Lacs Rs. Per Day) |
|---|--|--|
| Up to 200   | 15   | Min. 0.01, Max. 0.05   |
| 201-500   | 30   | Min. 0.10, Max. 0.15   |
| 501-1000  | 35   | Min. 0.25, Max. 0.35   |
| 1001-2000   | 40   | Min. 0.50, Max. 0.60   |
| Above 2000  |  | Max. 0.80  |

The Committee further decided to fix a cap for minimum and maximum cost for capital and O&M component for Environmental Compensation, which are given in below tables:

**Table No. 3.3: Minimum and Maximum EC to be levied for untreated/partially treated sewage discharge**

| Class of the City/Town  | Mega-City               | Million-plus City       | Class-I City/Town and others |
|---|-------------------------|-------------------------|------------------------------|
| Minimum and Maximum values of EC (Total Capital Cost Component) recommended by the Committee (Lacs Rs.) | Min. 2000<br>Max. 20000 | Min. 1000<br>Max. 10000 | Min. 100<br>Max. 1000        |
| Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lacs Rs./day)       | Min. 2<br>Max. 20       | Min. 1<br>Max. 10       | Min. 0.5<br>Max. 5           |

Table No. 3.4: Minimum and Maximum EC to be levied for improper municipal solid waste management

| Class of the City/Town  | Mega-City               | Million-plus City     | Class-I City/Town and others |
|---|-------------------------|-----------------------|------------------------------|
| Minimum and Maximum values of EC (Capital Cost Component) recommended by the Committee (Lacs Rs.) | Min. 1000<br>Max. 10000 | Min. 500<br>Max. 5000 | Min. 100<br>Max. 1000        |
| Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lacs Rs./day) | Min. 1.0<br>Max. 10.0   | Min. 0.5<br>Max. 5.0  | Min. 0.1<br>Max. 1.0         |

The application of formula for calculation of EC may be further understood with the example of two typical cases.

### 3.3 Environment Compensation for Discharge of Untreated/Partially Treated Sewage by Concerned Individual/Authority:

BIS IS-1172:1993 suggests that for communities with population above 100,000, minimum of 150 to 200 lpcd of water demand is to be supplied. Further, 85% of return rate (CPHEEO Manual on Sewerage and Sewage Treatment Systems, 2013), may be considered for calculation of total sewage generation in a city. CPCB Report on "Performance evaluation of sewage treatment plants under NRCD, 2013", describes that the capital cost for 1 MLD STP ranges from 0.63 Cr. to 3 Cr. and O&M cost is around Rs. 30,000 per month. After detail deliberations, the Committee suggested to assume capital cost for STPs as Rs. 1.75 Cr/MLD (marginal average cost). Further, expected cost for conveyance system is assumed as Rs. 5.55 Cr./MLD (marginal average cost) and annual O&M cost as 10% of the combined capital cost. Population of the city may be taken as per the latest Census of India. Based on these assumptions, Environmental Compensation to be levied on concerned ULB may be calculated with the following formula:

***EC = Capital Cost Factor x [Marginal Average Capital Cost for Treatment Facility x (Total Generation-Installed Capacity) + Marginal Average Capital Cost for Conveyance Facility x (Total Generation -Operational Capacity)] + O&M Cost Factor x Marginal Average O&M Cost x (Total Generation- Operational Capacity) x No. of Days for which facility was not available + Environmental Externality x No. of Days for which facility was not available***

*Alternatively;*

***EC (Lacs Rs.) = [17.5(Total Sewage Generation – Installed Treatment Capacity) + 55.5(Total Sewage Generation-Operational Capacity)] + 0.2(Sewage Generation-Operational Capacity) x N + Marginal Cost of Environmental Externality x (Total Sewage Generation-Operational Capacity) x N***

*Where; N= Number of days from the date of direction of CPCB/SPCB/PCC till the required capacity systems are provided by the concerned authority*

*Quantity of Sewage is in MLD*

Table No. 3.5: Sample calculation for EC to be levied for discharge of untreated/partial treated Sewage

| City  | Delhi                   | Agra                    | Gurugram               | Ambala                 |
|---|-------------------------|-------------------------|------------------------|------------------------|
| Population (2011)   | 1,63,49,831             | 17,60,285               | 8,76,969               | 5,00,774               |
| Class   | Mega-City               | Million-plus City       | Class-I Town           | Class-I Town           |
| Sewage Generation (MLD) (as per the latest data available with CPCB)                                    | 4195                    | 381                     | 486                    | 37                     |
| Installed Treatment Capacity (MLD) (as per the latest data available with CPCB)                         | 2500                    | 220                     | 404                    | 45.5                   |
| Operational Capacity (MLD) (as per the latest data available with CPCB)                                 | 1900                    | 140                     | 300                    | 24.5                   |
| Treatment Capacity Gap (MLD)  | 2295                    | 241                     | 186                    | 12.5                   |
| Calculated EC (capital cost component for STPs) in Lacs Rs.   | 29662.50                | 2817.50                 | 1435.00                | 0.00                   |
| Calculated EC (capital cost component for Conveyance System) in Lacs. Rs.                               | 127372.50               | 13375.50                | 10323.00               | 693.75                 |
| Calculated EC (Total capital cost component) in Lacs Rs.  | 157035.00               | 16193.00                | 11758.00               | 693.75                 |
| Minimum and Maximum values of EC (Total Capital Cost Component) recommended by the Committee (Lacs Rs.) | Min. 2000<br>Max. 20000 | Min. 1000<br>Max. 10000 | Min. 100<br>Max. 1000  | Min. 100<br>Max. 1000  |
| <b>Final EC (Total Capital Cost Component) in Lacs Rs.</b>  | <b>20000.00</b>         | <b>10000.00</b>         | <b>1000.00</b>         | <b>693.75</b>          |
| Calculated EC (O&M Component in Lacs Rs./day)   | 459.00                  | 48.20                   | 37.20                  | 2.50                   |
| Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lacs Rs./day)       | Min. 2<br>Max. 20       | Min. 1<br>Max. 10       | Min. 0.5<br>Max. 5     | Min. 0.5<br>Max. 5     |
| <b>Final EC (O&amp;M Component) in Lacs. Rs./Day</b>  | <b>20.00</b>            | <b>10.00</b>            | <b>5.00</b>            | <b>2.50</b>            |
| Calculated Environmental Externality (Lacs Rs .Per Day)   | 2.0655                  | 0.2049                  | 0.1395                 | 0.0094                 |
| Minimum and Maximum value of Environmental Externality recommended by the Committee (Lacs Rs. Per Day)  | Min. 0.60<br>Max. 0.80  | Min. 0.25<br>Max. 0.35  | Min. 0.05<br>Max. 0.10 | Min. 0.05<br>Max. 0.10 |
| <b>Final Environmental Externality (Lacs Rs. Per day)</b>   | <b>0.80</b>             | <b>0.25</b>             | <b>0.10</b>            | <b>0.05</b>            |

### 3.4 Environment Compensation to be Levied on Concerned Individual/Authority for Improper Solid Waste Management:

It is known that estimated MSW generation is approximately 1.5 lakh MT/Day in India (MoHUA Report-2016). As per the principles of SWM Rules, 2016 and PWM Rules 2016, as amended in 2018, the total cost of Municipal Solid Waste management in a city/town includes cost for door to door collection, cost of segregation at source, cost for transportation in segregated manner, cost for processing of MSW and disposal through facility like composting, biomethanation, recycling, co-processing in cement kilns etc.

In view of above, it is estimated that the total cost of processing and treatment of MSW for a city having population size of 1 lakh and generating approximately 50 tons/day of MSW is Rs.15.5 Crores, including capital cost (one time) and O & M cost for one year. The expenditure for subsequent years would be only Rs. 3.5 crores/annum.

CPCB sponsored a survey to ascertain the status of municipal solid waste disposal in 59 cities/towns of India. The survey was conducted by the Environment Protection Training Research Institute (EPTRI), Hyderabad. As per the survey, it is estimated that solid waste generated in small, medium and large cities and towns is about 0.1 kg (Class-III), 0.3-0.4 kg (Class-II) and 0.5 kg (Class-I) per capita per day respectively. The committee opined that 0.6 kg/day, 0.5 kg/day and 0.4 kg/day per capita waste generation may be assumed for mega-cities, million-plus UAs/towns and Class-I UA/Towns respectively for calculation of environmental compensation purposes. Based on these assumptions, Environmental Compensation to be levied on concerned ULB may be calculated with the following formula:

**EC = Capital Cost Factor x Marginal Average Cost for Waste Management x (Per day waste generation-Per day waste disposed as per the Rules) + O&M Cost Factor x Marginal Average O&M Cost x (Per day waste generation-Per day waste disposed as per the Rules) x Number of days violation took place + Environmental Externality x N**

Where;

Waste Quantity in tons per day (TPD)

N= Number of days from the date of direction of CPCB/SPCB/PCC till the required capacity systems are provided by the concerned authority

Simplifying;

**EC (Lacs Rs.) = 2.4(Waste Generation - Waste Disposed as per the Rules) +0.02 (Waste Generation - Waste Disposed as per the Rules) x N + Marginal Cost of Environmental Externality x (Waste Generation - Waste Disposed as per the Rules) x N**

Table No. 3.6: Sample calculation for EC to be levied for improper management of Municipal Solid Waste

| City   | Delhi                   | Agra                   | Gurugram               | Ambala                 |
|--|-------------------------|------------------------|------------------------|------------------------|
| Population (2011)  | 1,63,49,831             | 17,60,285              | 8,76,969               | 5,00,774               |
| Class  | Mega-City               | Million-plus City      | Class-I Town           | Class-I Town           |
| Waste Generation (kg. per person per day)  | 0.6                     | 0.5                    | 0.4                    | 0.4                    |
| Waste Generation (TPD)   | 9809.90                 | 880.14                 | 350.79                 | 200.31                 |
| Waste Disposal as per Rules (TPD) (assumed as 25% of waste generation for sample calculation)          | 2452.47                 | 220.04                 | 87.70                  | 50.08                  |
| Waste Management Capacity Gap (TPD)  | 7357.42                 | 660.11                 | 263.09                 | 150.23                 |
| Calculated EC (capital cost component) in Lacs. Rs.  | 17657.82                | 1584.26                | 631.42                 | 360.56                 |
| Minimum and Maximum values of EC (Capital Cost Component) recommended by the Committee (Lacs Rs.)      | Min. 1000<br>Max. 10000 | Min. 500<br>Max. 5000  | Min. 100<br>Max. 1000  | Min. 100<br>Max. 1000  |
| <b>Final EC (capital cost component) in Lacs. Rs.</b>  | <b>10000.00</b>         | <b>1584.26</b>         | <b>631.42</b>          | <b>360.56</b>          |
| Calculated EC (O&M Component) in Lacs. Rs./Day   | 147.15                  | 13.20                  | 5.26                   | 3.00                   |
| Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lacs Rs./Day)      | Min. 1.0<br>Max. 10.0   | Min. 0.5<br>Max. 5.0   | Min. 0.1<br>Max. 1.0   | Min. 0.1<br>Max. 1.0   |
| <b>Final EC (O&amp;M Component) in Lacs. Rs./Day</b>   | <b>10.00</b>            | <b>5.00</b>            | <b>1.00</b>            | <b>1.00</b>            |
| Calculated Environmental Externality (Lacs Rs. Per Day)  | 2.58                    | 0.18                   | 0.03                   | 0.02                   |
| Minimum and Maximum value of Environmental Externality recommended by the Committee (Lacs Rs. per day) | Max. 0.80               | Min. 0.25<br>Max. 0.35 | Min. 0.01<br>Max. 0.05 | Min. 0.01<br>Max. 0.05 |
| <b>Final Environmental Externality (Lacs Rs. per day)</b>  | <b>0.80</b>             | <b>0.25</b>            | <b>0.03</b>            | <b>0.02</b>            |

### 3.3 Action Plan for Utilization of Environmental Compensation Fund

EC levied in case of failure of preventing the pollutants being discharged in water bodies and failure to implement waste management rules will be deposited in the same fund and will be utilized in the same manner as mentioned in para 1.4.1 of Chapter-I of this report.

### 3.4 Recommendations

1. The Committee recommended that to begin with, Environmental Compensation to be recovered from individuals/authorities in case of failure of preventing the pollutants being discharged in water bodies and failure to implement solid waste management rules may be calculated with the methodology described in the report.
2. If mixing of Bio-medical Waste or Hazardous Waste is found in Municipal Solid Waste than capital cost component of EC may be increased by a multiplication factor of 1.5.

3. In order to include deterrent effect for continuous violations, component of O&M and Environmental Externality in EC formula may be increased on exponential basis by 2, 4, and 8 times after every six-months, beyond the time prescribed by authority for ensuring complete treatment of sewage/waste of the city/town.

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## Chapter-IV: Environmental Compensation in Case of Illegal Extraction of Ground Water

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### 4.1 Background

The Hon'ble National Green Tribunal (NGT), Principal Bench in the matter of Shailesh Singh v/s Central Ground Water Board & Ors. (Original Application No. 327/2018) vide order dated 03/01/2019 (**Annexure-V**) directed Central Pollution Control Board (CPCB) that:

*"CPCB may constitute a mechanism to deal with individual cases of violation of norms, as existed prior to Notification of 12/12/2018, to determine the environment compensation to be recovered or other coercive measures to be taken, including prosecution, for past illegal extraction of ground water, as per law."*

### 4.2 Constitution of the Committee

In compliance to Hon'ble NGT dated 03/01/2019, CPCB constituted a committee under the Chairmanship of Shri A. Sudhakar, DH, WQM-I Division with Shri P. K. Gupta, DH, IPC-VI, Shri Vishal Gandhi, Sc. D, UPC-I Division and Smt. Suniti Parashar, Scientist B, WQM-I Division as members. The committee was asked to deliberate on this issue and come up with draft formulation of mechanism to determine the Environmental Compensation for illegal extraction of ground water.

### 4.3 Methodology for Assessing Environmental Compensation

The committee discussed the issue on 07/02/2019, 07/03/2019 and 20/3/2019. The committee deliberated on the issue of Environmental Compensation to be recovered from individuals/industries such as domestic, packaging drinking water units, mining & infrastructure projects and industrial units in case of illegal extraction of ground water. The Guidelines/Criteria for evaluation of proposals/requests for Ground Water Abstraction, 2015 were also discussed and based on this further formulation to levy Environmental Compensation has been evolved.

### 4.4 Ideology of Environmental Compensation w.r.to illegal extraction of ground water

Ground water is becoming an increasingly scarce resource because of its unabated and indiscriminate over-exploitation. Growth in ground water exploitation, however, has led to a steep fall in water table in several parts of the country. Use of ground water is becoming unsustainable day by day. The falling water table is a matter of special concern since it tends to reduce the accessibility of the resource to small and marginal farmers due to increase in costs of extractions.

Specific conditions applicable in Notified/Non-Notified areas for various users, as mentioned in Guidelines/Criteria for evaluation of proposals/requests for Ground Water Abstraction, 2015 are given below:

#### For Notified Areas:

1. Permission to abstract ground water through any energized means will not be accorded for any purpose other than drinking water.

2. Central Ground Water Authority (CGWA) so far has notified 162 areas, in the country for the purpose of regulation of ground water development.
3. Regulation of Ground Water development in Notified areas is through District Administrative Heads assisted by Advisory Committees under the provisions of Section 4 of the Environment (Protection) Act, 1986.
4. In Notified areas, ground water use in individual houses, infrastructure complexes like group housing societies, hospitals, schools etc. and drinking water requirements of workers in industries can be allowed.
5. NOC for ground water withdrawal will be considered only if Water Supplying Department is not providing adequate water in the area/premises. Proof for this is to be produced from the concerned authority by the applicant.
6. For individual houses, the maximum diameter of the tube-well should be restricted to 4 inch only and the capacity of the pump should not exceed 1HP. For infrastructure projects, maximum diameter of the ground water abstraction structures should be restricted to 150 mm (6 inches) only and capacity of the pump should not exceed 5 HP.
7. Any violation of the above conditions will attract legal action under Section 15 of the Environment (Protection) Act, 1986.

#### For Non-Notified Areas:

NOC for ground water withdrawal will be considered for industries/infrastructure/packaging as per safe, semi critical, critical and over-exploited criteria.

#### 4.5 Formula for Environmental Compensation for illegal extraction of ground water

The committee decided that the formula should be based on water consumption (Pump Yield & Time duration) and rates for imposing Environmental Compensation for violation of illegal abstraction of ground water. The committee has proposed following formula for calculation of Environmental Compensation ( $EC_{GW}$ ):

|  |
|--|
| $EC_{GW} = \text{Water Consumption per Day} \times \text{No. of Days} \times \text{Environmental Compensation Rate for illegal extraction of ground water (ECR}_{GW})$ |
|--|

Where water Consumption is in  $m^3/\text{day}$  and  $ECR_{GW}$  in  $Rs./m^3$

Yield of the pump varies based on the capacity/power of pump, water head etc. For reference purpose, yield of the pump may be assumed as given in Annexure-VI.

Time duration will be the period from which pump is operated illegally.

In case of illegal extraction of ground water, quantity of discharge as per the meter reading or as calculated with assumptions of yield and time may be used for calculation of  $EC_{GW}$ .

#### 4.6 Environmental Compensation Rate ( $ECR_{GW}$ ) for illegal use of Ground Water

The committee decided that the Environmental Compensation Rate ( $ECR_{GW}$ ) for illegal extraction of ground water should increase with increase in water consumption as well as water scarcity in the area. Further,  $ECR_{GW}$  are kept relaxed for drinking and domestic use as compared to other uses, considering the basic need of human being.

As per CGWB, safe, semi-critical, critical and over-exploited areas are categorized from the ground water resources point of view (CGWB, 2017). List of safe, semi-critical, critical and over-exploited areas are available on the website of CGWB and can be accessed from- <http://cgwb.nic.gov.in/LandlinePage/NotifiedAreas/CategorizationOfAssessmentUnits.pdf#700M=150>.

Environmental Compensation Rates ( $ECR_{GW}$ ) for illegal use of ground water ( $ECR_{GW}$ ) for various purposes such as drinking/domestic use, packaging units, mining and industrial sectors as finalized by the committee are given in tables below:

#### 4.6.1 $ECR_{GW}$ for Drinking and Domestic use:

Drinking and Domestic use means uses of ground water in households, institutional activity, hospitals, commercial complexes, townships etc.

| Sl. No.   | Area Category  | Water Consumption ( $m^3/day$ ) |         |          |            |
|---|----------------|---------------------------------|---------|----------|------------|
|   |                | <2                              | 2 to <5 | 5 to <25 | 25 & above |
| Environmental Compensation Rate ( $ECR_{GW}$ ) in Rs./ $m^3$  |                |                                 |         |          |            |
| 1   | Safe           | 4                               | 6       | 8        | 10         |
| 2   | Semi Critical  | 12                              | 14      | 16       | 20         |
| 3   | Critical       | 22                              | 24      | 26       | 30         |
| 4   | Over-Exploited | 32                              | 34      | 36       | 40         |
| Minimum $EC_{GW}$ =Rs 10,000/- (for households) and Rs. 50,000 (for institutional activity, commercial complexes, townships etc.) |                |                                 |         |          |            |

#### 4.6.2 $ECR_{GW}$ for Packaged drinking water units:

| Sl. No.  | Area Category  | Water Consumption ( $m^3/day$ ) |              |               |              |
|--|----------------|---------------------------------|--------------|---------------|--------------|
|  |                | <200                            | 200 to <1000 | 1000 to <5000 | 5000 & above |
| Environmental Compensation Rate ( $ECR_{GW}$ ) in Rs./ $m^3$ |                |                                 |              |               |              |
| 1  | Safe           | 12                              | 18           | 24            | 30           |
| 2  | Semi critical  | 24                              | 36           | 48            | 60           |
| 3  | Critical       | 36                              | 48           | 66            | 90           |
| 4  | Over-exploited | 48                              | 72           | 96            | 120          |
| Minimum $EC_{GW}$ =Rs 1,00,000/-                             |                |                                 |              |               |              |

#### 4.6.3 $ECR_{GW}$ for Mining, Infrastructure and Dewatering Projects

| Sl. No.  | Area Category  | Water Consumption ( $m^3/day$ ) |              |               |              |
|--|----------------|---------------------------------|--------------|---------------|--------------|
|  |                | <200                            | 200 to <1000 | 1000 to <5000 | 5000 & above |
| Environmental Compensation Rate ( $ECR_{GW}$ ) in Rs./ $m^3$ |                |                                 |              |               |              |
| 1  | Safe           | 15                              | 21           | 30            | 40           |
| 2  | Semi critical  | 30                              | 45           | 60            | 75           |
| 3  | Critical       | 45                              | 60           | 85            | 115          |
| 4  | Over-exploited | 60                              | 90           | 120           | 150          |
| Minimum $EC_{GW}$ =Rs 1,00,000/-                             |                |                                 |              |               |              |

4.6.4 ECR<sub>GW</sub> for Industrial Units:

| Sl. No.  | Area Category  | Water Consumption (m <sup>3</sup> /day) |              |               |              |
|--|----------------|---|--------------|---------------|--------------|
|  |                | <200                                    | 200 to <1000 | 1000 to <5000 | 5000 & above |
| Environmental Compensation Rate (ECR <sub>GW</sub> ) in Rs./m <sup>3</sup> |                |   |              |               |              |
| 1  | Safe           | 20                                      | 30           | 40            | 50           |
| 2  | Semi critical  | 40                                      | 60           | 80            | 100          |
| 3  | Critical       | 60                                      | 80           | 110           | 150          |
| 4  | Over-exploited | 80                                      | 120          | 160           | 200          |
| Minimum ECR <sub>GW</sub> =Rs 1,00,000/-                                   |                |   |              |               |              |

For better understanding of implementation of ECR<sub>GW</sub> policy, some example calculations are given below:

**Example No. 1 (For drinking and domestic Use):**

It is observed that a household in safe zone is extracting ground water illegally from past 2 year and 3 months with the help of 1 HP pump, dia 4 inches and head as 25 meter. It is assumed that the house-owner runs the pump for 0.5 hr/day. What Environmental Compensation (EC<sub>GW</sub>) will be charged to the owner?

**Solution:** Pump Yield (Please refer Annexure-VI) = 3 m<sup>3</sup>/hr  
 Daily Consumption = 3 x 0.5 = 1.5 m<sup>3</sup>  
 ECR<sub>GW</sub> = 4 Rs./m<sup>3</sup> (Please refer para 4.6.1)  
 EC to be levied = 4 x 1.5 = 6 Rs./day  
 Total time period = 820 days

Then, ECR<sub>GW</sub> = 6 x 820

Calculated ECR<sub>GW</sub> = 4,920 Rs.

EC<sub>GW</sub> to be levied = 10,000 Rs. (minimum prescribed ECR<sub>GW</sub>, please refer para 4.6.1)

**Example 2 (For Industrial Units):**

It is observed that an industry in critical zone is extracting ground water illegally from past 1 year with the help of 5 HP pump, dia 6 inches and head as 50 meter. It is assumed that the industry runs the pump for 3 hrs/day. What Environmental Compensation (EC<sub>GW</sub>) will be charged to the owner?

**Solution:** Pump Yield (Please refer Annexure-VI) = 12 m<sup>3</sup>/hr  
 Daily Consumption = 12 x 3 = 36 m<sup>3</sup>/day  
 ECR<sub>GW</sub> = 60 Rs./m<sup>3</sup> (Please refer para 4.6.4)  
 EC to be levied = 60 x 36 = 2,160 Rs./day  
 Total time period = 365 days

Then, ECR<sub>GW</sub> = 2,160 x 365

ECR<sub>GW</sub> = 7,88,400 Rs.

#### 4.7 Relaxation

Central Ground Water Authority (CGWA) reserves to right to relax or interpret these mechanisms in case of any exigency or situation of National strategic importance, as per Guidelines/Criteria for evaluation of proposals/requests for Ground Water Abstraction, 2015.

#### 4.8 Recommendations

The committee has given following recommendations:

- The minimum Environmental Compensation for illegal extraction of ground water for domestic purpose will be Rs. 10,000, for institutional/commercial use will be 50,000 and for other uses will be 1,00,000.
- In case of fixation of liability, it always lies with current owner of the premises where illegal extraction is taking place.
- Time duration may be assumed to be one year in case where no evidence for period of installation of bore well could be established.
- For Drinking and Domestic use, where metering is not present but storage tank facility is available, minimum water consumption per day may be assumed as similar to the storage capacity of the tank.
- For industrial ground water use, where metering is not available, water consumption may be assumed as per the consent conditions. Further, where in case industry is operating without consent, water consumption may be calculated based on the plant capacity (on the recommendation of SPCB/PCC, if required). SPCB/PCC may bring the issue of illegal extraction of ground water in industries in to the notice of CGWA for appropriate action by CGWA.
- Authorities assigned for levy EC and taking penal action are listed below:

| S. No. | Actions   | Authority   |
|--------|---|---|
| 1.     | To seal the illegal bore-well/tube-well to stop extraction of water and further closure of project          | District Collector                                    |
| 2.     | To levy EC <sub>GW</sub> as per prescribed method   | District Collector, CGWA                              |
| 3.     | To levy EC on water pollution, as per the method prescribed in report of CPCB- "EC on industrial pollution" | CPCB/SPCB/PCC   |
| 4.     | Prosecution of violator   | CGWA under EP Act<br>SPCB/PCC under Air and Water Act |

- CGWA may maintain a separate account for collection and utilization of fund, collected through the prescribed methodology in this report.

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BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI

Original Application No. 893/2017  
(W.P. (Civil) No. 375/2012)

In the matter of:

Paryavaran Suraksha Samiti & Anr.  
Vs.  
Union of India & Ors.

**CORAM :** HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE DR. JUSTICE JAWAD RAHIM, JUDICIAL MEMBER  
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER  
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

**Present:**

**Applicant:**  
**Amicus Curiae:**  
**Respondent Nos.**

Mr. Rahit Prajapati, Applicant in person  
Mr. Jai A. Dehadrai, Adv.  
Mr. Nishe Rajan Shouker, Adv. for State of Kerala  
Mr. Tarunvir Singh Khosar, Ms. Gunseet Khosar  
Mr. Sandeep Mishra Adv. for GNCTD  
Mr. Anil Shrivastava & Nituraj Dewas and  
Ms. Sujaya Bardhan, Adv. for State of Arunachal Pradesh  
Mr. Jigy Searia, Ms. Beema Victor, Adv. for Kerala State Pollution Control Board  
Mr. Avijit Roy, Adv. for Assam Pollution Control Board  
Mr. Leishangthem Roshmani Kh. Ms. Malham Bahina, Adv. for State of Manipur  
Mr. Nikhil Nayyar, Mr. Dhananjoy Bajjal, Adv. for APPCB and TBPCB  
Mr. Mukesh Verma, Adv.  
Mr. Tarunvir Singh Khosar, Adv., Mr. Sandeep Mishra and Ms. Gunseet Khosar, Adv.  
Mr. Dinesh Jindal, LO for DPCC  
Ms. Aruna Mather, Mr. Arneesh Arputham, Ms. Himraj Jeet and Ms. Anandha Arputham, Adv. for State of Sikkim  
Mr. Raja Chatterjee, Mr. Piyush Sachdev, Ms. Ashleendini Yadav, Adv. and Adv. for State of WB  
Mr. Edward Belho, AAG, Mr. H. Ladhani Michael and Ms. Holmshiam, Adv. for State of Nagaland  
Ms. Enatoli Bema, Adv. for State of Nagaland and Pollution Control Board  
Mr. M. Paliharey and Mr. A.R. Prada, Adv. for SPCB, Odisha  
Mr. Dhruv Pal, Adv. for State of Gujarat  
Mr. V.K. Shukla, Adv. for State of MP  
Mr. Jayesh Gaurav, Adv. for R-47  
Mr. Tayanjam Momo Singh, Adv. for Meghalaya Pollution Control Board  
Mr. Bhlok Chandra and Mr. Ritesh Kumar Sharma, Adv.  
Mr. Gautam Singh and Mr. Shonab Alam, Adv. for State of Bihar  
Ms. Agrajita Mukherjee, Adv.  
Ms. G. Indira, Adv. for UT of Andaman & Nicobar  
Mr. Balendu Shukhar, Mr. Brianath Prakash and Mr. Rajkumar Maurya, Adv. for Ministry of Environment, Forest and Climate Change  
Ms. Puja Kalra, Adv. for EDMC & RDMC  
Mr. Anil Grover, AAG, Mr. Rahul Kharens and Mr. Michal VU, Adv. for State of Haryana and HSPCB

Ms. Yogmaya Agnihotri, Adv. and Ms. Prity, Adv. for CECEB  
 Ms. Sakshi Popli, Adv. for Ministry of Environment, Forest and Climate Change  
 Mr. Shuvodeep Roy, Adv. and Mr. Rituraj Biswas, Adv. for State of Tripura & Tripura Pollution Control Board  
 Mr. Shashank Bajpai and Mr. Shakun S. Shukla, Advs. for State of Odisha  
 Ms. Asha Nayar Basu and Ms. Aradhita Ghosh Mandal, Advs.  
 Ms. Priyanka Sinha, Adv. for State of Jharkhand  
 Mr. Rajal Shrivastav, Adv. for MPPCB  
 Mr. Pradeep Misra and Mr. Daleep Dhyani Advs. for UPPCB  
 Mr. R. Rakesh Sharma and Mr. V. Mowli, Advs. for State of TN & TNPCB  
 Mr. Shubham Bhalla, Adv.  
 Mr. Shiv Mangal Sharma, AAG, Mr. Saurabh Rajpal, Mr. Adhiraj Singh, Ms. Shikha Sandhu and Mr. Vikramjeet Singh, Advs. for State of Rajasthan and Pollution Control Board  
 Mr. G. M. Kawoosa, Adv. for State of J & K  
 Mr. Divya Prakash Fande, Adv. For HPSPCB  
 Mr. Manish Kumar, Adv.

| Date and Remarks                                   | Orders of the Tribunal   |
|--|--|
| <p>Item No. 12</p> <p>August 03, 2018</p> <p>A</p> | <p>1. This matter was taken by this Tribunal in furtherance to the orders of the Hon'ble Supreme Court dated 22.02.2017 <i>Paryavaran Suraksha Samiti Vs Union of India</i> (2017) 5 SCC 326, establishment and functioning of ETPs/CETP/STPs.</p> <p>2. Vide order dated 25.05.2017, Notice was issued to Central Pollution Control Board and all the States Pollution Control Boards/Committees and the Ministry of Environment, Forest and Climate Change. They were directed to file status-cum-compliance report in terms of the orders of the Hon'ble Supreme Court. Accordingly, various status reports have been filed. An affidavit has been filed by the Ministry of Environment, Forest and Climate Change dated 04<sup>th</sup> July, 2017 stating as follows:</p> <p><i>*4. That the answering Respondent is engaged in policy formulation, prescribing standards and its implementation through the Central Pollution Control Board (CPCB), State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) for UFs. This Ministry has written to all SPCBs and PCCs as well as to CPCB to ensure compliance of the judgment of the Hon'ble Supreme Court and to submit detailed compliance report.</i></p> |

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|  | <p>Item No.<br/>12</p> <p>August 03,<br/>2018<br/>A</p> | <p>5. That the CPCB has also followed up with all SPCBs and PCCs through letters and review meetings to ensure compliance of the aforementioned judgment and that the matter was also discussed in the 62<sup>nd</sup> Conference of the Chairmen and Member Secretaries of SPCBs and PCCs held on 27.06.2017. That 26 SPCBs/PCCs have submitted the compliance report, which has been summarized at <b>Annexure-I</b>.</p> <p>6. That the CPCB has also carried out inspections of 17 categories of industries to verify compliance with its directions issued on online effluent/emission monitoring system and to cross-verify online results with manual sampling. During February-June, 2017, 64 industries were inspected and directions under section 5 of the Environment (Protection) Act, 1986 have been issued to 24 non-complying industries; 18 industries were complying; 8 were found closed and inspection reports of 14 industries are under process.</p> <p>7. That the CPCB and NMCG through 11 technical institutions, inspected 751 industries located in the River Ganga main stem during March-April, 2017 to verify the status of installation and connectivity of industries discharging effluents as well as their compliance with the standards. Closure directions have been issued to 154 industries; show cause notices issue to 36 industries; 149 industries were found complying and direction issued to 91 self-closed Grossly Polluting Industries (GPI) to remain closed; 93 GPI units were found closed as per directions; 38 GPI units found operational in violation of closure directions and inspection reports of 190 industries are under process*.</p> <p>3. We have heard learned Amicus Curiae Sh. Jai A. Dehadrai and the learned counsel for Ministry of Environment, Forest and Climate Change, Central Pollution Control Board, various State Pollution Control Boards and the Pollution Control Committees.</p> <p>4. Learned Amicus Curiae has drawn our attention to orders dated 04.07.2017, 18.09.2017 and 11.10.2017 of the Tribunal directing the State Pollution Control Boards to file a statement as to how many Industrial Units discharging trade effluents or causing emissions exist in the State; how many are having their own STPs, ETPs and/or connected to Common Effluent Treatment Plant</p> |
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| <p>Item No.<br/>12</p> <p>August 03,<br/>2018<br/>A</p> | <p>(CETP), whether any such CETP or ETP or STP is properly functioning and treating the effluents as per prescribed limits or not.</p> <p>5. Learned Amicus Curiae submitted that contamination of water due to industrial effluents can lead to various diseases and adverse consequences on the aquatic organism due to decreased level of oxygen. The use of technology can help reduction of adverse consequences. However, the best solution is to prevent pollution by soil conservation and proper disposal of toxics and chemicals which may include chemical recycling.</p> <p>6. Having monitored the matter for the last more than one year on several dates, we are of the view that the matter requires continuous monitoring by statutory authorities as per directions which we proceed to issue today.</p> <p>(i) We direct the Central Pollution Control Board (CPCB) to forthwith prepare an action plan after looking into all the status reports. The action plans must have mechanism to ensure compliance or all the directions in the order of the Hon'ble Supreme Court. To enable this to be done, a Nodal officer must be identified to deal with the issue of CETPs/ETPs/STPs.</p> <p>(ii) A representative of the Ministry of Environment, Forest and Climate Change may be associated with the Nodal Officer of the CETP for monitoring. The Monitoring by the said two officers- the representative of the MoEF and the Nodal Officer of the CPCB must be held atleast once in a month and on the basis of such meeting and the feedback taken further follow up action must be taken and</p> |
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|  | <p><b>Item No.<br/>12</b></p> <p><b>August 03,<br/>2018</b></p> <p><b>A</b></p> | <p>appropriate directions issued. This process may be a continuous process.</p> <p>(iii) It must be ensured that STPs, CETPs and ETPs are functional and meet the requisite standards.</p> <p>(iv) There is already a direction in the above judgment under which 50% of the funds for the purpose are to be provided by the Central Government, 25% by the States and remaining 25% to be arranged by way of loans which is to be re-paid by the user industries. Local bodies and the States have duties as clearly stipulated in the judgment. There has to be online monitoring system by each State to display emission levels in public domain in terms of paragraph 17 of the order of the Hon'ble Supreme Court.</p> <p>(v) A report of the steps taken may be placed on the website of the Central Pollution Control Board atleast once in three months. Deficiencies if any may also be so displayed.</p> <p>(vi) The Central Pollution Control Board may take penal action for failure, if any, against those accountable for setting up and maintaining STPs, CETPs and ETPs. Central Pollution Control Board may also assess and recover compensation for damage to the environment and the said fund be kept in a separate account and utilized in terms of an action plan for protection of the environment. Such action plan may be prepared by the Central Pollution Control Board within three months from today.</p> <p>(vii) A compliance report in terms of the above order may be furnished to this Tribunal within four months from today by e-mail at <a href="mailto:filing.ngt@gmail.com">filing.ngt@gmail.com</a>.</p> |
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| <p><b>Item No.<br/>12</b></p> <p><b>August 03,<br/>2018</b></p> <p><b>A</b></p> | <p>(7) Proceedings are disposed of.</p> <p>However, the report received from the Central Pollution Control Board may be placed for consideration before this Tribunal on 04.09.2018.</p> <p>We place on record our appreciation for the services rendered by the learned Amicus Curiae.</p> <p>....., CP<br/>(Adarsh Kumar Goel)</p> <p>....., JM<br/>(Dr. Jawad Rahim)</p> <p>....., JM<br/>(S.P. Wangdi)</p> <p>....., EM<br/>(Dr. Nagin Nanda)</p> <p>03.08.2018</p> |
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## Annexure-II

Annexure-II  
Comments Received from Various RDs on Draft Report for Environmental Compensation

| S. No. | Item                 | RD Kolkata  | RD Vadodara  | RD Bengaluru  | RD Lucknow  | Committee Deliberations  |
|--------|----------------------|---|--|---|---|--|
| 1      | Case- a, b & c       | Bypassing of effluent/emission should be given special consideration.<br>EC levied on ROG categories of industries should be on the basis of inspection by CPCB, complaint verification and routine inspection. | Instead of "Compensation", "Penalty" word should be used.<br>In case common facilities like CETPs, factor may be introduced based on member industries.<br>Clarify the applicability of penalty in addition to closure directions for pro-longed and gross non-compliance. |   |   | The Committee discussed that the points highlighted by RD Kolkata are already the part of cases fit for violation and levy environmental compensation. However, as mentioned by RD Vadodara, word "Penalty" may be used for case a, b and c. For CETPs, a factor may be considered in future based on the capacity of the plant. |
| 2      | Case- d, e & f       | Higher rates for irreparable damages crop, soil, health etc.<br>Leakages/spillage should have different compensation value.   | It should be mentioned that instances d, e & f shall be dealt for environmental compensation in line with the polluter pays principle, besides of environmental penalty for cases a, b and c.  | Similar to "Guidelines on Liabilities for Environmental Damages due to Handling & Disposal of Hazardous Waste and Penalty", Guidelines may be prepared. |   | Suggestions made by RD Kolkata and Vadodara has already been taken care. Concept of environmental compensation is based on the philosophy of "polluters pay" and for give- injury to environment, compensation will be charged as per the assessment of remediation cost, on case to case basis.                                 |
| 3      | Pollution Index (PI) |   |  | Instead of average PI, Actual PI may be used.   |   | Committee suggested that to make the implementation of EC simple and easy, use of average PI may be considered for calculation of EC.  |
| 4      | R-factor             | Should be based on pollution load. For ex. Amount of BOD/NOx etc. discharged.   |  | May be classified based on the contribution of pollution load based on quantity of effluent, concentration, emissions                                   | May be as per the category of industry, for ex. Red-500, Orange-300, Green-100. | As PI is based on the pollution load, suggestion of RDs are already taken care in the formula.   |
| 5      | L-factor             |   |  | May be redefined based on the features, activities involved and habitation.   |   | L-factor may be covered in future as already indicated in the report.  |

| S. No. | Item  | RD Kolkata   | RD Vadodra  | RD Bengaluru   | RD Lucknow  | Committee Deliberations   |
|--------|---|--|---|--|---|---|
| 6      | Defining period of violations for which EC will be levied |  | Duration of violations needs more clarity.  | For industry having OCEMS, no. of days may be counted based on the recorded data.<br>Industry without OCEMS- based on break down of ETP/APCD, disturbance of power supply or any failure of auxiliary machineries w.r.t. control system. | May be clearly defined as the period between the day of violation observed and the day of compliance verified by CPCB/SPCB/PCC.   | The committee agreed that period of violation for which EC may be levied will be the period between the day of violation observed and the day of compliance verified by CPCB/SPCB/PCC.  |
| 7      | Repeated Violations                                       |  | Some number of days may be specified after which the penalty amount may get a factor of 1.5 or 2.   |  | Multiplying factor for repeated violations may be included. For ex.<br>1 <sup>st</sup> Repetition- 25%<br>2 <sup>nd</sup> Repetition- 50%<br>3 <sup>rd</sup> Repetition- 100% | For habitual offenders, higher amount of penalty/compensation may be charged in future.   |
| 8      | Utilization of fund                                       | An environmental damage assessment cell may be created. Expertise in the field may be achieved by involving scientist/engineers and providing them training in country/abroad. | Amount should not be utilized for<br>a) Industrial inspections for compliance verification,<br>b) Installation of Continuous water quality monitoring stations / Continuous ambient air quality monitoring stations for strengthening of existing monitoring network,<br>c) Preparation of Comprehensive Industry Documents on Industrial Sectors / clean technology<br>f) Funding to financially weaker municipalities for installation of STPs.<br><br>The amount should be utilized solely for damage assessment, remediation of affected sites, orphan contaminated sites and creating awareness. The purpose should not get inclined towards revenue generation. |  |   | RD Vadodra suggested that amount should be utilized only for remediation purpose. However, committee discussed that the proposal for utilization of fund is prepared considering the other aspects (i.e. direct and indirect) for protection of environment, which include research, monitoring etc.<br><br>Suggestion of RD Kolkata may be considered in future. |

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| 9 | Others | Higher EC for non-installation of pollution control measures. Expected sources should have different scoring methodology based on their weightage. | Thus, the functional fabric of CPCB shall remain intact. |  |  | The committee discussed that CPCB is already taking appropriate action including closure direction against the industries found operating without pollution control measures. |
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## Annexure-III

**Comments Received from Various Expert Institutions on the Report on Environmental Compensation**

As per the Hon'ble NGT suggestion, CPCB has invited comments of 3 expert institution, namely, Centre for Science and Environment (CSE), Institute of Economic Growth (IEG) and The Energy Research Institute (TERI). The CPCB in-house committee on Environmental Compensation has deliberated on the comments and finalized the report accordingly. The Committee's deliberations are summarized in table below:

| S. No. | Item             | Comments from TERI   | Comments of CSE   | Comments of IEG   | Committee's Deliberations   |
|--------|------------------|--|---|---|---|
| 1      | Cases d, e and f | Distinction between categories 'a, b, c' and 'd, e, f' is not clear. Case specific investigations should be minimized. Proposed cases deals separately with intentional and accidental cases but sometimes they are not easy to establish. | -   | Why cases 'e' and 'f' are left for later remediation and study?   | There may be a varied damage to the environment as considered in cases 'e' and 'f'. Such damage assessment requires detailed case specific study and remediation measures. Therefore, whenever such case comes into the notice, Environmental Compensation may be levied based on the detailed investigation made by Expert Institutions/Organizations.   |
| 2      | R-factor         | -  | R-factor should be Rs. 1,000/day.   | Why R-factor is kept as 250, although the value ranges between 100 to 500?  | In the Environmental Compensation policy, average value of the R-factor as 250 is recommended, keeping in view both its practicability as well as to make it significantly deterrent, which may be further revised in future.   |
| 3      | L-factor         | -  | L-factor should be based on the population density of surroundings, instead of population of the nearby city/town.<br><br>For critically polluted areas/ ecologically fragile areas LF should be considered as 2. | For nearby city, having population less than 1 million, the LF is 1. This implies that we care only for populated regions only.<br><br>Industries located in critically polluted and ecologically fragile area should be closed down. | Population density for surrounding of industrial units will be complex because it will vary depending on area used in calculation of population density as industrial units are generally away from population.<br><br>More weightage is given to the higher population exposure to the risk. In case the industry is located in the city of population less than one million than the LF Factor will be 1.<br><br>Depending on the local environmental conditions, the restrictions on expansion and modernization of industries in critically polluted areas are imposed as per the prevailing policy of the Government of India. Similarly, industries in ecologically fragile areas are permitted after careful examination, as per prevailing policy of MoEFCC/SPCB.<br><br>The Committee agreed that for notified ecologically fragile areas, LF may be considered as 2. However, LF for critically polluted areas may be explored in future. |

| S. No. | Item                    | Comments of CSE   | Comments of IEG  | Committee's Deliberations  |
|--------|-------------------------|---|--|--|
| 4      | S-factor                | Classification of industries should be based on profit/turnover basis.  |  | Presently industrial units are classified into small, medium and large category (MSME Act, 2006) based on the data of assets/infrastructure available with them. The data for profit/turnover of industrial units are not available with SPCBs/PCCs and S-factor based on profit/turnover will complicate the procedure for calculation of EC. This may be considered in future when SPCBs/PCCs will have such type of data.   |
| 5      | Level of non-compliance | <p>Pollution Index does not measure the level of pollution. Further, averaging PI eliminates the variation in the nature/ impact of pollution that PI tries to capture. Further, the Red Category itself is too wide and some sort of sub-classification should be undertaken.</p> <p>The rate of the penalty should increase with the period of violation. The penalty should increase exponentially in case of repeated violations. The objective should be that units should choose to shut down operations when violations cannot be brought under control in the specified time.</p> |  | <p>Pollution Index (PI) itself covers the potential of environmental pollution as its calculation considers variation in pollution load.</p> <p>The industrial sectors have been categorized into Red, Orange and Green, based on their Pollution Index in the range of 60 to 100, 41 to 59 and 23 to 40, respectively. As PI is not available for all the industrial sectors, calculating PI for rest of the sectors will delay the processing. Therefore, for calculating the Environmental Compensation average PI as 80, 50 and 30 may be used for Red, Orange and Green category of industries, respectively.</p> <p>To keep the formula simple for better implementation, the IV factor may not be considered as there are different environmental parameters such as environmental standards and for each standard calculation of level of violation and its weightage will be a tedious task, which may bring difficulty in implementation of EC concept.</p> <p>The Committee has agreed that in order to include deterrent effect for repeated violations, EC may be increased on exponential basis, i.e. by 2, 4 and 8 times on each similar violation. Further, if the violator continues its operations beyond 3 months then EC may be increased by 2, 4 and 8 times for 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quarter, respectively.</p> <p>Besides EC, industry may be prosecuted or closure directions may be issued, whenever required.</p> <p>EC is not a substitute for taking actions under EP Act, Water Act or Air Act. In fact, units found polluting should be closed/prosecuted as per the Acts.</p> <p>Scheme of infrastructure augmentation of Urban Local Bodies (ULBs) /capacity building of SPCBs/PCCs is already covered in the report.</p> <p>Further, schemes such as incentives to regulators where no violations are observed and incentives to public for reporting violations may be considered separately.</p> |
| 6      | Utilization of fund     | Funds may be utilized for building monitoring and enforcement capacity of SPCBs and strengthening the pollution compliance especially in the MSME sector.   | Incentives to regulators where no violations are observed and incentives to public for reporting violations may be provided. |  |

| S. No. | Item        | Comments of CSE  | Comments of IEG   | Committee's Deliberations  |
|--------|-------------|--|---|--|
| 7      | GRAP        | -  | Size of the construction sites more than 20,000 sqm. area are considered for EC. Although, small sites cumulatively impact significantly. | As per the EIA Notification, 2006, building construction projects more than 20,000 sqm. area are required to have environmental clearance, therefore, the same cut-off is maintained here.   |
| 8      | Others: (a) | Severity of violations should be measured in terms of hours of violation because for some pollutants even a few hours of violation can have serious environmental and health consequences. This would require continuous monitoring of stacks, which is not the case presently for most units. Therefore, continuous monitoring should be implemented urgently, to begin with for all red and orange categories. | illegal dumping of municipal solid waste regardless of the place should be penalized.   | Issue of illegal dumping of municipal solid waste is being covered in separate report of EC.<br><br>Currently, online continuous effluent/emission monitoring system (OCEMS) is installed in only in 17 categories of highly polluting industries and some other industrial sectors. Further, in current practice the compliance of industries is only verified by physical monitoring and compensation may be imposed based on the manual testing. The idea of measurement of violation on hourly basis may be considered in future, when OCEMS is widely installed and included in policy. |
|        | (b)         | CETP should be categorized under Red Category of industries. Some sub-classification should be undertaken under red categories of industries.  | -   | CETPs are already categorized under Red Category of Industries   |
|        | (c)         | Based on the spirit behind the proposed charge, it should therefore be called an "environmental penalty" rather than "environmental compensation".   | -   | The power of imposing "Penalty" lies in the jurisdiction of the Hon'ble Courts and NGT only. The CPCB is empowered to levy environmental compensation by the Hon'ble NGT in its order dated 03.08.2018 (OA No.593/2017). Therefore, term "Environmental Penalty" is avoidable.   |

Annexure-IV

Item Nos. 01 &amp; 02

Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHIOriginal Application No. 125/2017  
(M.A. No. 1337/2018)

With

Original Application No. 217/2017  
(M.A. Nos. 761/2017, 1073/2017,  
1098/2017 & 1471/2017)

|                         |        |               |
|-------------------------|--------|---------------|
| Court on its own Motion |        | Applicant(s)  |
| State of Karnataka      | Versus | Respondent(s) |
| With                    |        |               |
| D. Kupendra Reddy       |        | Applicant(s)  |
| State of Karnataka      | Versus | Respondent(s) |

Date of hearing: 06.12.2018

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER  
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER  
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

Original Application No. 125/2017  
(M.A. No. 1337/2018)

For Applicant(s):

Mr. Sajan Poovayya, Sr. Advocate and Mr. Sunnah Jain,  
Advocate for impleaded applicant - Namma Bengaluru  
Foundation  
Mr. Vitram Hegde, Advocate for impleaded applicant

For Respondent(s):

Mr. Devraj Ashok, Advocate  
Mr. Rajkumar, Advocate and Ms. Sonia, LA  
Ms. Nidhi Mehrotra, Advocate

Original Application No. 217/2017  
(M.A. Nos. 761/2017, 1073/2017,  
1098/2017 & 1471/2017)

For Applicant(s):

Ms. Guneet Khehar, Mr. Tarunvir Singh Khehar, Mr.  
P. Ramaprakash and Mr. Sandeep Mishra, Advocates

For Respondent(s):

Dr. Abhishek Atrey, Advocate  
Mr. Rajkumar, Advocate and Ms. Sonia, LA

**ORDER**

1. The issue for consideration in the two matters, one initiated by the Tribunal on its own motion and the other filed by an individual relates to contamination of water bodies at Bengaluru - Bellandur lake, Agara lake and Varthur lake *inter-alia*, on account of discharge of untreated sewage and other effluents from

their performance should be recorded and considered favourably or otherwise for their career progression.

- xv. Similar exercise as (xiv) may be undertaken to identify officers responsible for failure in the past. Such exercise may be completed within three months from today.
  - xvi. Since failure of preventing the pollutants being discharged in water bodies (including lakes) and failure to implement solid and other waste management rules are too frequent and widespread, the CPCB must lay down specific guidelines to deal with the same, throughout India, including the scale of compensation to be recovered from different individuals/authorities, in addition to or as alternative to prosecution. The scale may have slabs, depending on extent of pollution caused, economic viability, etc. Deterrent effect for repeated wrongs may also be provided.
  - xvii. MoEF&CC may specify limit for phosphorus in soaps and detergents to prevent damage to the environment and public health.
27. The above amount in the present case has been determined having regard to the estimated cost of setting up of STPs, based on the data available, which has been assessed with the assistance of the learned Counsel for the parties.
  28. We have nominated Justice Santosh Hegde on information being provided during the hearing that he is agreeable to undertake the above job.
  29. Justice Hegde will be entitled to a token honorarium of Rs. 2.5 Lakh per month from the date he assumes the charge. Justice Hegde will be entitled to assistance of persons of his choice for which remuneration will be paid by the SPCB, Karnataka as may be determined by Justice Hegde.

Annexure-V

Item Nos. 1 to 11

Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI

Original Application No. 176/2015  
(M.A. No. 1332/2015)  
&  
Original Application No. 59/2012  
(M.A. No. 34/2016 & M.A. No. 190/2016)  
&  
Original Application No. 108/2013  
(M.A. No. 489/2015)  
&  
Original Application No. 179/2013  
(M.A. No. 866/2014 & M.A. NO. 644/2015)  
&  
Appeal No. 67/2015  
(M.A. No. 652/2015)  
And

Original Application No. 484/2015  
(M.A. No. 155/2017, M.A. No. 567/2017  
& M.A. No. 927/2017)  
And

Original Application No. 327/2018  
(M. A. No. 1282/2018)  
And

Original Application No. 115/2017  
(M.A. No. 442/2017)  
And

Original Application No. 411 of 2018  
And

Original Application No. 613/2017  
And

Original Application No. 614/2017

|  |        |               |
|--|--------|---------------|
| Shalleah Singh   | Versus | Respondent(s) |
| Hotel Holiday Regency, Moradabad & Ors.                            |        | Applicant(s)  |
| With   |        |               |
| Legal Aid, National Green Tribunal Bar Association                 |        | Applicant(s)  |
|  | Versus |               |
| NCT of Delhi & Ors.  |        | Respondent(s) |
| With   |        |               |
| Raj Hans Bansal  |        | Applicant(s)  |
|  | Versus |               |
| Ministry of Water Resources & Ors.                                 |        | Respondent(s) |
| With   |        |               |
| Apex Chambers of Commerce and Industries of N.C.T. of Delhi & Ors. |        | Applicant(s)  |
|  | Versus |               |
| Govt. of NCT Delhi & Ors.  |        | Respondent(s) |
| With   |        |               |
| Vikram Tongad  |        | Applicant(s)  |

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Versus

|  |               |
|--|---------------|
| Union of India & Ors.  | Respondent(s) |
| With<br>Shailesh Singh   | Applicant(s)  |
| Versus   |               |
| Hotel The Oberoi Amarvilas & Ors.                                      | Respondent(s) |
| With<br>Shailesh Singh   | Applicant(s)  |
| Versus   |               |
| Panchsheel Buildtech Pvt. Ltd. & Ors.                                  | Respondent(s) |
| With<br>Shailesh Singh   | Applicant(s)  |
| Versus   |               |
| Central Ground Water Board & Ors.                                      | Respondent(s) |
| With<br>M/s A-One Mineral Water Industry                               | Applicant(s)  |
| Versus   |               |
| Central Ground Water Authority & Ors.                                  | Respondent(s) |
| With<br>Mohd. Javed Asghar   | Applicant(s)  |
| Versus   |               |
| M/s Upper Ganges Sugar and Industries Ltd.<br>(Distillery Unit) & Ors. | Respondent(s) |
| With<br>Mohd. Javed Asghar   | Applicant(s)  |
| Versus   |               |
| State of U.P. & Ors.   | Respondent(s) |

Hearing concluded on: 18.12.2018  
Order uploaded on: 03.01.2019

**CORAM:** HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER  
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER  
HON'BLE DR. NAQIB HANDA, EXPERT MEMBER

For Applicant(s): Mr. Raj Pajwani, Senior Advocate and Mr. Rahul Choudhary, Advocate (In O.A. Nos. 59/2012 & 108/2013)  
Ms. Preeti Singh, Mr. S. Porwal, Mr. Shivam Jaiswal, Advocates (In O.A. Nos. 176/2015, 484/2015, 327/2018 & 115/2017)  
Mr. Amrendra Kumar Dubey, Advocate (O.A. No. 411/2018)

For Respondent (s): Ms. Sakshi Popli, Advocate for DJB (O.A. No. 59/2012)  
Mr. Sumeet Pushkarna, Mr. Devanshu, Advocates with Mr. Sudhir Chauhan, E.E., Delhi Jal Board (O.A. No. 108/2013)  
Mr. Ajay Jain, Advocate for GNCTD  
Mr. Ardhendumauli Kumar Prasad, Mr. Shashank Saxena, Ms. Diksha Gera, Mr. Amrutesh Raj, Advocates for CGWA  
Mr. Pradeep Mishra, Mr. Duleep Dhyani, Advocates for UPPCB  
Ms. Sakshi Popli, Advocate for NDMC  
Mr. Amit Tiwari, Mr. Rohit Pratap Singh, Advocates for State of UP

appropriate mechanism can be introduced consistent with the needs of environment.

29. The MoEF&CC is directed to constitute an Expert Committee by including representatives from IIT Delhi, IIT Roorkee, IIM Ahmedabad, CPCB, NITI Ayog and any other concerned agency or department to examine the issue of appropriate policy for conservation of ground water with a robust institutional mechanism for surveillance and monitoring with a view to enhance access to ground water for drinking purposes in OCS areas by way of appropriate replenishment practices which can be properly accounted and measured for as well as to sustain the floodplains of rivers in terms of e-flows and other water bodies. The MoEF & CC and MoWR may finalize the issue of subject remain *inter-se* with regard to ground water reserve and its quality.

30. The Committee may be constituted in two weeks and report of the Committee may be furnished to the MoEF &CC and this Tribunal in two months by e-mail at [ngt.filing@gmail.com](mailto:ngt.filing@gmail.com).

31. The Committee may also indicate the projection of its impact study in light of projected data for the next 50 years (in phased manner with action plan for each decade). Thereafter, fresh guidelines be issued by the concerned Ministry and the report furnished to the Tribunal on or before 30.04.2019.

32. The CPCB may constitute a mechanism to deal with individual cases of violations of norms, as existed prior to Notification of 12.12.2018, to determine the environment compensation to be recovered or other coercive measures to be taken, including prosecution, for past illegal extraction of ground water, as per

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law. All the matters relating to illegal extraction of ground water by individuals are disposed of with these directions.

33. The Expert Committee report, the new policy and challenge to orders of authorities, if any, will be considered on the next date.

The matter be put up for above consideration in the first week of May, 2019.



**CRITERIA TO CALCULATE WATER CONSUMPTION****Table 1: Discharge of 4" Dia and 1 HP Pump**

| Sl. No. | Depth (Meter) | Discharge |                    |
|---------|---------------|-----------|--------------------|
|         |               | LPM       | m <sup>3</sup> /hr |
| 1       | 25            | 50        | 3                  |
| 2       | 43            | 40        | 2.4                |
| 3       | 59            | 30        | 1.8                |
| 4       | 69            | 20        | 1.2                |
| 5       | 77            | 10        | 0.6                |

**Table 2: Discharge of 4" Dia and 2 HP Pump**

| Sl. No. | Depth (Meter) | Discharge |                    |
|---------|---------------|-----------|--------------------|
|         |               | LPM       | m <sup>3</sup> /hr |
| 1       | 60            | 50        | 3                  |
| 2       | 98            | 40        | 2.4                |
| 3       | 124           | 30        | 1.8                |
| 4       | 141           | 20        | 1.2                |
| 5       | 165           | 10        | 0.6                |

**Table 3: Discharge of 6" Dia and 3 HP Pump**

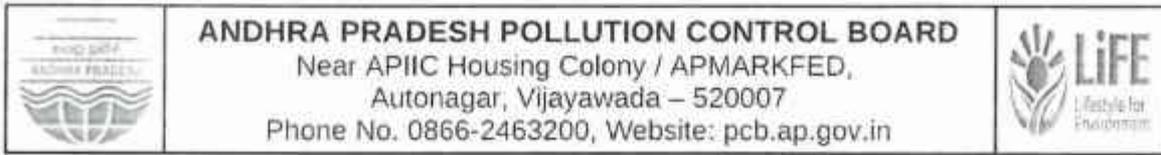
| Sl. No. | Depth (Meter) | Discharge |                    |
|---------|---------------|-----------|--------------------|
|         |               | LPM       | m <sup>3</sup> /hr |
| 1       | 17            | 200       | 12                 |
| 2       | 29            | 175       | 10.5               |
| 3       | 41            | 150       | 9                  |
| 4       | 50            | 130       | 7.8                |
| 5       | 62            | 100       | 6                  |

**Table 4: Discharge of 6" Dia and 5 HP Pump**

| Sl. No. | Depth (Meter) | Discharge |                    |
|---------|---------------|-----------|--------------------|
|         |               | LPM       | m <sup>3</sup> /hr |
| 1       | 26            | 225       | 13.5               |
| 2       | 50            | 200       | 12                 |
| 3       | 70            | 175       | 10.5               |
| 4       | 86            | 150       | 9                  |
| 5       | 92            | 140       | 8.4                |

## References

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3. Central Pollution Control Board. 2013. *Performance Evaluation of Sewage Treatment Plants under NRCD*. Delhi: CPCB.
4. Central Pollution Control Board. 2016. *Graded Response Action Plan for Delhi & NCR*. Delhi: CPCB.
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13. *Solid Waste Management Rules, 2016*. (S.O. 1357(E) [08-04-2016]). New Delhi: Ministry of Environment Forest and Climate Change, Government of India.
14. WILO. 2017. *Building Service Residential Selection Booklet*. Pune- WILO Mather and Platt Pumps Pvt. Ltd.

**Award No: APPCB-12028/1/2023-SS-CL-APPCB****15/08/2023.****NOTIFICATION OF AWARD**

**To**  
**M/s. Swan Environmental Pvt. Ltd.,**  
Plot. No. 922 & 935,  
Swami Ayyappa Society,  
Madhapur,  
Hyderabad – 500081.

Sir,

**Sub:** APPCB – Central Lab - Notification of Award for supply of five (5) Real -time Water Quality Monitoring Systems (RTWQMS) to install & commissioning on river stretches for water quality monitoring, data connectivity to APPCB & CPCB servers, training to APPCB staff and operation & maintenance of these stations for a period of five years – Issued - Reg.

**Ref:**

1. APPCB Tender Notice No. APPCB-12028/1/2023-SS-CL-APPCB, dated 30.03.2023 and with GEM/2023/B/3326079, dated 03.04.2023.
2. M/s. Swan Environmental Pvt. Ltd., Hyderabad techno commercial bid no. 263-C/G/ENV/RTWQMS/XLM/SHI/ 2023, dated 20.04.2023.
3. M/s. Swan Environmental Pvt. Ltd., Hyderabad price bid quotation obtained during reverse auction on 06.07.2023.
4. M/s. Swan Environmental Pvt. Ltd., Hyderabad price bid break-up format reference no. 263-C/G/ENV/RTWQMS/XLM/SHI/2023, dated 13.07.2023 received through mail, dated 13.07.2023.

\*\*\*

**1.0 AWARD OF CONTRACT & SCOPE OF WORK:**

Andhra Pradesh Pollution Control Board (APPCB) is pleased to inform that your bids, vide reference 2<sup>nd</sup> to 4<sup>th</sup> cited have been accepted and is hereby issued the Notification of Award (NoA) for the supply of five (5) Real-time Water Quality Monitoring Systems (RTWQMS) to install & commission on river stretches for water quality monitoring, data connectivity to APPCB & CPCB servers, training to APPCB staff and operation & maintenance of these stations for a period of five years as mentioned at Annexures – 1, 2, 3, 4 & 5 as per the terms & conditions mentioned below:

**2.0 TECHNICAL SPECIFICATIONS:**

As per the tender document.

**3.0 AWARD PRICE:**

The total award price for the entire scope of work as detailed at Para - 1.0 above shall not exceed Rs. 2,92,00,000/- (Indian rupees two crores and ninety two lakhs only) as detailed below:

| S. No.              | Component   | Amount (Rs.)          |
|---------------------|---|-----------------------|
| 1                   | Supply of five (5) Real-time Water Quality Monitoring Systems (RTWQMS) to install & commission on river stretches, data transfer to APPCB & CPCB servers, training, etc. inclusive of Customs Duty, GST, freight, packing, insurance, clearance charges, transportation – <b>Annexure -1.</b> | 2,09,68,600.00        |
| 2                   | Comprehensive Operation & Maintenance (O & M) of these stations for a period of five years from the date of commissioning inclusive of GST – <b>Annexure - 2.</b>   | 49,91,400.00          |
| 3                   | Optional items – <b>Annexure - 3.</b>   | 26,81,700.00          |
| 4                   | O & M charges for 5 years for optional items – <b>Annexure - 4.</b>   | 5,58,299.30           |
| <b>Total:</b>       |   | <b>2,91,99,999.30</b> |
| <b>Rounded Off:</b> |   | <b>2,92,00,000.00</b> |

**4.0 PRICE BASIS:**

The award price mentioned at Para 3.0 above is FOR destination to the places of installation at five (5) river stretches.

**5.0 PERFORMANCE SECURITY:**

The supplier shall submit Security Deposit of 35% of the total value of the contract, in the form of two Demand Drafts / Bank Guarantees of 10% and 25% each as detailed below:

- a. The Security Deposit of 10% in the form of Bank Guarantee / Demand Draft shall be submitted immediately after receipt of the work order and signing the pre-contract agreement.
- b. The Security Deposit 10% will be returned after completion of the supplies within the delivery period to the satisfaction of the consignee, installation & commissioning of the station and submission of Performance Security of 25% of the contract value in the form of Bank Guarantee / Demand Draft. In case of failure of supply within the delivery period, Security Deposit (10%) will be forfeited as liquidated damages.
- c. The Performance Security of 25% shall continue to be with the consignee as performance guarantee for a minimum period of 10 years with periodical renewal of the PBG for every three years to ensure optimal performance of the system including 90% data captive rates, providing reliable & accurate data.

No interest shall be payable by the purchaser on the security deposits of 10% or 25% deposited by the Supplier.

#### 6.0 TERMS AND CONDITIONS OF PAYMENT:

Release of payment to the supplier will be made in two installments as detailed below:

- a. 80% of the contract value including taxes will be released to the supplier after supply of the ordered equipment / instruments in good condition to the consignee's location and acceptance by the concerned APPCB official.
- b. Balance 20% of the contract value including taxes will be released to the supplier after successful installation & commissioning, training to the APPCB officials and real-time data connectivity to APPCB and CPCB servers online.
- c. No advance payment will be made against invoice and other proof of dispatch, but payment will be made only after acceptance of the supplies by the consignee as mentioned above at (a) & (b).

However, the conditions of Security Deposit and performance guarantee shall be as per provision mentioned in the tender.

#### 7.0 All the Invoices, along with related documents for claiming payments shall be addressed to:

The Member Secretary,  
Andhra Pradesh Pollution Control Board  
Paryavaran Bhavan, APIIC Housing Colony,  
Near A.P. MARKFED Office, Gurunanak Road,  
Autonagar, Vijayawada, Andhra Pradesh – 520007  
Telephone + 0866-2436200

- Invoice should indicate goods' Description, Quantity, Unit Price, total amount, Customs / Excise duties, taxes, etc.

#### 8.0 DELIVERY SCHEDULE:

Delivery period for all the packages including imported and Indian supplies to the respective installation locations shall be one hundred and twenty (120) days from the date of receipt of NoA. Following are the details of delivery and installation locations:

| S. No. | Delivery location  | Quantity (Nos.) | Installation location  |
|--------|--|-----------------|--|
| 1      | The Environmental Engineer,<br>Plot No.32, D. No. 16-13-25, 2nd<br>Cross Road, Purushotham Nagar<br>Colony,<br>Gujarathipeta Village,<br>Srikakulam - 532001.<br><br>Mail Id: roskm-ee1@appcb.gov.in | 1               | <b>River Nagavali</b><br><br>Upstream of Nagavali river,<br>Kureru i.e., Thotapalli<br>Upstream, Parvathipuram<br>Manyam district. |

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|               |  |          |  |
|---------------|--|----------|--|
|               | Mobile No: 9177303291<br>Office No: 08942-271291.  |          |  |
| 2             | The Environmental Engineer,<br>A. P. Pollution Control Board,<br>Regional Office, 1st Floor, Shanker<br>Shopping Complex,<br>Krishna Nagar, Main Road,<br>Kurnool – 518 002.<br><br>Mail Id: roknl-ee1@appcb.gov.in<br>Mobile No: 9866776728<br>Office No: 08518-235800. | 1        | <b>River Tungabhadra</b><br><br>Downstream of Kurnool town<br>after joining city domestic<br>sewage, Padidempadu (V),<br>Kurnool district. |
| 3             | The Environmental Engineer,<br>A. P. Pollution Control Board,<br>Regional Office, Plot No. 2, IDA<br>Ramanayyapeta, Backside of DIC<br>Office,<br>Kakinada – 533 005.<br><br>Mail Id: rokkd-ee1@appcb.gov.in<br>Mobile No: 9866776723<br>Office No: 0884 – 2374066.      | 1        | <b>River Godavari</b><br><br>River Godavari at Rajahmundry<br>D/s, Dowleswaram (V),<br>Rajahmundry (M), East<br>Godavari district.         |
| 4             | The Environmental Engineer,<br>A.P. Pollution Control Board,<br>Regional Office, Plot No. 41,<br>Sri Kanakadurga Officer's Colony,<br>Vijayawada – 520 008.<br><br>Mail Id: rovja-ee1@appcb.gov.in<br>Mobile No: 9866776739<br>Office No: 0866 – 2543542.                | 1        | <b>River Krishna</b><br><br>Upstream of Prakasham<br>barrage, Vijayawada, NTR<br>district.   |
| 8             | The Environmental Engineer,<br>Regional Office,<br>A P Pollution Control Board,<br>Plot No: 1, Prasanthi Nagar, Near<br>Nellore Club, Podalakur Road,<br>Nellore - 524003.<br><br>Mail Id: ronlr-ee1@appcb.gov.in<br>Mobile No: 9866776736<br>Office No: 0861-2329730.   | 1        | <b>River Pennar</b><br><br>Upstream of Nellore barrage,<br>Nellore, SPSR Nellore district.   |
| <b>Total:</b> |  | <b>5</b> | ---  |

#### 9.0 INSTALLATION, COMMISSIONING, OPERATION & MAINTENANCE AND OTHER INCIDENTAL SERVICES:

Installation & commissioning of the Real-time Continuous Water Quality Monitoring Systems on specified river stretches shall be completed by the supplier in thirty (30) days time at the respective locations.

Operation & Maintenance contract agreement will be entered with the supplier / operator in due course of time after completion of total supply of equipment and just before completion of installation & commissioning of the five Real-time Continuous Water Quality Monitoring Systems on the river stretches at the specified locations and the supplier, M/s. Swan Environmental Pvt. Ltd., Hyderabad shall bound by the price quote offered through the price bid, vide reference 4<sup>th</sup> cited (Annexures - 2 & 4).

#### **10.0 CUSTOM DUTY, EXCISE DUTY AND CUSTOM / PORT CLEARANCE:**

APPCB does not have the DSIR registration and is not entitled for claiming concessional Custom Duty / Excise Duty. APPCB will be providing necessary documents for clearance of the imported items from the Customs Dept. at the Airport. The supplier has to arrange the clearing agent at his own cost for clearing the goods from the Airport. Customer's copy of the Bill of Entry shall be submitted to APPCB.

#### **11.0 INSURANCE AND FREIGHT:**

For delivery of goods at site, the insurance shall be obtained by the Supplier in an amount equal to 100% of the value of the goods from "Ware house to warehouse" (final destination) on "All Risks" basis including War Risks and Strikes. The insurance charges shall be borne by the supplier.

Supplier shall be responsible for timely payment of premium and for the proper and effective follow up and settlement of any claims with the Insurance Company. Supplier shall ensure immediate arrangement of replacement for loss / damage during transit, free of cost to APPCB irrespective of claim amount and time of receipt of such claim amount from the insurance company.

#### **12.0 INSPECTION & TESTS:**

Inspection & tests will be in accordance with the conditions of contract / bid documents.

#### **13.0 WARRANTY:**

Warranty of all the equipment shall be for three (3) years from the date of successful installation & commission of the systems.

#### **14.0 TRAINING:**

Training shall be provided to APPCB staff by your trained Service Engineer / Application Expert at free of cost.

#### **15.0 SETTLEMENT OF DISPUTES AND ARBITRATION:**

15.1 All disputes or differences arising out of or in connection with the

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contract for supply of any item / equipment assigned under the same (whether during the progress of the works or after their completion, determination, abandonment or breach of the contract) shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The Arbitral Tribunal shall consist of three (3) arbitrators appointed by the Member Secretary, Andhra Pradesh Pollution Control Board. The arbitrators shall elect an umpire among them. In case of failure of two arbitrators appointed to reach upon a consensus the decision of the umpire shall be final and binding. No objection shall lie to have such appointment and whether the arbitrators are Government servants and had any interest in the Board or the contract entered into directly or indirectly. In all cases, the arbitrators shall state their decision in writing, amount of claim in dispute is Rupees One Lakh and above, subject as aforesaid the provision of the Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. Arbitration proceedings shall be held at Vijayawada, India and the language of arbitration proceedings and that all documents and communications between the parties shall be in English. The cost and expenses of arbitration proceedings will be paid as determined by the Member Secretary, APPCB.

**15.2** Under the terms of contract, the party invoking the arbitration shall specify the dispute or disputes to be referred to arbitration under this clause together with the amount or amounts claimed in respect of each dispute.

**15.3** It is also a term of the contract that if the supplier (s) do not make any demand for arbitration in respect of any claim (s) or dispute (s) in writing within 90 days of submission of the final bill for payment, the claim of the supplier will be deemed to have been waived and absolutely barred by time and the Board will be discharged and released of all liabilities under the contract in respect of those claims.

#### **16.0 LAWS AND REGULATIONS:**

All matters relating to the formation, validity and performance of this Contract shall be governed under the laws and regulations of India and courts at Vijayawada shall have exclusive jurisdiction in all matters arising under this Contract.

The supplier shall respect and abide by all laws and regulations of India and shall make best efforts to ensure that the personnel of the supplier and their dependents, while staying in India, shall respect and abide by all laws and regulation of India.

The supplier shall protect, absolve and indemnify the Board, and their representatives from any claim, loss or damage arising from any non compliance alleged or proved, without claiming them for payment.

#### **17.0 FORCE MAJEURE:**

The supplier shall not be considered in default, if delay in delivery occurs due to causes beyond his control such as acts of God, natural calamities, civil, wars, strikes, fire, frost, floods, riots, pandemic situation and acts of usurped power. Only those causes which have a duration of more than 7 calendar days shall be considered cause of force majeure. A notification to this effect duly certified by the Local Chamber of Commerce / Statutory Authorities shall be given by the supplier to the buyer by registered letter. In the event of delay in such cases, a length of time equal to the period of force majeure or at the option of the buyer, the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of buyer. In the event of such cancellation the supplier shall refund any amount advanced by the buyer and return back any material issued to him by the buyer and release facilities, if any, provided by the buyer.

#### **18.0 CORRESPONDENCE:**

For the purpose of correspondence with APPCB, the address is given below:

**MEMBER SECRETARY,  
Andhra Pradesh Pollution Control Board,  
Near APIIC Housing Colony / APMARKFED,  
Autonagar, Vijayawada – 520007.**

#### **19.0 OTHER TERMS & CONDITIONS:**

As per the tender document, vide Tender Notice no. APPCB-12028/1/2023-SS-CL-APPCB, dated 30.03.2023 and with GEM/2023/B/3326079, dated 03.04.2023.

#### **20.0 ACKNOWLEDGEMENT OF NOTIFICATION OF AWARD:**

Please acknowledge the receipt of Notification of Award and acceptance for the supply of five (5) Real-time Continuous Water Quality Monitoring Systems to install & commission on the specified river stretches, data connectivity to APPCB & CPCB servers, training to APPCB staff and operation & maintenance of these stations for a period of five years as per the terms & conditions stipulated therein, may be submitted to APPCB within seven (7) days from the date of receipt of the same.

Yours sincerely,  
B Sreedhar Ias  
**MEMBER SECRETARY**

Encls: Annexures – 1, 2, 3, 4, 5, 6 & 7.

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**LIST OF ENCLOSURES**

|   |              |   |
|---|--------------|---|
| 1 | Annexure - 1 | List of Analyzers along with Equipment and Price break-up.              |
| 2 | Annexure - 2 | O & M Charges for 5 years after standard warranty.                      |
| 3 | Annexure - 3 | Optional Items.   |
| 4 | Annexure - 4 | O & M Charges for 5 years after standard warranty (for Optional Items). |
| 5 | Annexure - 5 | Utilities in the scope of APPCB.  |
| 6 | Annexure - 6 | Pre-contract Agreement.   |
| 7 | Annexure - 7 | Proforma for Bank Guarantee against Performance Security.               |

## LIST OF EQUIPMENT / INSTRUMENTS AND PRICE BREAK-UP

## Annexure - 1

| I. Real-time water quality monitoring system for monitoring water quality of Rivers: |   |   |                  |     |                            |             |                   |
|--|---|---|------------------|-----|----------------------------|-------------|-------------------|
| S. No.   | Instrument / equipment & accessories  | Make / Part no.                                       | Unit price (Rs.) | GST | Unit price after GST (Rs.) | Qty. (Nos.) | Total Price (Rs.) |
| 1.0  | <p>Universal Transmitter to operate up to 4 digital IQ sensors, with 6 x 0(4) ... 20 mA, 6 x Relays, with RJ45 interface for internet connection and remote control<br/><b>Model: DIQ/S 284-CR6-E</b><br/><b>Item No: 472133</b></p> <p>Optical COD/TOC/DOC/BOD/SAC and TSS sensor (60 mm) with spectral processing of the UV-VIS range, for measurement in the effluent of municipal wastewater treatment plants, with integrated ultrasonic cleaning. Supplied with multifunctional slide and Shock-Absorption-Rings, without connection cable(SACIQ order separately).<br/><b>Model: CarboVis® 705 IQ TS</b><br/><b>Item No: 481051</b></p> <p>Robust digital pH sensor for pH electrodes SensoLyt® SEA/DWA/ECA/PtA for use with the IQ SENSOR NET. With built-in pre-amplifier and temperature sensor (NTC), with Sens Check function, without connection cable (please order SACIQ separately).<br/><b>Model: SensoLyt® 700 IQ</b><br/><b>Item No: 109170</b></p> <p>pH combination electrode especially suited for measurements in heavily polluted wastewater, with armouring for use in</p> | M/s. Xylem Analytics Germany Sales GmbH & Co. KG, WTW | 27,00,000.00     | 18% | 31,86,000.00               | 5           | 1,59,30,000.00    |

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|     |   |              |             |     |             |   |              |
|-----|---|--------------|-------------|-----|-------------|---|--------------|
|     | <p>SensoLyt® sensors. With watertight S7 plug head (IP 67); measuring range 0 ... 12 pH.<br/><b>Model: SensoLyt® SEA</b><br/><b>Item No: 109115</b></p> <p>Digital calibration free optical D.O. sensor (universal use). Optimized for monitoring/controlling the O2 input in wastewater treatment plants, for use with IQ SENSOR NET. Factory calibrated system composed of sensor FDO® 700 IQ and membrane cap SC-FDO® 700, without connection cable (SACIQ order separately)<br/><b>Model: FDO®700 IQ</b><br/><b>Item No: 201650</b></p> <p>Sensor adapter cable for all IQ sensors, with IP 68 waterproof connection to the IQ SENSOR NET system. Cable length 15 m (49 ft).<br/><b>Model: SACIQ-15,0</b><br/><b>Item No: 480044</b><br/>Cable will be considered and shall be supplied according to site requirement</p> |              |             |     |             | 5 |              |
| 2.0 | <b>Display Board:</b><br>Display Board, Pixel Pitch 10 mm Red Color<br>Dimensions:<br>6' (L) X 1' (H), AC-230V Supply.  | Reputed Make | 1,44,000.00 | 18% | 1,69,920.00 | 5 | 8,49,600.00  |
| 3.0 | <b>Sample flow cell, Tubing's and sampling lines with conditioning system, pumps, valves, fittings of analyzer as required. Etc</b>   |              | 1,98,000.00 | 18% | 2,33,640.00 | 5 | 11,68,200.00 |
| 4.0 | <b>Flow cell for sensors</b>  |              |             |     |             |   |              |
| 5.0 | <b>Civil Works &amp; Fabrication works for Protection</b>   |              | 1,62,000.00 | 18% | 1,91,160.00 | 5 | 9,55,800.00  |
| 6.0 | <b>Panels, Enclosures</b>   |              | 90,000.00   | 18% | 1,06,200.00 | 5 | 5,31,000.00  |
| 7.0 | <b>EQMS Data uploading to CPCB/SPCB</b><br>Model SED-9S(Uploading of data to CPCB & SPCB)   | Reputed Make | 2,10,000.00 | 18% | 2,47,800.00 | 5 | 12,39,000.00 |
|     | <b>DATA ACQUISITION SYSTEM</b>  |              |             |     |             |   |              |

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|  |   |                  |               |             |               |     |                            |
|--|---|------------------|---------------|-------------|---------------|-----|----------------------------|
|  | 16<br>Chan<br>nel<br>Date<br>Logg<br>er<br>Our<br>Mater<br>ial<br>No:20<br>0303<br>13<br><br><ul style="list-style-type: none"> <li>• IOT Based System (ILens Data Logger Hardware)</li> <li>• Data Logger Hardware for direct connectivity of analyzer (Any make or model).</li> <li>• Connect any make of Analog to Digital Converter</li> <li>• LAN/GRPS/Wi-Fi connectivity</li> <li>• 2 Nos. RS232/RS485 ports available on board</li> <li>• All the monitored parameters are available at central location preferably using single LAN cable.</li> </ul> |                  |               |             |               |     |                            |
| 8.<br>0  | <b>A/D Converter ( 8 X 4-20mA)</b>  |                  | 50,000.0<br>0 | 1<br>8<br>% | 59,000.<br>00 | 5   | 2,95,000.0<br>0            |
| 9.<br>0  | <b>Spares list:</b>   |                  |               |             |               |     |                            |
| a  | pH combination electrode especially suited for normally polluted wastewater (e.g municipal wastewater). With watertight S7 plug head (IP 67); measuring range 0 ... 12 pH.  | SensoLyt<br>® EC | 109102        | ---         | ---           | --- | Included                   |
| b  | Universal sensor cap for FDO® 700 IQ/700 IQ SW.   | SC-FDO<br>700    | 201654        | ---         | ---           | --- | Included                   |
| <b>Total:</b>  |   |                  |               |             |               |     | <b>2,09,68,60<br/>0.00</b> |
| Customs duty, freight charges and other taxes, if any may also be incorporated in the price bid. |   |                  |               |             |               |     | <b>Included</b>            |

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**Annexure - 2**

| <b>I. Operation &amp; Maintenance charges for five (05) years including three years warranty period:</b>  |                                    |                       |     |                            |             |                     |
|---|------------------------------------|-----------------------|-----|----------------------------|-------------|---------------------|
| Comprehensive Operation & Maintenance services for a period of five years from the date of commissioning of the station including three years warranty period [services include total operation & maintenance of the station, supply of spares & consumables, security of the station equipment, payment of internet & power supply charges, real-time data transmission to APPCB on continuous basis, insurance of the total station equipment against any theft, fire, natural calamities (hurricanes, earth quakes, floods, etc.): |                                    |                       |     |                            |             |                     |
| S. No.  | Year                               | Amount per unit (Rs.) | GST | Unit price after GST (Rs.) | Qty. (Nos.) | Total (Rs.)         |
| 1   | 1 <sup>st</sup> Year O & M Charges | 1,35,000.00           | 18% | 1,59,300.00                | 5           | 7,96,500.00         |
| 2   | 2 <sup>nd</sup> Year O & M Charges | 1,44,000.00           | 18% | 1,69,920.00                |             | 8,49,600.00         |
| 3   | 3 <sup>rd</sup> Year O & M Charges | 1,62,000.00           | 18% | 1,91,160.00                |             | 9,55,800.00         |
| 4   | 4 <sup>th</sup> Year O & M Charges | 1,89,000.00           | 18% | 2,23,020.00                |             | 11,15,100.00        |
| 5   | 5 <sup>th</sup> Year O & M Charges | 2,16,000.00           | 18% | 2,54,880.00                |             | 12,74,400.00        |
| <b>Total Price:</b>   |                                    |                       |     |                            |             | <b>49,91,400.00</b> |

**Annexure - 3**

| <b>II. Optional items:</b> |  |                 |                  |     |                            |             |                     |
|----------------------------|--|-----------------|------------------|-----|----------------------------|-------------|---------------------|
| S. No.                     | Item Description                         | Make / Part no. | Unit Price (Rs.) | GST | Unit Price After GST (Rs.) | Qty. (Nos.) | Total Price (Rs.)   |
| 1                          | IP Camera                                | M/s. Dahua      | 75,000.00        | 18% | 88,500.00                  | 5           | 4,42,500.00         |
| 2                          | Suitable Shelter for RTWQMS              | Reputed Make    | 2,70,000.00      | 18% | 3,18,600.00                | 5           | 15,93,000.00        |
| 3                          | Solar Panel & Charge Controller          |                 | 37,929.00        | 12% | 42,480.48                  | 5           | 2,12,402.40         |
| 4                          | Batteries For Solar Panel                |                 | 20,571.00        | 12% | 23,039.52                  | 5           | 1,15,197.60         |
| 5                          | 3 KVA UPS (Uninterruptible Power Supply) | Reputed Make    | 54,000.00        | 18% | 63,720.00                  | 5           | 3,18,600.00         |
| <b>Total Price:</b>        |  |                 |                  |     |                            |             | <b>26,81,700.00</b> |

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**Annexure - 4**

| <b>I. Operation &amp; Maintenance charges for five (5) years including three years warranty period:</b> |                                    |                              |             |                                   |                    |                          |
|---|------------------------------------|------------------------------|-------------|-----------------------------------|--------------------|--------------------------|
| <b>S. No.</b>   | <b>Year</b>                        | <b>Amount per unit (Rs.)</b> | <b>GS T</b> | <b>Unit price after GST (Rs.)</b> | <b>Qty. (Nos.)</b> | <b>Total Price (Rs.)</b> |
| 1   | 1 <sup>st</sup> Year O & M Charges | 12,127.00                    | 18 %        | 14,309.90                         | 5                  | 71,549.30                |
|   | 2 <sup>nd</sup> Year O & M Charges | 15,000.00                    | 18 %        | 17,700.00                         |                    | 88,500.00                |
|   | 3 <sup>rd</sup> Year O & M Charges | 18,000.00                    | 18 %        | 21,240.00                         |                    | 1,06,200.00              |
|   | 4 <sup>th</sup> Year O & M Charges | 22,500.00                    | 18 %        | 26,550.00                         |                    | 1,32,750.00              |
|   | 5 <sup>th</sup> Year O & M Charges | 27,000.00                    | 18 %        | 31,860.00                         |                    | 1,59,300.00              |
| <b>Total Price:</b>   |                                    |                              |             |                                   |                    | <b>5,58,299.30</b>       |

**Annexure - 5**

| <b>II. Utilities in the scope of APPCB:</b> |   |
|---|---|
| 1   | Providing Place & Necessary Permissions to install analyzers in a secured location. |
| 2   | 230 V AC; 50 Hz UPS power supply to be provided at the room / shelter.              |
| 3   | Internet connection for data uploading.   |

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**ANNEXURE - 6****Contract Agreement**

*[The successful Bidder shall fill in this form in accordance with the instructions indicated]*

THIS CONTRACT AGREEMENT is made

the *[insert: number]* day of *[insert: month]*, *[insert: year]*.

BETWEEN

(1) *[insert complete name of Purchaser]*, a *[insert description of type of legal entity, for example, an agency of the Ministry of .... of the Government of {insert name of Country of Purchaser}, or corporation incorporated under the laws of {insert name of Country of Purchaser}]* and having its principal place of business at *[insert address of Purchaser]* (hereinafter called "the Purchaser"), and

(2) *[insert name of Supplier]*, a corporation incorporated under the laws of *[insert: country of Supplier]* and having its principal place of business at *[insert: address of Supplier]* (hereinafter called "the Supplier").

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., *[insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of *[insert Contract Price in words and figures, expressed in the Contract currency(ies)]* (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:
  - a. This Contract Agreement
  - b. All conditions of Bid Document
  - c. Technical Requirements (including Schedule of Requirements and Technical Specifications)
  - d. The Supplier's Bid and original Price Schedules
  - e. The Purchaser's Notification of Award
  - f. *[Add here any other document(s)]*
3. This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
4. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

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5. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*  
in the capacity of *[ insert title or other appropriate designation ]*  
in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*  
in the capacity of *[ insert title or other appropriate designation ]*  
in the presence of *[ insert identification of official witness]*

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**ANNEXURE - 7****Performance Security**

*[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]*

Date: *[insert date (as day, month, and year) of Bid Submission]*  
IFB No. and title: *[insert no. and title of bidding process]*

Bank's Branch or Office: *[insert complete name of Guarantor]*

**Beneficiary:** *[insert complete name of Purchaser]*

**PERFORMANCE GUARANTEE No.:** *[insert Performance Guarantee number]*

We have been informed that *[insert complete name of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert day and month]*, *[insert year]* with you, for the supply of *[description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a Performance Guarantee is required.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert amount(s) in figures and words]* upon receipt by us of your first demand in writing declaring the Supplier to be in default under the Contract, without cavil or argument, or your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This Guarantee shall expire no later than the *[insert number]* day of *[insert month]* *[insert year]*, and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is governed by the provisions of Indian Contract Act

*[signatures of authorized representatives of the bank and the Supplier]*

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|   |  |   |
|---|--|---|
|  | <p align="center"><b>ANDHRA PRADESH POLLUTION CONTROL BOARD</b><br/>Near APIIC Housing Colony / APMARKFED,<br/>Autonagar, Vijayawada – 520007<br/>Phone No. 0866-2463200, Website: pcb.ap.gov.in</p> |  |
|---|--|---|

**Award No: APPCB-12028/1/2023-SS-CL-APPCB****15/08/2023.****NOTIFICATION OF AWARD**

To  
M/s. Swan Environmental Pvt. Ltd.,  
Plot No. 922 & 935,  
Swami Ayyappa Society,  
Madhapur,  
Hyderabad – 500081,  
Telangana, India.

Sir,

|              |   |
|--------------|---|
| <b>Sub :</b> | APPCB – Central Lab - Notification of Award for supply of two (2) Real-time Continuous Wastewater Quality Monitoring Systems to install & commission to the pipelines discharging treated effluent into coastal waters, data connectivity to APPCB & CPCB servers, training to APPCB staff and operation & maintenance of these stations for a period of five years – Issued - Reg.   |
| <b>Ref:</b>  | <ol style="list-style-type: none"> <li>1. APPCB Tender Notice No. APPCB-12028/1/2023-SS-CL-APPCB, dated 30.03.2023 (GEM/2023/B/3326079, dated 03.04.2023).</li> <li>2. M/s. Swan Environmental Pvt. Ltd., Hyderabad techno commercial bid no. 263-C/G/ENV/RTWQMS/XLM/SHI/2023, dated 20.04.2023.</li> <li>3. M/s. Swan Environmental Pvt. Ltd., Hyderabad price bid quotation as opened on GeM, dated 05.07.2023.</li> <li>4. M/s. Swan Environmental Pvt. Ltd., Hyderabad price bid break-up format reference no. 263-C/G/ENV/RTWQMS/XLM/SHI/2023, dated 13.07.2023 received through mail dated 13.07.2023.</li> </ol> |

\*\*\*

**1.0 AWARD OF CONTRACT & SCOPE OF WORK:**

Andhra Pradesh Pollution Control Board (APPCB) is pleased to inform that your bids, vide reference 2<sup>nd</sup> to 4<sup>th</sup> cited have been accepted and is hereby issued the Notification of Award (NoA) for the supply of two (2) Real-time Continuous Wastewater Quality Monitoring Systems to install & commission to the pipelines discharging treated effluent into coastal waters, data connectivity to APPCB & CPCB servers, training to APPCB staff and operation & maintenance of these stations for a period of five years as mentioned at Annexures – 1, 2, 3, 4 & 5 as per the terms & conditions mentioned below:

**2.0 TECHNICAL SPECIFICATIONS:**

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As per the tender document.

### 3.0 AWARD PRICE:

The total award price for the entire scope of work as detailed at Para - 1.0 above shall not exceed Rs. 1,46,84,274/- (Indian rupees one crore forty six lakhs eighty four thousand two hundred and seventy four only) as detailed below:

| S. No.        | Component  | Amount (Rs.)          |
|---------------|--|-----------------------|
| 1             | Supply of two (2) Real-time Continuous Wastewater Quality Monitoring Systems to install & commission to the pipelines discharging treated effluent into coastal waters, data connectivity to APPCB & CPCB servers, training to APPCB staff, Customs Duty, GST, freight, packing, insurance, clearance charges, transportation, etc. – <b>Annexure – 1.</b> | 70,09,200.00          |
| 2             | Comprehensive Operation & Maintenance (O & M) of these stations for a period of five years from the date of commissioning inclusive of GST – <b>Annexure – 2.</b>  | 28,03,680.00          |
| 3             | Optional items – <b>Annexure – 3.</b>  | 39,36,834.00          |
| 4             | O & M charges for 5 years for optional items – <b>Annexure - 4.</b>  | 9,34,560.00           |
| <b>Total:</b> |  | <b>1,46,84,274.00</b> |

### 4.0 PRICE BASIS:

The award price mentioned at Para 3.0 above is FOR destination to the places of installation at two (2) specified locations.

### 5.0 PERFORMANCE SECURITY:

The supplier shall submit Security Deposit of 35% of the total value of the contract, in the form of two Demand Drafts / Bank Guarantees of 10% and 25% each as detailed below:

- The Security Deposit of 10% in the form of Bank Guarantee / Demand Draft shall be submitted immediately after receipt of the work order and signing the pre-contract agreement.
- The Security Deposit 10% will be returned after completion of the supplies within the delivery period to the satisfaction of the consignee, installation & commissioning of the station and submission of Performance Security of 25% of the contract value in the form of Bank Guarantee / Demand Draft. In case of failure of supply within the delivery period, Security Deposit (10%) will be forfeited as liquidated damages.
- The Performance Security of 25% shall continue to be with the consignee as performance guarantee for a minimum period of 10 years with periodical renewal of the PBG for every three years to ensure optimal performance of the system including 90% data captive rates, providing reliable & accurate data.

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No interest shall be payable by the purchaser on the security deposits of 10% or 25% deposited by the Supplier.

#### 6.0 TERMS AND CONDITIONS OF PAYMENT:

Release of payment to the supplier will be made in two installments as detailed below:

- a. 80% of the contract value including taxes will be released to the supplier after supply of the ordered equipment / instruments in good condition to the consignee's location and acceptance by the concerned APPCB official.
- b. Balance 20% of the contract value including taxes will be released to the supplier after successful installation & commissioning, training to the APPCB officials and real-time data connectivity to APPCB and CPCB servers online.
- c. No advance payment will be made against invoice and other proof of dispatch, but payment will be made only after acceptance of the supplies by the consignee as mentioned above at (a) & (b).

However, the conditions of Security Deposit and performance guarantee shall be as per provision mentioned in the tender.

#### 7.0 All the Invoices, along with related documents for claiming payments shall be addressed to:

The Member Secretary,  
Andhra Pradesh Pollution Control Board,  
Near APIIC Housing Colony / APMARKFED, Autonagar, Vijayawada – 520007.

- Invoice should indicate goods' description, quantity, unit price, total amount, Customs / Excise duties, taxes, etc.

#### 8.0 DELIVERY SCHEDULE:

Delivery period for all the packages including imported and Indian supplies to the respective installation locations shall be one hundred and twenty (120) days from the date of receipt of NoA. Following are the details of delivery and installation locations:

| S. No.        | Delivery location   | Quantity (Nos.) | Installation location                                |
|---------------|---|-----------------|--|
| 1             | The Environmental Engineer,<br>A.P. Pollution Control Board, Regional Office, D. No. 39-33-20/4/1,<br>Madhavadhara, VUDA Colony, Beside RTO Office, Visakhapatnam - 530018. | 1               | Thikkavanipalem (V),<br>Parawada (M), Anakapalli (D) |
| 2             | Mail Id: rovsp-ee1@appcb.gov.in<br>Mobile No: 9866776722<br>Office No: 0891 – 2755356   | 1               | Pudimadaka (V), Rambilli (M), Anakapalli (D).        |
| <b>Total:</b> |   | <b>2</b>        | ---  |

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**9.0 INSTALLATION, COMMISSIONING, OPERATION & MAINTENANCE AND OTHER INCIDENTAL SERVICES:**

Installation & commissioning of the Real-time Continuous Wastewater Quality Monitoring Systems to the pipelines discharging treated effluent into coastal waters shall be completed by the supplier in thirty (30) days time at the respective locations.

Operation & Maintenance contract agreement will be entered with the supplier / operator in due course of time after completion of total supply of equipment and just before completion of installation & commissioning of the two Real-time Continuous Wastewater Quality Monitoring Systems to the pipelines discharging treated effluent into coastal waters at the specified locations and the supplier, M/s. Swan Environmental Pvt. Ltd., Hyderabad shall be bound by the price quote offered through the price bid, vide references 4<sup>th</sup> cited (Annexures - 2 & 4).

**10.0 CUSTOM DUTY, EXCISE DUTY AND CUSTOM / PORT CLEARANCE:**

APPCB does not have the DSIR registration and is not entitled for claiming concessional Custom Duty / Excise Duty. APPCB will be providing necessary documents for clearance of the imported items from the Customs Dept. at the Airport. The supplier has to arrange the clearing agent at his own cost for clearing the goods from the Airport. Customer's copy of the Bill of Entry shall be submitted to APPCB.

**11.0 INSURANCE AND FREIGHT:**

For delivery of goods at site, the insurance shall be obtained by the Supplier in an amount equal to 100% of the value of the goods from "Ware house to warehouse" (final destination) on "All Risks" basis including War Risks and Strikes. The insurance charges shall be borne by the supplier.

Supplier shall be responsible for timely payment of premium and for the proper and effective follow up and settlement of any claims with the Insurance Company. Supplier shall ensure immediate arrangement of replacement for loss / damage during transit, free of cost to APPCB irrespective of claim amount and time of receipt of such claim amount from the insurance company.

**12.0 INSPECTION & TESTS:**

Inspection & tests will be in accordance with the conditions of contract / bid documents.

**13.0 WARRANTY:**

Warranty of all the equipment shall be for three (3) years from the date of successful installation & commission of the systems.

#### **14.0 TRAINING:**

Training shall be provided to APPCB staff by your trained Service Engineer / Application Expert at free of cost.

#### **15.0 SETTLEMENT OF DISPUTES AND ARBITRATION:**

**15.1** All disputes or differences arising out of or in connection with the contract for supply of any item / equipment assigned under the same (whether during the progress of the works or after their completion, determination, abandonment or breach of the contract) shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The Arbitral Tribunal shall consist of three (3) arbitrators appointed by the Member Secretary, Andhra Pradesh Pollution Control Board. The arbitrators shall elect an umpire among them. In case of failure of two arbitrators appointed to reach upon a consensus the decision of the umpire shall be final and binding. No objection shall lie to have such appointment and whether the arbitrators are Government servants and had any interest in the Board or the contract entered into directly or indirectly. In all cases, the arbitrators shall state their decision in writing, amount of claim in dispute is Rupees One Lakh and above, subject as aforesaid the provision of the Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. Arbitration proceedings shall be held at Vijayawada, India and the language of arbitration proceedings and that all documents and communications between the parties shall be in English. The cost and expenses of arbitration proceedings will be paid as determined by the Member Secretary, APPCB.

**15.2** Under the terms of contract, the party invoking the arbitration shall specify the dispute or disputes to be referred to arbitration under this clause together with the amount or amounts claimed in respect of each dispute.

**15.3** It is also a term of the contract that if the supplier (s) do not make any demand for arbitration in respect of any claim (s) or dispute (s) in writing within 90 days of submission of the final bill for payment, the claim of the supplier will be deemed to have been waived and absolutely barred by time and the Board will be discharged and released of all liabilities under the contract in respect of those claims.

#### **16.0 LAWS AND REGULATIONS:**

All matters relating to the formation, validity and performance of this

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Contract shall be governed under the laws and regulations of India and courts at Vijayawada shall have exclusive jurisdiction in all matters arising under this Contract.

The supplier shall respect and abide by all laws and regulations of India and shall make best efforts to ensure that the personnel of the supplier and their dependents, while staying in India, shall respect and abide by all laws and regulation of India.

The supplier shall protect, absolve and indemnify the Board, and their representatives from any claim, loss or damage arising from any non compliance alleged or proved, without claiming them for payment.

#### **17.0 FORCE MAJEURE:**

The supplier shall not be considered in default, if delay in delivery occurs due to causes beyond his control such as acts of God, natural calamities, civil wars, strikes, fire, frost, floods, riots, pandemic situation and acts of usurped power. Only those causes which have a duration of more than 7 calendar days shall be considered cause of force majeure. A notification to this effect duly certified by the Local Chamber of Commerce / Statutory Authorities shall be given by the supplier to the buyer by registered letter. In the event of delay in such cases, a length of time equal to the period of force majeure or at the option of the buyer, the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of buyer. In the event of such cancellation the supplier shall refund any amount advanced by the buyer and return back any material issued to him by the buyer and release facilities, if any provided by the buyer.

#### **18.0 CORRESPONDENCE:**

For the purpose of correspondence with APPCB, the address is given below:

**MEMBER SECRETARY,  
Andhra Pradesh Pollution Control Board,  
Near APIIC Housing Colony / APMARKFED,  
Autonagar, Vijayawada – 520007.**

#### **19.0 OTHER TERMS & CONDITIONS:**

As per the tender document, vide Tender Notice no. APPCB-12028/1/2023-SS-CL-APPCB, dated 30.03.2023 and with GEM/2023/B/3326079, dated 03.04.2023.

#### **20.0 ACKNOWLEDGEMENT OF NOTIFICATION OF AWARD:**

Please acknowledge the receipt of Notification of Award and acceptance for the supply of two (2) Real-time Continuous Wastewater Quality Monitoring

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Systems to install & commission to the pipelines discharging treated effluent into coastal waters, data connectivity to APPCB & CPCB servers, training to APPCB staff and operation & maintenance of these stations for a period of five years as per the terms & conditions stipulated therein, may be submitted to APPCB within seven (7) days from the date of receipt of the same.

Yours sincerely,  
**B Sreedhar Ias**  
**MEMBER SECRETARY**

**Enclosures:** Annexures – 1, 2, 3, 4, 5, 6 & 7.

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**LIST OF ENCLOSURES**

|   |                 |   |
|---|-----------------|---|
| 1 | Annexure -<br>1 | List of equipment / instruments and their price break-up.   |
| 2 | Annexure -<br>2 | Operation & Maintenance price break-up format for two (2) real-time continuous wastewater quality monitoring systems to the pipelines discharging effluent into coastal waters for a period of 5 years. |
| 3 | Annexure -<br>3 | Optional items and their price break-up.  |
| 4 | Annexure -<br>4 | Operation & Maintenance price break-up format for optional items.   |
| 5 | Annexure -<br>5 | Utilities in the scope of APPCB.  |
| 6 | Annexure -<br>6 | Pre-contract Agreement.   |
| 7 | Annexure -<br>7 | Proforma for Bank Guarantee against Performance Security.   |

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**LIST OF EQUIPMENT / INSTRUMENTS AND PRICE BREAK-UP****Annexure - 1**

| <b>I. Real-time Wastewater Quality Monitoring Systems for monitoring wastewater quality being discharged into marine waters:</b> |  |                        |                         |             |                                   |                    |                          |
|--|--|------------------------|-------------------------|-------------|-----------------------------------|--------------------|--------------------------|
| <b>S. No.</b>  | <b>Instrument / equipment &amp; accessories</b>  | <b>Make / Part no.</b> | <b>Unit price (Rs.)</b> | <b>GS T</b> | <b>Unit price after GST (Rs.)</b> | <b>Qty. (Nos.)</b> | <b>Total Price (Rs.)</b> |
| 10   | <b>Single Stream Online COD &amp; BOD (TOC) Analyzer Model: TOC-4200</b><br><b>Make: Shimadzu, Japan</b><br>Part No: 638-91134-91<br><b>Single Stream</b> online analyzer for the measurement of BOD/COD/TOC<br><b>Specifications:</b> <ul style="list-style-type: none"> <li>• Remote On line calibration facility: Calibration possible from remotely located PC/Laptop/server</li> <li>• MCERTS certified.</li> <li>• Analogue Output/Load: Two 4-20 mA; Load: 500 Ω.</li> <li>• Digital interface: RS-485</li> <li>• Power supply: 230 VAC; 50 Hz.</li> <li>• Measurement Range: From 0 - 5 to 0 - 1000 mgC/L f.s.</li> <li>• (0 - 20,000 mgC/L f.s. by auto dilution)</li> <li>• Reproducibility: Within 2% full scale for greater than 4ppm full range)</li> <li>• Zero Stability: Within 2% f.s / day</li> <li>• With display Accuracy: 1.5% of the reading Stand.</li> </ul> | Shimadzu, Japan        | 18,50,000.00            | 18%         | 21,83,000.00                      | 2                  | 43,66,000.00             |
| 11   | <b>Zero Air Cylinders With Regulators</b>  | Reputed Make           | 45,000.00               | 18%         | 53,100.00                         | 2                  | 1,06,200.00              |
| 20   | <b>Online pH &amp; Temperature Analyser</b><br>Make: M/s. Daeyoon Scale  | Daeyoon                | 1,30,000.00             | 18%         | 1,53,400.00                       | 2                  | 3,06,800.00              |

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|     |  |                                  |             |     |             |   |             |
|-----|--|----------------------------------|-------------|-----|-------------|---|-------------|
|     | Industrial Co. Ltd., Korea Complete with PW34 Sensor and DWA3000B pH Analyser  | Scale Industrial Co. Ltd         |             |     |             |   |             |
|     | <b>Specifications:</b> <ul style="list-style-type: none"> <li>• Range: 0-14</li> <li>• Submersible Sensor</li> <li>• Output: 4-20mA</li> <li>• Galvanically Isolated, IP65 protection</li> <li>• Power supply: 230VAC; 50Hz</li> <li>• Waste water Application</li> </ul>  |                                  |             |     |             |   |             |
| 3.0 | <b>Online TSS Analyser with Flow cell</b><br>Make: M/s. Daeyoon Scale Industrial Co. Ltd., Korea Complete with TCSS200N Sensor and DWA3000B TSS Analyser<br><b>Specifications:</b> <ul style="list-style-type: none"> <li>• Range: 0-1500mg/L</li> <li>• Submersible Sensor,</li> <li>• Output: 4-20mA</li> <li>• Galvanically Isolated, IP65 protection</li> <li>• Power supply: 230VAC; 50Hz</li> <li>• Waste water Application</li> </ul> | Daeyoon Scale Industrial Co. Ltd | 2,25,000.00 | 18% | 2,65,500.00 | 2 | 5,31,000.00 |
| 4.0 | <b>Electro Magnetic Flow Meter</b><br>Model: MFE600<br><b>Specifications:</b> <ul style="list-style-type: none"> <li>• Electrode Type: Stand mount (if required)</li> <li>• Supply Power: 100....220V AC</li> <li>• Signal outputs: RS-485 (Modbus protocol)</li> <li>• Media Working Temp: E&lt;60°C;H&lt;120°C</li> <li>• Protection: IP65, Converter type: Integrated</li> </ul>  | Reputed Make                     | 85,000.00   | 18% | 1,00,300.00 | 2 | 2,00,600.00 |
| 5.0 | <b>Sample flow cell, Tubing's and sampling lines with conditioning system, pumps, valves, calibrations, fittings of analyzer as required. Etc</b>  | Reputed Make                     | 2,40,000.00 | 18% | 2,83,200.00 | 2 | 5,66,400.00 |
| 6.  | <b>Display Board:</b>  | Repu                             | 1,45,000.   | 18  | 1,71,100.   | 2 | 3,42,200.00 |

|     |  |              |             |     |             |     |             |
|-----|--|--------------|-------------|-----|-------------|-----|-------------|
| 0   | Display Board, Pixel Pitch 10 mm Red Color Dimensions: 6' (L) X 1' (H), AC-230V Supply.  | ted Make     | 00          | %   | 00          |     |             |
| 7.0 | <b>EQMS Data uploading to CPCB/SPCB</b><br>Model SED-9S(Uploading of data to CPCB & SPCB)  | Swan         | 1,20,000.00 | 18% | 1,41,600.00 | 2   | 2,83,200.00 |
|     | <b>DATA ACQUISITION SYSTEM</b><br>16 Channel Date Logger Our Material No:20030313<br><br><ul style="list-style-type: none"> <li>• IOT Based System (ILens Data Logger Hardware)</li> <li>• Data Logger Hardware for direct connectivity of analyzer (Any make or model).</li> <li>• Connect any make of Analog to Digital Converter</li> <li>• LAN/GRPS/Wi-Fi connectivity</li> <li>• 2 Nos. RS232/RS485 ports available on board.</li> <li>• All the monitored parameters are available at central location preferably using single LAN cable.</li> </ul> | Swan         | 80,000.00   | 18% | 94,400.00   | 2   | 1,88,800.00 |
| 8.0 | <b>A/D Converter</b><br><b>8 X 4-20mA</b>  | Reputed Make | 50,000.00   | 18% | 59,000.00   | 2   | 1,18,000.00 |
| 9.0 | <b>Consumables:</b>  |              |             |     |             |     |             |
| a   | Platinum catalyst  | 638-60246    | ---         | --  | ---         | --- | Included    |
| b   | Combustion tube  | 638-41323    | ---         | --- | ---         | --- |             |
| c   | Quartz wool  | 630-00557    | ---         | --- | ---         | --- |             |
| d   | Halogen Scrubbers  | 630-00992    | ---         | --- | ---         | --- |             |
| e   | CO2absorber  | 630-00999    | ---         | --- | ---         | --- |             |
| f   | O-ring4DP10  | 036-11209-84 | ---         | --- | ---         | --- |             |
| g   | O-ring PTFE  | 638-15025    | ---         | --- | ---         | --- |             |
| h   | Plunger tip  | 638-59296-01 | ---         | --- | ---         | --- |             |
| i   | Ferrulepipeport-2  | 638-         | ---         | --- | ---         | --- |             |

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|  |                   |              |     |     |     |     |              |
|--|-------------------|--------------|-----|-----|-----|-----|--------------|
|  |                   | 42165-02     |     |     |     |     |              |
| j  | Ferrulepipeport-7 | 638-42165-07 | --- | --- | --- | --- |              |
| k  | SSMESH            | 631-60069    | --- | --- | --- | --- |              |
| <b>Total:</b>  |                   |              |     |     |     |     | 70,09,200.00 |
| Customs duty, freight charges and other taxes, if any may also be incorporated in the price bid: |                   |              |     |     |     |     | Included     |

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Annexure - 2

| II. Operation & Maintenance charges for five (5) years including three years warranty period:  |                                    |                       |     |                            |               |                     |
|--|------------------------------------|-----------------------|-----|----------------------------|---------------|---------------------|
| Comprehensive Operation & Maintenance services for a period of five years from the date of commissioning of the station including three years warranty period [services include total operation & maintenance of the station, supply of spares & consumables, security of the station equipment, payment of internet & power supply charges, real-time data transmission to APPCB on continuous basis, insurance of the total station equipment against any theft, fire, natural calamities (hurricanes, earth quakes, floods, etc.)]: |                                    |                       |     |                            |               |                     |
| S. No.   | Year                               | Amount per unit (Rs.) | GST | Unit price after GST (Rs.) | Qty.          | Total Price (Rs.)   |
| 1  | 1 <sup>st</sup> Year O & M Charges | 1,78,000.00           | 18% | 2,10,040.00                | 2 Nos.        | 4,20,080.00         |
| 2  | 2 <sup>nd</sup> Year O & M Charges | 2,00,000.00           | 18% | 2,36,000.00                |               | 4,72,000.00         |
| 3  | 3 <sup>rd</sup> Year O & M Charges | 2,35,000.00           | 18% | 2,77,300.00                |               | 5,54,600.00         |
| 4  | 4 <sup>th</sup> Year O & M Charges | 2,75,000.00           | 18% | 3,24,500.00                |               | 6,49,000.00         |
| 5  | 5 <sup>th</sup> Year O & M Charges | 3,00,000.00           | 18% | 3,54,000.00                |               | 7,08,000.00         |
|  |                                    |                       |     |                            | <b>Total:</b> | <b>28,03,680.00</b> |
| <b>Note:</b> Prices of critical Spares & all Consumables are included in warranty & O & M Prices.  |                                    |                       |     |                            |               |                     |

Annexure - 3

| I. Optional items: |   |                 |                  |     |                            |             |                   |
|--------------------|---|-----------------|------------------|-----|----------------------------|-------------|-------------------|
| S. No.             | Item Description  | Make / Part no. | Unit Price (Rs.) | GST | Unit Price After GST (Rs.) | Qty. (Nos.) | Total Price (Rs.) |
| 1                  | IP Camera (2MP HD Network IR PTZ Dome Camera with 4ch NVR, 1TB HDD); Model: DH-SD59225U-HNI<br>Features:<br>• 1/2.8" 2Megapixel STARVIS™ CMOS<br>• Powerful 25x optical zoom<br>• Starlight technology<br>• Max. 50/60fps@1080P | M/s. Dahua      | 75,000.00        | 18% | 88,500.00                  | 2           | 1,77,000.00       |
| 2                  | Shelter with 10' X 10' X 8' dimensions complete with 2 X Air conditioners.  | Repute          | 7,00,000.00      | 18% | 8,26,000.00                | 2           | 16,52,000.00      |

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|               |   |                     |             |         |             |   |                     |
|---------------|---|---------------------|-------------|---------|-------------|---|---------------------|
| 3             | Solar Panel   | d<br>Make           | 4,00,000.00 | 12<br>% | 4,48,000.00 | 2 | 8,96,000.00         |
| 4             | Batteries For Solar Panel                                     |                     | 1,61,712.00 | 12<br>% | 1,81,117.00 | 2 | 3,62,234.00         |
| 4             | 5 KVA UPS (Uninterruptible Power Supply) With 30 mints Backup | Repute<br>d<br>Make | 2,00,000.00 | 18<br>% | 2,36,000.00 | 2 | 4,72,000.00         |
| 5             | Zero Air generator with compressor                            | Analab              | 1,60,000.00 | 18<br>% | 1,88,800.00 | 2 | 3,77,600.00         |
| <b>Total:</b> |   |                     |             |         |             |   | <b>39,36,834.00</b> |

**Annexure - 4**

| IV.Operation & Maintenance charges for five (5) years including three years warranty period: |                                    |                       |      |                            |           |                    |
|--|------------------------------------|-----------------------|------|----------------------------|-----------|--------------------|
| S. No.   | Year                               | Amount per unit (Rs.) | GS T | Unit price after GST (Rs.) | Qty. Nos. | Total Price Rs.)   |
| 1  | 1 <sup>st</sup> Year O & M Charges | 62,000.00             | 18 % | 73,160.00                  | 2         | 1,46,320.00        |
| 2  | 2 <sup>nd</sup> Year O & M Charges | 67,500.00             | 18 % | 79,650.00                  |           | 1,59,300.00        |
| 3  | 3 <sup>rd</sup> Year O & M Charges | 76,500.00             | 18 % | 90,270.00                  |           | 1,80,540.00        |
| 4  | 4 <sup>th</sup> Year O & M Charges | 90,000.00             | 18 % | 1,06,200.00                |           | 2,12,400.00        |
| 5  | 5 <sup>th</sup> Year O & M Charges | 1,00,000.00           | 18 % | 1,18,000.00                |           | 2,36,000.00        |
| <b>Total:</b>  |                                    |                       |      |                            |           | <b>9,34,560.00</b> |

**Annexure - 5**

| V. Utilities in the scope of APPCB: |   |
|-------------------------------------|---|
| 1                                   | Providing Place & Necessary Permissions to install Shelter and analyzers in a secured location. |
| 2                                   | 230 V AC; 50 Hz UPS power supply to be provided at the room / shelter.                          |
| 3                                   | Providing Manhole as required for drawing sample is to be provided in a secured location.       |
| 4                                   | Internet connection for data uploading.   |

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**ANNEXURE - 6****Contract Agreement**

*[The successful Bidder shall fill in this form in accordance with the instructions indicated]*

THIS CONTRACT AGREEMENT is made

the *[insert: number]* day of *[insert: month]*, *[insert: year]*.

BETWEEN

(1) *[insert complete name of Purchaser]*, a *[insert description of type of legal entity, for example, an agency of the Ministry of .... of the Government of {insert name of Country of Purchaser}, or corporation incorporated under the laws of {insert name of Country of Purchaser}]* and having its principal place of business at *[insert address of Purchaser]* (hereinafter called "the Purchaser"), and

(2) *[insert name of Supplier]*, a corporation incorporated under the laws of *[insert: country of Supplier]* and having its principal place of business at *[insert: address of Supplier]* (hereinafter called "the Supplier").

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., *[insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of *[insert Contract Price in words and figures, expressed in the Contract currency (ies)]* (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:
  - a. This Contract Agreement
  - b. All conditions of Bid Document
  - c. Technical Requirements (including Schedule of Requirements and Technical Specifications)
  - d. The Supplier's Bid and original Price Schedules
  - e. The Purchaser's Notification of Award
  - f. *[Add here any other document(s)]*
3. This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
4. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

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5. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*  
in the capacity of *[ insert title or other appropriate designation ]*  
in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*  
in the capacity of *[ insert title or other appropriate designation ]*  
in the presence of *[ insert identification of official witness]*

**ANNEXURE - 7****Performance Security**

*[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]*

Date: *[insert date (as day, month, and year) of Bid Submission]*  
IFB No. and title: *[insert no. and title of bidding process]*

Bank's Branch or Office: *[insert complete name of Guarantor]*

**Beneficiary:** *[insert complete name of Purchaser]*

**PERFORMANCE GUARANTEE No.:** *[insert Performance Guarantee number]*

We have been informed that *[insert complete name of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert day and month]*, *[insert year]* with you, for the supply of *[description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a Performance Guarantee is required.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert amount(s) in figures and words]* upon receipt by us of your first demand in writing declaring the Supplier to be in default under the Contract, without cavil or argument, or your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This Guarantee shall expire no later than the *[insert number]* day of *[insert month]* *[insert year]*, and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is governed by the provisions of Indian Contract Act

*[signatures of authorized representatives of the bank and the Supplier]*

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ANNEXURE-8

|   |  |   |
|---|--|---|
|  | <p align="center"><b>ANDHRA PRADESH POLLUTION CONTROL BOARD</b><br/>Near APIIC Housing Colony / APMARKFED,<br/>Autonagar, Vijayawada – 520007<br/>Phone No. 0866-2463200, Website: pcb.ap.gov.in</p> |  |
|---|--|---|

**Award No: APPCB-12028/1/2023-SS-CL-APPCB****15/08/2023.****NOTIFICATION OF AWARD**

To

M/s. Aaxis Nano Technologies Pvt. Ltd.,  
Plot No. B-46, Sector – 59, Industrial Area,  
Noida,  
Delhi NCR – 201301.  
Uttar Pradesh.

Sir,

|              |  |
|--------------|--|
| <b>Sub :</b> | APPCB – Central Lab - Notification of Award for supply of nine (9) Real-time Wastewater Quality Monitoring Systems, installation & commissioning at STPs for monitoring treated wastewater quality, data connectivity to APPCB & CPCB servers, training to APPCB staff and operation & maintenance of these stations for a period of five years – Issued - Reg.  |
| <b>Ref:</b>  | <ol style="list-style-type: none"> <li>1. APPCB Tender Notice No. APPCB-12028/1/2023-SS-CL-APPCB, dated 30.03.2023 (GEM/2023/B/3326079, dated 03.04.2023).</li> <li>2. M/s. Aaxis Nano Technologies Pvt. Ltd., New Delhi techno commercial bid no. ANTPL-1166/2023-24/STP's, dated 29.04.2023.</li> <li>3. M/s. Aaxis Nano Technologies Pvt. Ltd., New Delhi price bid quotation obtained during reverse auction on 06.07.2023.</li> <li>4. M/s. Aaxis Nano Technologies Pvt. Ltd., New Delhi price bid break-up format reference no. ANTPL-110/23-24, dated 10.07.2023 received through mail dated 13.07.2023.</li> </ol> |

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**1.0 AWARD OF CONTRACT & SCOPE OF WORK:**

Andhra Pradesh Pollution Control Board (APPCB) is pleased to inform that your bids, vide reference 2<sup>nd</sup> to 4<sup>th</sup> cited have been accepted and is hereby issued the Notification of Award (NoA) for the supply, installation & commissioning of nine (9) Real-time Wastewater Quality Monitoring Systems for monitoring wastewater quality being treated by STPs, data connectivity to APPCB & CPCB servers, training to APPCB staff and operation & maintenance of these stations for a period of five years as mentioned at

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Annexures – 1, 2, 3 & 4 as per the terms & conditions mentioned below:

## 2.0 TECHNICAL SPECIFICATIONS:

As per the tender document.

## 3.0 AWARD PRICE:

The total award price for the entire scope of work as detailed at Para - 1.0 above shall not exceed Rs. **3,46,43,583.00** (rupees three crores forty six lakhs forty three thousand five hundred and eighty three only) as detailed below:

| S. No.  | Component   | Amount (Rs.)          |
|---|---|-----------------------|
| <b>I</b>  | <b>Regular items and their O &amp; M service charges:</b>   |                       |
| 1   | Supply of nine (9) Real-time Wastewater Quality Monitoring Systems, installation & commissioning at STPs for monitoring treated wastewater quality, data connectivity to APPCB & CPCB servers, training to APPCB staff, etc. inclusive of Customs Duty, GST, freight, packing, insurance, clearance charges, transportation, etc. – <b>Annexure -1.</b> | <b>2,81,99,190.00</b> |
| 2   | Comprehensive Operation & Maintenance (O & M) of these stations for a period of five years from the date of commissioning inclusive of GST – <b>Annexure - 2.</b>   | <b>51,96,543.00</b>   |
|   | <b>Total:</b>   | <b>3,33,95,733.00</b> |
| <b>Ensure the supply of the regular items immediately after receipt of the Notification of Award.</b>   |   |                       |
| <b>II</b>   | <b>Optional items and their O &amp; M service charges:</b>  |                       |
| 3   | Optional items – <b>Annexure - 3.</b>   | <b>9,02,700.00</b>    |
| 4   | O & M charges for 5 years for optional items – <b>Annexure - 4.</b>   | <b>3,45,150.00</b>    |
|   | <b>Total:</b>   | <b>12,47,850.00</b>   |
|   | <b>Grand total (I + II):</b>  | <b>3,46,43,583.00</b> |
| <b>The requirement of these optional items will be of site specific and have to be supplied by the supplier as per the requirement of APPCB only.</b> |   |                       |

## 4.0 PRICE BASIS:

The award price mentioned at Para 3.0 above is FOR destination to the places of installation at nine (9) specified locations.

## 5.0 PERFORMANCE SECURITY:

The supplier shall submit Security Deposit of 35% of the total value of the contract, in the form of two Demand Drafts / Bank Guarantees of 10% and 25% each as detailed below:

- a. The Security Deposit of 10% in the form of Bank Guarantee / Demand Draft

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shall be submitted immediately after receipt of the work order and signing the pre-contract agreement.

- b. The Security Deposit 10% will be returned after completion of the supplies within the delivery period to the satisfaction of the consignee, installation & commissioning of the stations and submission of Performance Security of 25% of the contract value in the form of Bank Guarantee / Demand Draft. In case of failure of supply within the delivery period Security Deposit (10%) will be forfeited as liquidated damages.
- c. The Performance Security of 25% shall continue to be with the consignee as performance guarantee for a minimum period of 10 years with periodical renewal of the PBG for every three years to ensure optimal performance of the system including 90% data captive rates, providing reliable & accurate data.

No interest shall be payable by the purchaser on the security deposits of 10% or 25% deposited by the Supplier.

#### **6.0 TERMS AND CONDITIONS OF PAYMENT:**

Release of payment to the supplier will be made in two installments as detailed below:

- a. 80% of the contract value including taxes will be released to the supplier after supply of the ordered equipment / instruments in good condition to the consignee's location and acceptance by the concerned APPCB official.
- b. Balance 20% of the contract value including taxes will be released to the supplier after successful installation & commissioning, training to the APPCB officials and real-time data connectivity to APPCB and CPCB servers online.
- c. No advance payment will be made against invoice and other proof of dispatch, but payment will be made only after acceptance of the supplies by the consignee as mentioned above at (a) & (b).

However, the conditions of Security Deposit and performance guarantee shall be as per provision mentioned in the tender.

#### **7.0 All the Invoices, along with related documents for claiming payments shall be addressed to:**

The Member Secretary,  
Andhra Pradesh Pollution Control Board,  
Near APIIC Housing Colony / APMARKFED,  
Autonagar, Vijayawada – 520007.

- Invoice should indicate goods' Description, Quantity, Unit Price, total amount, Customs / Excise duties, taxes, etc.

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**8.0 DELIVERY SCHEDULE:**

Delivery period for all the packages including imported and Indian supplies to the respective installation locations shall be one hundred and twenty (120) days from the date of receipt of NoA. Following are the details of delivery and installation locations:

| S. No. | Delivery location   | Quantity (Nos.) | Installation location   |
|--------|---|-----------------|---|
| 1      | The Environmental Engineer,<br>A.P. Pollution Control Board, Regional Office,<br>D. No. 39-33-20/4/1, Madhavadhara, VUDA<br>Colony, Beside RTO Office, Visakhapatnam -<br>530018.   | 1               | Outlet of 54 MLD<br>STP, Narava,<br>Visakhapatnam                 |
| 2      |   | 1               | Outlet of 38 MLD<br>STP, Old town,<br>Visakhapatnam               |
| 3      | Mail Id: rovsp-ee1@appcb.gov.in<br>Mobile No: 9866776722<br>Office No: 0891 – 2755356   | 1               | Outlet of 25 MLD<br>STP, Appughar,<br>Visakhapatnam               |
| 4      | The Environmental Engineer,<br>A. P. Pollution Control Board, Regional Office,<br>Plot No. 2, IDA Ramanayapeta, Backside of<br>DIC Office,<br>Kakinada – 533 005.<br><br>Mail Id: rokdd-ee1@appcb.gov.in<br>Mobile No: 9866776723<br>Office No: 0884 – 2374066        | 1               | Outlet of 30 MLD<br>STP, Hukumpet,<br>Rajamahendravara<br>m.      |
| 5      | The Environmental Engineer,<br>A.P. Pollution Control Board, Regional Office,<br>Plot No. 41,<br>Sri Kanakadurga Officer's Colony,<br>Vijayawada – 520 008.   | 1               | Outlet of 40 MLD<br>STP, Ajithsingnagar,<br>Vijayawada.           |
| 6      | Mail Id: rovja-ee1@appcb.gov.in<br>Mobile No: 9866776739<br>Office No: 0866 – 2543542   | 1               | Outlet of 20 MLD<br>STP,<br>Ramalingeswamaga<br>r,<br>Vijayawada. |
| 7      | The Environmental Engineer,<br>A P Pollution Control Board, Regional Office,<br>2 <sup>nd</sup> Floor, D. No.1/2277, Rajiv Park Road, A.<br>P. Housing Board Colony, YSR District,<br>Kadapa – 516003.<br><br>Mail Id:rokdp-ee1@appcb.gov.in<br>Mobile No: 9177303312 | 1               | Outlet of 10 MLD<br>STP, Pulivendula.                             |
| 8      | The Environmental Engineer,<br>Regional Office,<br>A P Pollution Control Board,<br>Plot No: 1, Prasanthi Nagar, Near Nellore  | 1               | Outlet of 55 MLD<br>STP, Allipuram,<br>Nellore.                   |

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|               |  |          |                                     |
|---------------|--|----------|-------------------------------------|
|               | Club, Podalakur Road, Nellore - 524003.<br>Mail Id: ronlr-ee1@appcb.gov.in<br>Mobile No: 9866776736<br>Office No: 0861-2329730   |          |                                     |
| 9             | The Environmental Engineer,<br>Regional Office,<br>A P Pollution Control Board,<br>1 <sup>st</sup> floor, APSFC Building,<br>Narasimha Theertham Road,<br>Near LIC, Balaji city,<br>Tirupathi – 517502.<br><br>Mail Id: rotpt-ee1@appcb.gov.in<br>Mobile No: 9866776730<br>Office No: 0877-2253981 | 1        | Outlet of 50 MLD<br>STP, Tirupathi. |
| <b>Total:</b> |  | <b>9</b> | ---                                 |

#### 9.0 INSTALLATION, COMMISSIONING, OPERATION & MAINTENANCE AND OTHER INCIDENTAL SERVICES:

Installation & commissioning of the Real-time Wastewater Quality Monitoring Systems, installation & commissioning at STPs for monitoring treated wastewater quality shall be completed by the supplier in thirty (30) days time at the respective locations.

Operation & Maintenance contract agreement will be entered with the supplier / operator in due course of time after completion of total supply of equipment and just before completion of installation & commissioning of the nine Real-time Wastewater Quality Monitoring Systems at the specified locations and the supplier, M/s. Aaxis Nano Technologies Pvt. Ltd. shall bound by the price quote offered through the price bid, vide references 4<sup>th</sup> cited (Annexures - 2 & 4).

#### 10.0 CUSTOM DUTY, EXCISE DUTY AND CUSTOM / PORT CLEARANCE:

APPCB does not have the DSIR registration and is not entitled for claiming concessional Custom Duty / Excise Duty. APPCB will be providing necessary documents for clearance of the imported items from the Customs Dept. at the Airport. The supplier has to arrange the clearing agent at his own cost for clearing the goods from the Airport. Customer's copy of the Bill of Entry shall be submitted to APPCB.

#### 11.0 INSURANCE AND FREIGHT:

For delivery of goods at site, the insurance shall be obtained by the Supplier in an amount equal to 100% of the value of the goods from "Ware house to warehouse" (final destinations) on "All Risks" basis including War Risks and

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Strikes. The insurance charges shall be borne by the supplier.

Supplier shall be responsible for timely payment of premium and for the proper and effective follow up and settlement of any claims with the Insurance Company. Supplier shall ensure immediate arrangement of replacement for loss / damage during transit, free of cost to APPCB irrespective of claim amount and time of receipt of such claim amount from the insurance company.

#### **12.0 INSPECTION & TESTS:**

Inspection & tests will be in accordance with the conditions of contract / bid documents.

#### **13.0 WARRANTY:**

Warranty of all the equipment shall be for three (3) years from the date of successful installation & commission of the systems.

#### **14.0 TRAINING:**

Training shall be provided to APPCB staff by your trained Service Engineer / Application Expert at free of cost.

#### **15.0 SETTLEMENT OF DISPUTES AND ARBITRATION:**

**15.1** All disputes or differences arising out of or in connection with the contract for supply of any item / equipment assigned under the same (whether during the progress of the works or after their completion, determination, abandonment or breach of the contract) shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The Arbitral Tribunal shall consist of three (3) arbitrators appointed by the Member Secretary, Andhra Pradesh Pollution Control Board. The arbitrators shall elect an umpire among them. In case of failure of two arbitrators appointed to reach upon a consensus the decision of the umpire shall be final and binding. No objection shall lie to have such appointment and whether the arbitrators are Government servants and had any interest in the Board or the contract entered into directly or indirectly. In all cases, the arbitrators shall state their decision in writing, amount of claim in dispute is Rupees One Lakh and above, subject as aforesaid the provision of the Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. Arbitration proceedings shall be held at Vijayawada, India and the language of arbitration proceedings and that all documents and communications between the parties shall be in English. The cost and expenses of arbitration proceedings will be paid as determined by the Member Secretary, APPCB.

**15.2** Under the terms of contract, the party invoking the arbitration shall specify the dispute or disputes to be referred to arbitration under this clause together with the amount or amounts claimed in respect of each

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dispute.

**15.3** It is also a term of the contract that if the supplier (s) do not make any demand for arbitration in respect of any claim (s) or dispute (s) in writing within 90 days of submission of the final bill for payment, the claim of the supplier will be deemed to have been waived and absolutely barred by time and the Board will be discharged and released of all liabilities under the contract in respect of those claims.

#### **16.0 LAWS AND REGULATIONS:**

All matters relating to the formation, validity and performance of this Contract shall be governed under the laws and regulations of India and courts at Vijayawada shall have exclusive jurisdiction in all matters arising under this Contract.

The supplier shall respect and abide by all laws and regulations of India and shall make best efforts to ensure that the personnel of the supplier and their dependents, while staying in India, shall respect and abide by all laws and regulation of India.

The supplier shall protect, absolve and indemnify the Board, and their representatives from any claim, loss or damage arising from any non compliance alleged or proved, without claiming them for payment.

#### **17.0 FORCE MAJEURE:**

The supplier shall not be considered in default, if delay in delivery occurs due to causes beyond his control such as acts of God, natural calamities, civil, wars, strikes, fire, frost, floods, riots, pandemic situation and acts of usurped power. Only those causes which have a duration of more than 7 calendar days shall be considered cause of force majeure. A notification to this effect duly certified by the Local Chamber of Commerce / Statutory Authorities shall be given by the supplier to the buyer by registered letter. In the event of delay in such cases, a length of time equal to the period of force majeure or at the option of the buyer, the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of buyer. In the event of such cancellation the supplier shall refund any amount advanced by the buyer and return back any material issued to him by the buyer and release facilities, if any, provided by the buyer.

#### **18.0 CORRESPONDENCE:**

For the purpose of correspondence with APPCB, the address is given below:

MEMBER SECRETARY,  
Andhra Pradesh Pollution Control Board,  
Near APIIC Housing Colony / APMARKFED,  
Autonagar, Vijayawada – 520007.

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**19.0 OTHER TERMS & CONDITIONS:**

As per the tender document, vide Tender Notice no. APPCB-12028/1/2023-SS-CL-APPCB, dated 30.03.2023 and with GEM/2023/B/3326079, dated 03.04.2023.

**20.0 ACKNOWLEDGEMENT OF NOTIFICATION OF AWARD:**

Please acknowledge the receipt of Notification of Award and acceptance for the supply of nine (9) Real-time Wastewater Quality Monitoring Systems, installation & commissioning at STPs for monitoring treated wastewater quality, data connectivity to APPCB & CPCB servers, training to APPCB staff and operation & maintenance of these stations for a period of five years as per the terms & conditions stipulated therein, may be submitted to APPCB within seven (7) days from the date of receipt of the same.

Yours sincerely,

**B Sreedhar Ias**  
**MEMBER SECRETARY**

**Encls:** Annexures – 1, 2, 3, 4, 5 & 6.

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**LIST OF ENCLOSURES**

|        |   |
|--------|---|
| 1<br>1 | Annexure - : List of equipment / instruments and their price break-up.  |
| 2<br>2 | Annexure - : Operation & Maintenance price break-up format for nine (9) Real-time Wastewater Quality Monitoring System for monitoring wastewater quality being treated by STPs for a period of 5 years. |
| 3<br>3 | Annexure - : Optional items and their price break-up.   |
| 4<br>4 | Annexure - : Operation & Maintenance price break-up format for optional items.  |
| 5<br>5 | Annexure - : Pre-contract Agreement.  |
| 6<br>6 | Annexure - : Proforma for Bank Guarantee against Performance Security.  |

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**LIST OF EQUIPMENT / INSTRUMENTS AND PRICE BREAK-UP****Annexure - 1**

| <b>I. Real-time wastewater Quality Monitoring System for monitoring wastewater quality being discharged into marine waters:</b> |  |                        |                         |             |                                   |                      |                          |
|---|--|------------------------|-------------------------|-------------|-----------------------------------|----------------------|--------------------------|
| <b>S. N o.</b>  | <b>Instrument / equipment &amp; accessories</b>  | <b>Make / Part no.</b> | <b>Unit price (Rs.)</b> | <b>GS T</b> | <b>Unit price after GST (Rs.)</b> | <b>Qty . (No s.)</b> | <b>Total Price (Rs.)</b> |
| 1.0   | <p>Online multi-parametric COD, BOD, TSS, pH, &amp; Flow Analyzer with Data Connectivity Charges on APPCB &amp; CPCB Servers.</p> <p>Display: console terminal:</p> <p>scan high-end IoT terminal based on an industrial PC, IP65 widescreen color graphical display (9") and touch screen sensor and station management of up to 64 parameters: automatic cleaning, data logging, sample &amp; calibration including history and multipoint calibration, sensor function check, user management and easy data transfer via USB-stick . low power operation with less than 3 watts (@ 15 min. measuring interval) and M2M (Machine to Machine) connectivity:100 Mb/s Ethernet, 300 Mb/s WLAN and optional worldwide WCDMA 4G interface, remote control (http) and data transfer into "Cloud" via FTP, SSH and TML . process interface to</p> | S::CAN AUSTRIA         | 22,60,291.00            | 18 %        | 26,67,143.38                      | 9                    | 2,40,04,290.00           |

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|  |  |  |  |  |          |
|--|--|--|--|--|----------|
| <p>SCADA via Modbus RTU/TCP, SDI-1 Profibus DP, analog 0/4-20 mA and relay outputs (state)8. integration of third-party sensors via analog 0/4-20 mA and digital(solid state) inputs, Modbus RTU/TCP,16 GB memory storage capacity <b>Model :</b><br/><b>Con::cube</b><br/><b>Make:S::CAN, AUSTRIA</b></p>   |  |  |  |  |          |
| <p>Sensor:-Carbo::lyser<br/>Measuring principle: UV-Vis spectrometry over the total range 190-750 nm), web server on board - IoT enabled, no user software is needed to configure the probe. Communicates directly with your mobile device via Bluetooth or WLAN, 8 GB on board memory-capacity for logging data for many years long term stable and maintenance free in operation. Factory pre-calibrated, local multi-point calibration possible automatic cleaning with compressed air<br/>Model:<br/>carbo::lyser™- V3,<br/>Make: S::CAN, Austria.</p> |  |  |  |  | Included |
| <p>pH SENSOR -<br/>pH::lyser- measuring principle: unique, non-porous / non-leaking combined. Reference electrode</p>  |  |  |  |  | Included |

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|     |  |               |             |      |             |   |              |
|-----|--|---------------|-------------|------|-------------|---|--------------|
|     | for technically unrivalled and consistent pH performance s::can plug & measure. multi-parameter sensor; pH::lyser monitors pH & temperature; long term stable and maintenance free in operation; ideal for waste water, factory pre calibrated ;mounting and measurement directly in the media (In Situ) or in a flow cell, operation via s::can terminals & s::can software; Model: pH::lyser, Make: S::CAN, Austria. |               |             |      |             |   |              |
| 2.0 | Effluent flow meter: Shall be able to measure the velocity (mts./sec) & volume (m3) of effluent flowing through the effluent discharge pipeline with totalizer and shall display the readings in digital mode. Measurement principle: Ultrasonic Model : LST300, Make : ABB.   | ABB           | 95,000.00   | 18 % | 1,12,100.00 | 9 | 10,08,900.00 |
| 3.0 | Accessories required for Installation and commissioning of the system.<br><br>Bill of Quantity:-<br>1. Panel enclosure with Stand, SMPS, Panel air filter, Exhaust Fan, Anchor fastener & Circuit breaker, tubing, nut & bolt, etc.<br>2. SOV  | Reput ed make | 1,75,000.00 | 18 % | 2,06,500.00 | 9 | 18,58,500.00 |

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|   |  |                     |                 |         |                 |      |                            |
|---|--|---------------------|-----------------|---------|-----------------|------|----------------------------|
|   | 3. SIM Card<br>4. Compressor<br>5. SS Sensor cage<br>With SS chain &<br>Conduit pipe |                     |                 |         |                 |      |                            |
| 4.0   | GSM / GPRS-MODEM<br>with Antenna with data<br>transmission.                          | Reput<br>ed<br>Make | 1,25,000.0<br>0 | 18<br>% | 1,47,500.0<br>0 | 9    | 13,27,500.00               |
| 5.0   | pH combination<br>electrode – measuring<br>range 0 – 12 pH.                          | pH::ly<br>ser       | ----            | ----    | ----            | ---- | Included                   |
| <b>Total:</b>   |  |                     |                 |         |                 |      | <b>2,81,99,190.0<br/>0</b> |
| Customs duty, freight charges and other taxes, if any may also be<br>incorporated in the price bid: |  |                     |                 |         |                 |      | Included                   |

**Annexure - 2**

| <b>II. Operation &amp; Maintenance charges for five (5) years including three years warranty period:</b>  |                                    |                       |     |                            |           |                     |
|---|------------------------------------|-----------------------|-----|----------------------------|-----------|---------------------|
| <b>Comprehensive Operation &amp; Maintenance services for a period of five years from the date of commissioning of the station including three years warranty period [services include total operation &amp; maintenance of the station, supply of spares &amp; consumables, security of the station equipment, payment of internet &amp; power supply charges, real-time data transmission to APPCB on continuous basis, insurance of the total station equipment against any theft, fire, natural calamities (hurricanes, earth quakes, floods, etc.)]:</b> |                                    |                       |     |                            |           |                     |
| S. No.  | Year                               | Amount per unit (Rs.) | GST | Unit price after GST (Rs.) | Qty. Nos. | Total Price (Rs.)   |
| 1   | 1 <sup>st</sup> Year O & M Charges | 32,621.55             | 18% | 38,493.43                  | 9         | 3,46,440.86         |
| 2   | 2 <sup>nd</sup> Year O & M Charges | 65,242.15             | 18% | 76,985.74                  |           | 6,92,871.63         |
| 3   | 3 <sup>rd</sup> Year O & M Charges | 97,863.23             | 18% | 1,15,478.61                |           | 10,39,307.50        |
| 4   | 4 <sup>th</sup> Year O & M Charges | 1,30,484.30           | 18% | 1,53,971.47                |           | 13,85,743.27        |
| 5   | 5 <sup>th</sup> Year O & M Charges | 1,63,105.40           | 18% | 1,92,464.37                |           | 17,32,179.35        |
| <b>Total:</b>   |                                    |                       |     |                            |           | <b>51,96,543.00</b> |

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**Annexure - 3**

| <b>III. Optional items:</b>   |  |                 |                  |     |                            |             |                    |
|---|--|-----------------|------------------|-----|----------------------------|-------------|--------------------|
| S. No.  | Item Description                         | Make / Part no. | Unit Price (Rs.) | GST | Unit Price After GST (Rs.) | Qty. (Nos.) | Total Price (Rs.)  |
| 1   | Surveillance Camera                      | CP Plus         | 25,000.00        | 18% | 29,500.00                  | 9           | 2,65,500.00        |
| 2   | Suitable Shelter for RTWQMS              | Axis make       | 25,000.00        | 18% | 29,500.00                  | 9           | 2,65,500.00        |
| 3   | Solar Panel & Charge Controller          | Reputed Make    |                  |     |                            |             |                    |
| 4   | Batteries For Solar Panel                |                 |                  |     |                            |             |                    |
| 5   | 3 KVA UPS (Uninterruptible Power Supply) | Reputed Make    | 35,000.00        | 18% | 41,300.00                  | 9           | 3,71,700.00        |
| <b>Total:</b>   |  |                 |                  |     |                            |             | <b>9,02,700.00</b> |
| Procurement of optional items mentioned at Annexure - 3 from the supplier is purely depends on the requirement of APPCB and the supplier shall execute the supply of these items only on demand of APPCB. |  |                 |                  |     |                            |             |                    |

**Annexure - 4**

| <b>IV. Operation &amp; Maintenance charges for five (5) years including three years warranty period:</b> |                                    |                       |     |                            |           |                    |
|--|------------------------------------|-----------------------|-----|----------------------------|-----------|--------------------|
| S. No.   | Year                               | Amount per unit (Rs.) | GST | Unit price after GST (Rs.) | Qty. Nos. | Total Price Rs.)   |
| 1  | 1 <sup>st</sup> Year O & M Charges | 5,500.00              | 18% | 6,490.00                   | 9         | 58,410.00          |
| 2  | 2 <sup>nd</sup> Year O & M Charges | 6,000.00              | 18% | 7,080.00                   |           | 63,720.00          |
| 3  | 3 <sup>rd</sup> Year O & M Charges | 6,500.00              | 18% | 7,670.00                   |           | 69,030.00          |
| 4  | 4 <sup>th</sup> Year O & M Charges | 7,000.00              | 18% | 8,260.00                   |           | 74,340.00          |
| 5  | 5 <sup>th</sup> Year O & M Charges | 7,500.00              | 18% | 8,850.00                   |           | 79,650.00          |
| <b>Total:</b>  |                                    |                       |     |                            |           | <b>3,45,150.00</b> |

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ANNEXURE - 5**Contract Agreement***[The successful Bidder shall fill in this form in accordance with the instructions indicated]*

THIS CONTRACT AGREEMENT is made

the *[insert: number]* day of *[insert: month]*, *[insert: year]*.

## BETWEEN

(1) *[insert complete name of Purchaser]*, a *[insert description of type of legal entity, for example, an agency of the Ministry of .... of the Government of {insert name of Country of Purchaser}, or corporation incorporated under the laws of {insert name of Country of Purchaser}]* and having its principal place of business at *[insert address of Purchaser]* (hereinafter called "the Purchaser"), and

(2) *[insert name of Supplier]*, a corporation incorporated under the laws of *[insert: country of Supplier]* and having its principal place of business at *[insert: address of Supplier]* (hereinafter called "the Supplier").

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., *[insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of *[insert Contract Price in words and figures, expressed in the Contract currency(ies)]* (hereinafter called "the Contract Price").

## NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:
  - a. This Contract Agreement
  - b. All conditions of Bid Document
  - c. Technical Requirements (including Schedule of Requirements and Technical Specifications)
  - d. The Supplier's Bid and original Price Schedules
  - e. The Purchaser's Notification of Award
  - f. *[Add here any other document(s)]*
3. This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
4. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
5. The Purchaser hereby covenants to pay the Supplier in consideration of the

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provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*  
in the capacity of *[ insert title or other appropriate designation ]*  
in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*  
in the capacity of *[ insert title or other appropriate designation ]*  
in the presence of *[ insert identification of official witness]*

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**ANNEXURE - 6****Performance Security**

*[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]*

Date: *[insert date (as day, month, and year) of Bid Submission]*  
IFB No. and title: *[insert no. and title of bidding process]*

Bank's Branch or Office: *[insert complete name of Guarantor]*

**Beneficiary:** *[insert complete name of Purchaser]*

**PERFORMANCE GUARANTEE No.:** *[insert Performance Guarantee number]*

We have been informed that *[insert complete name of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert day and month]*, *[insert year]* with you, for the supply of *[description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a Performance Guarantee is required.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert amount(s) in figures and words]* upon receipt by us of your first demand in writing declaring the Supplier to be in default under the Contract, without cavil or argument, or your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This Guarantee shall expire no later than the *[insert number]* day of *[insert month]* *[insert year]*, and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is governed by the provisions of Indian Contract Act

*[signatures of authorized representatives of the bank and the Supplier]*



ANDHRA PRADESH POLLUTION CONTROL BOARD  
 Of VDR (Vijayawada Division), A.P.IC Colony Road,  
 Gurusank Colony, Autonagar, Vijayawada- 520007  
 Phone. No 0866-2463200, Website: <https://pcb.ap.gov.in/>



PROCEEDINGS OF THE MEMBER SECRETARY, APPCB

Procd.No. 126/APPCB/HO/ECS/KKD/2023 - 253

Dated: 19.06.2023

Sub: APPCB - M/s. Oil & Natural Gas Corporation Ltd., (ONGC) - Hon'ble NGT order dated. 02.08.2022 in O.A NO. 175 of 2020 - Utilization of Environmental Compensation fund - Release of Payment - Sanction Proceedings - Issued - Reg.

Ref: 1. Hon'ble NGT order dated. 02.08.2022 in O.A. No. 175 of 2020.  
 2. ONGC letter dated. 14.09.2022 on payment of EC.  
 3. District Collector, Dr. B.R. Ambedkar Konaseema District, Amalapuram letter No. NGT O.A No. 175/2020/EC dated. 06.2023.

20.06.2023  
 DESPATCH  
 VLS

\*\*\*

**ORDER:**

The Collector and District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram vide letter dated. 06.2023 informed that an expert committee was constituted for preparation of action plan for utilization of environmental compensation paid by M/s. ONGC in accordance to the Hon'ble NGT order dated. 02.08.2022 in O.A. No. 175 of 2020. Further informed that the committee in the meeting held on 02.06.2023 has recommended the proposal submitted by the Superintending Engineer, Irrigation circle, Dowlaiswaram for utilization of EC funds for earth work excavation of Rangarajucodu medium drain from KM 0.00 to KM 6.20 in GC delta. Wherein, it was reported that the above proposal will lead to the following benefits -

1. Prevent the Inundation of low lying Irrigation land due to free flow of flood water into sea through de-silted drain.
2. Increases the productivity of Agriculture and Horticulture in the area.
3. Prevents the pollution of drinking water sources and thereby decreases water borne diseases in the area.
4. Reduces inundation of villages during the time of Godavari floods.

After detailed examination, sanction is hereby accorded to release an amount of Rs. 94,60,000/- (Rupees Ninety-Four Lakhs and Sixty Thousand only) including GST and other applicable taxes in favor of the Collector & District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram towards utilization of EC funds paid by M/s. ONGC, for earth work excavation of Rangarajucodu medium drain from KM 0.00 to KM 6.20 in GC delta to achieve the benefits proposed above.

The Chief Accounts officer is hereby advised to initially make 50% payment of the above sanctioned amount i.e., Rs. 47,30,000/- (Rupees Forty-Seven Lakhs and Thirty Thousand only) including GST and other taxes through cheque / DD

O/C

drawn in favor of the Collector and District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram immediately as 1<sup>st</sup> installment. The above expenditure shall be met from head of EC funds. The balance amount is to be released upon receipt of the utilization for the 1<sup>st</sup> installment amount released.

  
MEMBER SECRETARY

To  
The Chief Accounts Officer,  
APPCB, Head Office,  
Vijayawada.



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Copy to the Collector and District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram for information.

Copy to the JCEE, ZO, APPCB, Visakhapatnam for information.

Copy to the EE, RO, APPCB, Kakinada for information.

|   |  |   |
|---|--|---|
|  | <p align="center"><b>ANDHRA PRADESH POLLUTION CONTROL BOARD</b><br/>         Dr. YSR Paryavaran Bhavan, APIIC Colony Road,<br/>         Gurunanak Colony, Autonagar, Vijayawada- 520007<br/>         Phone. No.0866-2463200, Website : <a href="https://pcb.ap.gov.in/">https://pcb.ap.gov.in/</a></p> |  |
|---|--|---|

**PROCEEDINGS OF THE MEMBER SECRETARY, APPCB**  
**PRESENT : SRI. B. SREEDHAR, IAS**

**Procd.No. 126/APPCB/HO/ECS/KKD/2023 -**

**Dated: 01/08/2023.**

Sub.: APPCB – HO – ECS - M/s. Oil & Natural Gas Corporation Ltd., (ONGC) – Hon'ble NGT order dated. 02.08.2022 in O.A NO. 175 of 2020 – Utilization of Environmental Compensation fund – Release of Payment – Sanction Proceedings – Issued - Reg.

- Ref.: 1. Hon'ble NGT order dated. 02.08.2022 in O.A. No. 175 of 2020.  
 2. ONGC letter dated. 14.09.2022 on payment of EC.  
 3. District Collector, Dr. B.R. Ambedkar Konaseema District, Amalapuram letter No. NGT O.A No. 175/2020/EC dt. .06.2023.  
 4. APPCB Procds. No. 126/APPCB/HO/ECS/KKD/2023 – 253, Dt. 19.06.2023  
 5. District Collector, Dr. B.R. Ambedkar Konaseema District, Amalapuram letter No. NGT O.A No. 175/2020/EC dt. .07.2023.

\*\*\*

**ORDER:**

The Collector and District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram vide letter dated. 06.2023 (ref 3) informed that an Expert committee was constituted on 17.01.2023 for preparation of action plan to utilize the environmental compensation paid by M/s. ONGC in accordance to the Hon'ble NGT order dated. 02.08.2022 in O.A. No. 175 of 2020. Further, informed that the committee in the meeting held on 01.02.2023 has recommended 6 No. of proposals for consideration and sanction of funds for utilization of Environmental Compensation amount paid by M/s. ONGC.

Vide ref. 4<sup>th</sup> cited, the Board has sanctioned an amount of Rs. 94.60 Lakhs in favour of the District Collector, Dr. B.R. Ambedkar Konaseema District, Amalapuram towards utilization of EC funds paid by M/s. ONGC, for earth works excavation of Rangarajucodu Medium Drain from KM 0.00 to KM 6.20 in GC Delta and 50% amount was released towards 1<sup>st</sup> installment for execution of the above.

Vide letter dated. July, 2023 (ref 5), the Collector and District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram informed that another proposal was received from District RWS Engineering Office, Amalapuram for Construction of OHSR at Indiramma Colony of Gudimula GP of Sakhinetipalli Mandal with an estimated cost of Rs 39.50 Lakhs and the same was recommended by the Expert Committee during the meeting held on 04.07.2023 for utilization of EC funds of M/s. ONGC at Dr. B.R. Ambedkar Konaseema District. Further, the Collector and District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram recommended for sanction of EC funds paid by M/s. ONGC, for taking up the following projects –

| S.No. | Details of the proposal | Estimated project cost |
|-------|-------------------------|------------------------|
|-------|-------------------------|------------------------|

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|              |   |                     |
|--------------|---|---------------------|
| 1.           | Construction of OHSR at Rudravari Meraka, Chintalapalli Village, Razole Mandal, Dr. Br. Ambedkar Konaseema District   | Rs.47.00 Lakhs      |
| 2.           | Construction of OHSR at Indiramma Colony of Gudimula GP of Sakhinetipalli Mandal, Dr. Br. Ambedkar Konaseema District | Rs 39.50 Lakhs      |
| 3.           | Establishment of 4 bedded dialysis centre at CHC, Razole, Dr. Br Ambedkar Konaseema District                          | Rs.65.00 Lakhs.     |
| <b>Total</b> |   | <b>151.50 Lakhs</b> |

After detailed examination, sanction is hereby accorded to release an amount of Rs. 151.50 Lakhs (Rupees One Crore Fifty One Lakhs and Fifty Thousand only) including GST and other applicable taxes in favor of the Collector & District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram towards utilization of EC funds paid by M/s. ONGC, towards construction of (1) OHSR at Rudravari Meraka, Chintalapalli Village, Razole Mandal with an estimated cost of Rs. 47.0 Lakhs; (2) OHSR at Indiramma Colony of Gudimula GP of Sakhinetipalli Mandal with an estimated cost of Rs. 39.50 Lakhs and (3) Establishment of 4 bedded dialysis centre at CHC, Razole with an estimated cost of Rs. 65.0 Lakhs at Dr. Br Ambedkar Konaseema District. Initially 50% of the sanctioned amount will be released as 1st installment and the balance amount will be released upon receipt of the utilization certificate for the 1<sup>st</sup> installment amount released.

**B Sreedhar las**  
**MEMBER SECRETARY**

To  
The Collector and District Magistrate,  
Dr. B.R. Ambedkar Konaseema District,  
Amalapuram

Copy to the Chief Accounts officer, APPCB, Head Office for information.  
Copy to the JCEE, ZO, APPCB, Visakhapatnam for information.  
Copy to the EE, RO, APPCB, Kakinada for information.

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**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
Dr. YSR Paryavaran Bhavan, APIIC Colony Road,  
Gurunanak Colony, Autonagar, Vijayawada- 520007  
Phone. No.0866-2463200, Website: <https://pcb.ap.gov.in/>



**PROCEEDINGS OF THE MEMBER SECRETARY, APPCB**  
**PRESENT : SRI. B. SREEDHAR, IAS**

**Procd.No. 126/APPCB/HO/ECS/KKD/2024 -**

**Date:12/08/2024.**

**Sub.:**APPCB – HO – ECS - M/s. Oil & Natural Gas Corporation Ltd., (ONGC) – Hon'ble NGT order dated. 02.08.2022 in O.A NO. 175 of 2020 – Utilization of Environmental Compensation fund – Release of Payment – Sanction Proceedings – Issued - Reg.

**Ref.:**

1. Hon'ble NGT order dated. 02.08.2022 in O.A. No. 175 of 2020.
2. ONGC letter dated. 14.09.2022 on payment of EC.
3. District Collector, Dr. B.R. Ambedkar Konaseema District, Amalapuram letter No. NGT O.A No. 175/2020/EC dt. .06.2023.
4. APPCB Procds. No. 126/APPCB/HO/ECS/KKD/2023 – 253, Dt. 19.06.2023
5. District Collector, Dr. B.R. Ambedkar Konaseema District, Amalapuram letter No. NGT O.A No. 175/2020/EC dt. .07.2023.
6. Procd.No. 126/APPCB/HO/ECS/KKD/2023 - Dated: 01/08/2023.
7. District Collector, Dr. B.R. Ambedkar Konaseema District, Amalapuram letter No. NGT O.A No. 175/2020/EC dt. 25.06.2024.

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**ORDER:**

The Collector and District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram vide letter dated.25.06.2024 (ref 7) informed that proposals were received by the Collectorate, Dr. B.R. Ambedkar Konaseema District for utilization of EC funds for establishments of various infrastructure projects and construction of 5 No. of OHSR tanks at Sakhinetipalli Lanka, Srungavarappadu, Merakapalem, Dindi and Mallipudi of Amalapuram Division, Dr. B. R. Ambedkar Konaseema District.

Further reported that, the Expert Committee constituted by the District Collector, Dr. B.R. Ambedkar Konaseema District for the utilization of the EC funds [paid by M/s. ONGC in NGT DA No. 175/2020/EC dated 17.01.2023] reviewed the above proposals in the committee meeting held on 21.06.2024 and recommended for sanction and release an amount of Rs. 1,50,10,000/- for construction Proposal of the OHSR tanks at Sakhinetipalli Lanka, Srungavarappadu, Merakapalem, Dindi and Mallipudi of Amalapuram Division, Dr. B. R. Ambedkar Konaseema District.

The Committee opined that the safe drinking water is basic need and hence recommended to accept construction of following 5 OHSR proposals –

| S.No. | Details of the proposal   | Estimated project cost |
|-------|---|------------------------|
| 1.    | Construction of OHSR with 40,000 liters capacity at Merakapalem Village, Razole Mandal, Amalapuram Division               | Rs. 34.00 Lakhs        |
| 2.    | Construction of OHSR with 40,000 liters capacity at Sakhinetipalli Lanka GP of Sakhinetipalli Mandal, Amalapuram Division | Rs. 32.00 Lakhs        |
| 3.    | Construction of OHSR with 20,000 liters capacity at   | Rs. 21.00 Lakhs        |

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|    |  |                     |
|----|--|---------------------|
|    | Kesavadasupalem Grama panchayath Sakhinetipalli Mandal, Amalapuram Division  |                     |
| 4. | Construction of OHSR with 40,000 liters capacity at Dindi Grama panchayath, Malkipuram Mandal, Amalapuram Division               | Rs. 43.10 Lakhs     |
| 5. | Construction of OHSR with 60,000 liters capacity at Srungavarappadu grama panchayath, Sakhinetipalli Mandal, Amalapuram Division | Rs. 20.00 Lakhs     |
|    | <b>Total</b>   | <b>150.10 Lakhs</b> |

After detailed examination, sanction is hereby accorded to release an amount of Rs. 150.10 Lakhs (Rupees One Crore Fifty Lakhs and Ten Thousand only) including GST and other applicable taxes in favor of the Collector & District Magistrate, Dr. B.R. Ambedkar Konaseema District, Amalapuram for utilization of EC funds paid by M/s. ONGC, towards construction of 1) Construction of OHSR with 40,000 liters capacity at Merakapalem Village, Razole Mandal, Amalapuram Division with an estimated cost of Rs.34,00,000/-; 2) Construction of OHSR with 40,000 liters capacity at Sakhinetipalli Lanka GP of Sakhinetipalli Mandal, Amalapuram Division with an estimated cost of Rs.32,00,000/-; 3) Construction of OHSR with 20,000 liters capacity at Kesavadasupalem Grama panchayath Sakhinetipalli Mandal, Amalapuram Division with an estimated cost of Rs.21,00,000/-; 4) Construction of OHSR with 40,000 liters capacity at Dindi Grama panchayath, Malkipuram Mandal, Amalapuram Division with an estimated cost of Rs.43,10,000/- and 5) Construction of OHSR with 60,000 liters capacity at Srungavarappadu grama panchayath, Sakhinetipalli Mandal, Amalapuram Division with an estimated cost of Rs.20,00,000/-. **Initially 50% of the sanctioned amount will be released as 1st installment and the balance amount will be released upon receipt of the utilization certificate for the 1<sup>st</sup> installment amount released.**

**B Sreedhar las**  
**MEMBER SECRETARY**

**To**  
**The Collector and District Magistrate,**  
**Dr. B.R. Ambedkar Konaseema District,**  
**Amalapuram.**

**Copy to:**

1. The Chief Accounts officer, APPCB, Head Office for information.
2. The JCEE, ZO, APPCB, Visakhapatnam for information.
3. The EE, RO, APPCB, Kakinada for information. He is informed to obtain utilization certificate for the aforesaid amount from the District Collector, Dr. B. R. Ambedkar Konaseema District and furnish to Head office at an early date.

## ANDHRA PRADESH POLLUTION CONTROL BOARD

D. No. 33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Centre,  
Chalamalavari Street, Kasturibaipet, Vijayawada – 520 010  
Phone. No. 0866-2463200, Website: www.pcb.ap.nic.in

NOA No. APPCB-12023/2/2021-SS-CL-APPCB - 569 09/11/2022

**// Notification of Award //**

To  
The Director,  
CSIR-National Environmental Engineering Research Institute (NEERI),  
Nehru Marg, Vasant Nagar,  
Nagpur-440020,  
Maharashtra.

Sir,

**Kind attention:** Dr. Shaik Basha, Scientist & Head, CSIR-NEERI, Hyderabad

|              |  |
|--------------|--|
| <b>Sub :</b> | APPCB – LAB – Notification of Award for conducting "Comprehensive Scientific Study" to save Kolleru Wildlife Sanctuary and Wetland of Kolleru from pollution as per the directions of Hon'ble NGT, Chennai - Issued to CSIR - National Environmental Engineering Research Institute (NEERI) - Reg.   |
| <b>Ref:</b>  | <ol style="list-style-type: none"> <li>1. Hon'ble NGT, Chennai Order, dated 03.01.2022 in O. A. No.259 of 2020 and 02 of 2021.</li> <li>2. EFS &amp; T Dept., Govt. of AP Lr. No. EFS01-ENV/29/2020-SEC-I, dated 08.03.2022.</li> <li>3. APPCB Lr. No. APPCB-12023/2/2021-SS-CL-APPCB/54, dated 25.04.2022.</li> <li>4. CSIR-NEERI Lr. No. HZC/APPCB-KL/2022/372, dated 21.06.2022.</li> </ol> |

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**1. Introduction:**

It is to inform that Hon'ble NGT, Chennai in its Order, dated 03.01.2022 in O.A. Nos. 259 of 2020 and 02 of 2021, vide reference 1<sup>st</sup> cited, directed the Government of Andhra Pradesh to conduct Comprehensive Scientific Study in order to protect the water body and remove the encroachments and hand to over the entire area to the Forest Department, so as to maintain the lake area in the wildlife sanctuary in an effective manner and to make the lake pollution free.

The EFS & T Department, Government of Andhra Pradesh has requested Andhra Pradesh Pollution Control Board (APPCB) to entrust the above study to CSIR-NEERI, Nagpur or any other reputed institute, vide reference 2<sup>nd</sup> cited.

Accordingly, APPCB has requested CSIR-NEERI, Nagpur to submit the proposals to

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APPCB for conducting Comprehensive Scientific Study to save the kolleru lake, vide reference 3<sup>rd</sup> cited.

In response, CSIR-NEERI, Hyderabad Zonal Centre has submitted the proposals for carrying out Comprehensive Scientific Study to save Kolleru Wildlife Sanctuary and Wetland, vide reference 4<sup>th</sup> cited.

## **2. Award of work order:**

After careful examination of the proposals submitted by CSIR-NEERI, vide reference 4th cited, APPCB is herewith issuing the Notification of Award to CSIR-NEERI for conducting "Comprehensive Scientific Study" to save Kolleru Wildlife Sanctuary and Wetland" with the following objectives, scope & methodology, deliverables and terms & conditions:

### **3. Title of the study:**

"Comprehensive Scientific Study" to save Kolleru Wildlife Sanctuary and Wetland of Kolleru from encroachments and pollution.

### **4) Objectives:**

- 4.1) To delineate the Kolleru wildlife sanctuary and demarcate the kolleru lake on Survey of India toposheet.
- 4.2) To identify the notified and unnotified drains entering the Kolleru lake.
- 4.3) To identify the various contaminants entering the lake through drains.
- 4.4) To assess the biodiversity status of the Kolleru wildlife sanctuary and Kolleru lake.
- 4.5) To assess the environmental impact and delineate the measures to save the kolleru lake and wildlife sanctuary catchment area.
- 4.6) To make an assessment for suggesting safe distances for establishment of Red, Orange, Green and White category industries from the +5 contour of Kolleru lake.

### **5) Scope of Work and Methodology:**

- 5.1) Demarcation of the Wildlife Sanctuary and Kolleru lake along with the notified and un-notified drains and outlet to the lake on the Survey of India toposheet on 1:50,000 scale.
- 5.2) Reconnaissance survey of the Sanctuary, lake and surrounding area shall be carried out to understand the status of the lake and the surrounding land use pattern.
- 5.3) Collection and analysis of secondary data from all sources like APPCB,

Irrigation & Forest department, Fisheries Department, etc.

5.4) Preliminary site assessment includes background data collection, site reconnaissance and drainage survey.

5.5) Inventory of potential contaminant sources of all the drains shall be prepared by carrying out preliminary investigation of the sanctuary and lake, topographic survey.

5.6) Collection of water & sediment samples in two seasons, post and pre monsoon seasons from (a) all the notified & other drains joining the lake, (b) existing lake (in adequate numbers) and (c) outlet of the lake and analysing for physico-chemical parameters like, pH, BOD, COD, DO, TOC, TDS, Phosphates, Nitrates, microbiological parameters like, E-Coli, Total Coliform, Fecal Coliform & Fecal Streptococci, organo-chloro & organo-phosphorus pesticide residues, antibiotic residues and metals such as As, Be, Cd, Cr, Pb, Co, Cu, Fe, Hg, Mn, Mo, Ni, Sb, Sc, Se, Ti, V and Zn.

5.7) Quantification of the drains entering the lake.

5.8) The water samples shall also be collected for analysis of phytoplankton and zooplankton diversity.

5.9) The sediment samples to be collected and assessed for the benthic fauna.

5.10) Collection of soil samples at representative locations and analysis for physico-chemical parameters like pH, EC, texture, bulk density, particle density, porosity, water holding capacity, soluble cations & anions, SAR, organic carbon, available N, P, K and heavy metals.

5.11) The whole study shall be carried out for the +5 contour of the Sanctuary and lake.

5.12) To delineate the environmental measures to be identified based on the contamination assessment, if any.

5.13) To study the baseline environmental data and examine the feasibility of permitting industries viz., White / Green / Orange / Red as per CPCB classification, 2016 within 10 km radius from +5 contour of Kolleru lake duly identifying the environmental impacts.

5.14) To envisage environmental changes in biodiversity in and around the lake (+5 contour) level.

5.15) Assess the biodiversity (flora and fauna) and attributes of study area around the proposed site.

5.16) Literature review and collation of secondary data relevant to the study area.

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5.17) Primary data collection and establishment of baseline environmental status of the study area.

5.18) The baseline information of physical information of the lake and visual inspection of the flora and fauna in the project area.

**6) Contract value of the study:**

Total contract value of the study shall not exceed Rs. 70,20,000/- (rupees seventy lakhs and twenty thousand only). GST will be extra as applicable at the time of execution of the study.

**7. Period of the study:**

The study shall be completed in twelve (12) months period including submission of final report to APPCB as detailed below:

7.1) The post monsoon season water, sediment, soil, etc. quality monitoring shall be carried out during the year, 2022.

7.2) The pre monsoon season water, sediment, soil, etc. quality monitoring shall be carried out during the year, 2023.

7.3) The draft report of the study shall be submitted to APPCB by the end of September, 2023 and the CSIR-NEERI team shall make a power point presentation to the expert committee consisting of members of concerned stakeholders.

7.4) The CSIR-NEERI shall incorporate the suggestions and recommendations made by the expert committee in the report. The final report completed in all respects shall be submitted to APPCB not later than 31.12.2023.

**8) Payment terms:**

8.1) 40% of the contract value will be released towards advance to start the work.

8.2) 25% of the contract value will be released to the institute after successful completion of first phase water quality monitoring during post monsoon season, 2022.

8.3) 25% of the contract value will be released to the institute after successful completion of second and final phase water quality monitoring during pre monsoon season, 2023.

8.4) Balance 10 % of the contract value will be released after acceptance of final report.

**9. Submission of final report:**

The final report complete in all respects shall be submitted not later than 31.12.2023.

**10) Deliverables:**

10.1) Assessment of the status and measures to save Kolleru wild life sanctuary and Kolleru Wetland from pollution.

10.2) Recommendations on the safe distances for establishment of Red, Orange, Green and White category industries from the +5 contour of Kolleru lake duly identifying the environmental impacts.

**11) General terms & conditions:**

11.1) Retain such amounts from the payment due and payable by APPCB to the Institute as may be required to offset any losses caused to the Board as a result of such event of default and the Institute shall compensate the Board for any such loss, damages or other costs, incurred by the Board in this regard. Nothing herein shall affect the continued obligation of the Institute / other members of its team to perform all their obligations and responsibilities under this contract in an identical manner as were being performed before the occurrence of the default.

11.2) APPCB reserves the right to recover such costs / losses and other amounts from the Institute that may have resulted from such default and pursue such other rights and / or remedies that may be available to the Board under law.

11.3) The Member Secretary, APPCB, Vijayawada reserves himself the right to cancel the contract at any stage, if the Institute was found noncompliance of the terms & conditions and objectives of the entrusted study.

11.4) APPCB shall reserve the right to inspect and verify the progress of the study at any time during the project tenure with prior information. Institute shall provide the information regarding the progress of the project, accordingly.

11.5) Physico-chemical analysis of all the samples pertaining to the study shall be carried out in a NABL accredited and having Environmental Laboratory recognition under the Environment (Protection) Act, 1986. The facilities shall be made available for the verification of APPCB, if required. Letter of authorizations / agreements / MoU / acceptance, etc. entered between CSIR-NEERI and Laboratories concerned shall be provided to APPCB.

11.6) The CSIR-NEERI shall have his own equipment / instruments for conducting the said studies. Transportation of required equipment / instruments for carrying out monitoring, safety during monitoring & storage, rents for buildings, electricity charges, installation expenses, including accommodation charges incurred shall be borne by the Institute. APPCB will not be providing any assistance or help to the Institute in supplying of equipment or laboratory services or manpower or in any other form.

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**12) Force Majeure:**

**12.1)** The Institute shall not be liable for any penalization or termination of the contract for default, if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

**12.2)** For purposes of this clause "Force Majeure" means an event beyond the control of the Institute and not involving the Institute's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the State Government in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

**12.3)** If a Force Majeure situation arises, the Institute shall promptly notify the Board in writing of such condition and the cause thereof. Unless otherwise directed by APPCB in writing, the Institute shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

**13) Disputes & Jurisdiction:**

This contract is between APPCB and the CSIR-NEERI and shall be governed by the Laws of India and under this contract shall be taken by the parties only in Andhra Pradesh to competent jurisdiction.

Kindly acknowledge the receipt of the Notification of Award and acceptance of the same for conducting "Comprehensive Scientific Study" to save Kolleru Wildlife Sanctuary and Wetland of Kolleru from pollution as per the terms & conditions stipulated therein, may please be communicated to APPCB within seven (7) days from the date of receipt of the same.

Yours sincerely,

**Vijay Kumar Gsrkr Ias**  
**Secretary To Government**

**ANDHRA PRADESH POLLUTION CONTROL BOARD**

Dr. YSR Paryavaran Bhavan, APIIC Colony Road,  
Gurunanak Colony, Autonagar, Vijayawada- 520007  
Phone. No.0866-2463200, Website : <https://pcb.ap.gov.in/>

**Lr. No.703/APPCB/HO/ECS/VSP/2023****Dt. 15/08/2023**

**To**  
**The Registrar,**  
**Andhra University,**  
**Visakhapatnam.**

Sub: APPCB – HO – ECS – Study to be carried out within 1km radius from M/s.Brandix Intimate India Pvt. Limited located in the premises of M/s.Brandix Apparel India Private Limited, SEZ, Actuthapuram, Anakapalli District – Work Order – Issued – Reg.

Ref: 1. ZO, Visakhapatnam Lr. 8518/ZO-VSP/Tech/2022 dt. 24.12.2022.  
2. Acceptance and nomination of Members by Andhra University vide letter dt.09.08.2023.  
3. Financial quotation dt.11.08.2023 submitted by Andhra University, Visakhapatnam.

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The Board is in receipt of your proposal sent vide ref 3<sup>rd</sup> cited to undertake the study to be carried out within 1km radius from M/s.Brandix Intimate India Pvt. Limited located in the premises of M/s.Brandix Apparel India Private Limited, SEZ, Actuthapuram, Anakapalli District.

The Board is pleased to inform that the above proposal has been accepted and hereby awarded the work order in favor of the Registrar, Andhra University, Visakhapatnam with the following terms and conditions.

**The Objectives of the study are:**

1. Ascertaining the cause of the incident.
2. Suggestion of measures to prevent such incident.
3. Identifying & marking of areas prone to such incident.
4. Identifying & marking of vulnerable industries.
5. Identification of marker pollutants in case of mishap.

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6. Future crisis management measures.

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**The scope of the study is as follows:**

1. The collection & analysis of the data related to the incidents took place in M/s.Brandix Intimate India Pvt. Ltd., (Formerly Seeds Intimate Apparel India Pvt. Ltd.,) in M/s Brandix Apparel India Pvt. Limited.
2. Identifying the probable sources (*both internal & external*) for the incident.
3. To take cognizance of earlier studies and report for establishing correlation with the present study if any.
4. Assessing the potential source that caused the incident along with the supporting scientific analysis consisting of the details of air pollutant emissions and their probable dispersion.
5. The measures to be taken to prevent such incident.
6. Study of the activities that may cause such type of incident in the area.
7. Mapping the areas prone to such incident.
8. Assessing the vulnerability of the each of the industries in the area and identifying the vulnerable industries & marking them as per their vulnerabilities.
9. Identification of possible pollutants that may get emitted from each of the activity (*industry in the area*).
10. Marking the pollutants that may have the potential to cause such incident or mishap.
11. The management measure that need to be taken during any such origin in the area.
12. Recommendations to prevent the occurrence of such incidents in future.

**Study Cost:** The total cost of the study is Rs.26,33,760/- (*Rupees twenty six lakhs thirty three thousand seven hundred and sixty only*) including GST and other taxes as applicable.

**Payment Schedule:**

- a. 1<sup>st</sup> installment - 50% of the study cost along with the work order.
- b. 2<sup>nd</sup> & final installment - On submission of the final study report.

**Other Terms & Conditions:**

- a. In view of the time schedule fixed by the Hon'ble Court, the draft study report shall be submitted to APPCB by 08.09.2023 for review by the Joint Committee constituted by Hon'ble NGT on the incidents.

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- b. The final report (10 hard copies & one soft copy) shall be submitted to APPCB by 15.09.2023 duly including the inputs of the Joint Committee to enable submission of the report by Joint Committee to Hon'ble Court / Tribunal within the time stipulated.

Yours faithfully,

B Sreedhar Ias  
**MEMBER SECRETARY**

- Copy to the Registrar, Andhra University, Visakhapatnam for information.
- Copy to the Director, Centre for Industrial and Scientific Consultancy (CISC), Andhra University, Visakhapatnam for information.
- Copy to Prof. P. Suneetha, Department of Meteorology and Oceanography, Andhra University, Visakhapatnam for information.
- Copy to Prof. N. Chittibabu, Department of Chemical Engineering, Andhra University, Visakhapatnam for information.
- Copy to PA to Chairman, APPCB, Vijayawada for information.
- Copy to PA to Member Secretary, APPCB, Vijayawada for information.
- Copy to the JCEE, ECS, APPCB, Vijayawada for information.
- Copy to the JCEE, Zonal Office, Visakhapatnam for information.
- Copy to the EE, RO, APPCB, Visakhapatnam for information.

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**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
**Dr. YSR Paryavaran Bhavan, APIIC Colony Road,**  
**Gurunanak Colony, Autonagar, Vijayawada- 520007**  
**Phone.No.0866-2463200,**  
**Website: <https://pcb.ap.gov.in/>**



Lr. No.703/APPCB/ZO-VSP/VSP/2023

Dt. 05.10.2023

**To**  
**The Registrar,**  
**Andhra University,**  
**Visakhapatnam.**

Sir,

Sub: APPCB – HO – ECS – Study to be carried out within 1km radius from M/s.Brandix Intimate India Pvt. Limited located in the premises of M/s.Brandix Apparel India Private Limited, SEZ, Actuthapuram, Anakapalli District – Additional scope of work - Work Order – Issued – Reg.

- Ref: 1. ZO, Visakhapatnam Lr.8518/ZO-VSP/Tech/2022 dt.24.12.2022.  
 2. Acceptance and nomination of Members by Andhra University vide letter dt.09.08.2023.  
 3. Financial quotation dt.11.08.2023 submitted by Andhra University, Visakhapatnam.  
 4. T.O.Lr.No.703/APPCB/HO/ECS/VSP/2023, dt.15.08.2023.  
 5. Letter from the Professors, Andhra University dt.29.09.2023.

\* \* \* \* \*

In continuation to the work order issued (Ref. 4<sup>th</sup> cited), it is requested to cover the study to identify and assess the Environmental damage due to the incidents happened on 03.06.2022 and 02.08.2022 in M/s.Brandix Intimate India Pvt. Limited located in the premises of M/s.Brandix Apparel India Private Limited, SEZ, Actuthapuram, Anakapalli District. The study may please be completed and arrange the draft report preferably within a week to take further action in the matter.

The other terms and conditions of the work order issued vide reference 4<sup>th</sup> cited remains same. Please acknowledge the receipt of this by return mail.

Yours faithfully,

**MEMBER SECRETARY**

- Copy to the Director, Centre for Industrial and Scientific Consultancy (CISC), Andhra

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- University, Visakhapatnam for information.
- Copy to Prof. P. Suneetha, Department of Meteorology and Oceanography, Andhra University, Visakhapatnam for information.
- Copy to Prof. N. Chittibabu, Department of Chemical Engineering, Andhra University, Visakhapatnam for information.
- Copy to PA to Chairman, APPCB, Vijayawada for information.
- Copy to PA to Member Secretary, APPCB, Vijayawada for information.
- Copy to the JCEE, ECS, APPCB, Vijayawada for information.
- Copy to the JCEE, Zonal Office, Visakhapatnam for information.
- Copy to the EE, RO, APPCB, Visakhapatnam for information.

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**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
D.No.33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Center,  
Chalamalavari Street, Kasturibaipet, Vijayawada – 520010  
Phone: 0866-2463200, Website: <https://pcb.ap.gov.in>

Procds.No.383/APPCB/HO/UH-II/TF/IITM/2022 - 582

04/11/2022

**PROCEEDING OF THE MEMBER SECRETARY, APPCB, VIJAYAWADA**  
**PRESENT SRI GSrKr. VIJAY KUMAR. IAS.,**  
**MEMBER SECRETARY**

**Sub: APPCB – HO – UH-II – Study report to conclusively establish the source of ground water contamination in the wells surrounding the tailing pond of UCIL, Thummalapalli, YSR District – Balance payment of Rs.30.70 Lakhs – Sanction proceedings – Issued - Reg.**

- Ref: 1. Lr.No.383/APPCB/HO/UH-II/TF/IITM/2019-1405, dt. 16.11.2019.  
2. Procds.No.383/APPCB/HO/UH-II/TF/IITM/2019-1414, dt. 20.11.2019.  
3. DD No.373661 dt.23.11.2019 for Rs.27,01,600/-.  
4. Final report submitted by IIT Madras in April 2021.  
5. Invoice No.C21228930C1734, dt.08.09.2021 for Rs.24.56 Lakhs.  
6. Invoice No.C21228930C1735, dt.08.09.2021 for Rs.6.14 Lakhs.  
7. Hard copies submitted by IITM vide letter 17.10.2022

10.11.2022  
**DESPATCH**  
VAM

o/c

The A.P. Pollution Control Board vide reference 1<sup>st</sup> cited, issued work order to Indian Institute of Technology, Madras for study to conclusively establish the source of ground water contamination in the wells surrounding the tailing pond of UCIL, Thummalapalli, YSR District. The total project cost is Rs.61.40 Lakhs (including GST).

The Board vide reference 2<sup>nd</sup> cited, issued proceedings for sanction of advance amount of Rs.30.70 Lakhs for the above study (50% of project cost) and paid an amount of Rs.27,01,600/- (50% of total amount minus GST) by DD No.373661 dt.23.11.2019 towards 1<sup>st</sup> instalment.

The IIT Madras submitted the final report vide reference 3<sup>rd</sup> cited and furnished invoices vide reference 4<sup>th</sup> & 5<sup>th</sup> cited towards payment of 2<sup>nd</sup> (40% of project cost) & 3<sup>rd</sup> (10% of project cost) instalments.

Sanction is hereby accorded for balance payment of Rs.30.70 Lakhs (Rupees Thirty Lakhs and Seventy thousand only) to IIT Madras towards 2<sup>nd</sup> & 3<sup>rd</sup> instalments of the project cost. The Chief Accounts Officer is directed to release Rs.30.70 Lakhs (Rupees Thirty Lakhs and Seventy thousand only) to the Registrar, IIT Madras by way of DD / NEFT / RTGS at the Bank Account details given in the invoice immediately. The amount shall be met from the Head of Account "Environmental Compensation".

Vijay Kumar Gsrkr Ias  
MEMBER SECRETARY

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File No.APPCB-11023/31/2019-TEC-TF-APPCB-Part(1)

To  
The Chief Accounts Officer,  
A.P. Pollution Control Board,  
Board Office, Vijayawada.

**Copy to:**

Dr.Venkatraman Srinivasan, Assistant Professor, Dept., of Civil Engineering, Indian Institute  
of Technology Madras, Chennai for information.  
The JCEE, ZO, Kurnool  
The EE RO Kadapa

File No. APPCB-11023/21/2019-TEC-TF-APPCB-Part(1)



**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
 D.No.33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Center,  
 Chalamalavari Street, Kasturibaipet, Vijayawada - 520010  
 Phone: 0866-2463200, Website: <https://pcb.ap.gov.in>

Procds.No.383/APPCB/HO/UH-II/TF/SVIMS/2019 -570

12/10/2022

**PROCEEDING OF THE MEMBER SECRETARY, APPCB, VIJAYAWADA**

**PRESENT SRI G.SrKr. VIJAY KUMAR, IAS.,**  
**MEMBER SECRETARY**

**Sub:** APPCB – HO – UH-II – Epidemiological studies in the Villages nearby tailing pond of UCIL, Thummalapalli, YSR District – Balance payment of Rs. 5,45,560/- – Sanction proceedings – Issued - Reg. d/c

- Ref:**
1. Lr.No.383/APPCB/HO/UH-II/TF/SVIMS/2019-1502, dt. 28.11.2019.
  2. Procds.No.383/APPCB/HO/UH-II/TF/SVIMS/2019,dt. 03.12.2019.
  3. Final report submitted by SVIMS, Tirupati on 05.03.2021.
  4. Director-cum-Vice Chancellor, SVIMS, Tirupati Lr. d t.12.11.2021.
  5. Remarks of the ZO, Kurnool on 22.11.2021.

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The A.P. Pollution Control Board vide reference 1<sup>st</sup> cited, issued work order to SVIMS to carryout Epidemiological studies in the Villages nearby tailing pond of UCIL, Thummalapalli, YSR District. The total project cost is Rs.27,27,800/- (including GST).

The Board vide reference 2<sup>nd</sup> cited, issued proceedings for sanction of advance amount of Rs.21,82,240/- for the above study (80% of project cost) and paid an amount of Rs.19,20,370/- by DD No.373767 dated 13.12.2019 towards 1<sup>st</sup> installment duly deducting the GST.

The SVIMS, Tirupati submitted the final report vide reference 3<sup>rd</sup> cited and vide reference 4<sup>th</sup> cited requested for payment of balance amount without deducting GST stating that GST for the total project cost was already deducted as part of 1<sup>st</sup> installment.

Sanction is hereby accorded for balance payment of Rs. 5,45,560/- (Rupees Five Lakh Forty five thousand Five hundred and Sixty only) to the Director - cum- Vice Chancellor, SVIMS, Tirupati towards 2<sup>nd</sup> & 3<sup>rd</sup> installments of the project cost. The Chief Accounts Officer is directed to release Rs.5,45,560/- (Rupees Five Lakh Forty five thousand Five hundred and Sixty only) to the Director-cum-Vice Chancellor, SVIMS, Tirupati by way of

12/10/22  
**AESPATCH**

File No.APPCB-11023/31/2019-TEC-TF-APPCB-Part(1)

DD immediately. The amount shall be met from the Head of Account "Environmental Compensation".

Vijay Kumar Gerkr las  
Secretary To Government

**To**  
The Chief Accounts Officer,  
A.P. Pollution Control Board,  
Board Office, Vijayawada.

**Copy to:**

The Director-cum-Vice Chancellor, SVIMS, Tirupati for information.



ANDHRA PRADESH POLLUTION CONTROL BOARD  
Dr. YSR Paryavaran Bhavan, APIIC Colony Road,  
Gurunanak Colony, Autonagar, Vijayawada- 520007  
Phone. No.0866-2463200, Website : <https://pcb.ap.gov.in/>



PROCEEDINGS OF THE MEMBER SECRETARY, APPCB

Procd.No. 429/APPCB/HO/ECS/VJA/2023 - 322, Dated:20/07/2023

Sub.: APPCB – M/s. Sentini Bio Products Private Limited, Gandepalli Village, Kanchikacherla Mandal, NTR District – Project on assessing the impact of effluents from M/s. Sentini Bio Products Private Limited, Gandepalli Village, Kanchikacherla Mandal, NTR District on the surrounding crops and soil – Work order dt. 15.06.2023 - Release of Payment of 1st installment – Sanction Proceedings – Issued - Reg.

- 0.09.2023 Ref.:  
1. APPCB Lr. NO. 429/APPCB/HO/ECS/VJA/2023, dt. 15.06.2023  
2. ANGRAU, Guntur lr. No. 006808/APPCB/Res.I/2022, dtd. 06.07.2023.

**ORDER:**

The Board vide order dated. 15.06.2023 issued work order in favour of the Registrar, Acharya N. G. Ranga Agricultural University, LAM, Guntur District to conduct study on "assessing the impact of effluents from M/s. Sentini Bio Products Private Limited, Gandepalli Village, Kanchikacherla Mandal, NTR District on the surrounding crops and soil" with project cost of Rs. 12.05 Lakhs (Rupees Twelve Lakhs and Five Thousand only) and inclusive of all other taxes as applicable. As per the payment schedule mentioned in the work order, the first installment i.e., 50% of the project cost shall be released on acceptance of the work order; the 2nd installment – 30% upon receipt of the draft report for comments and suggestions of APPCB and the final installment – 20% upon submission of final report.

The Registrar, Acharya N. G. Ranga Agricultural University, LAM, Guntur District vide letter dated. 06.07.2023, forwarded the acceptance of the university to conduct study on "assessing the impact of effluents from M/s. Sentini Bio Products Private Limited, Gandepalli Village, Kanchikacherla Mandal, NTR District on the surrounding crops and soil" with project outlay of Rs. 12.05 Lakhs (Rupees Twelve Lakhs and Five Thousand only).

After detailed examination, Sanction is hereby accorded to release an amount of Rs. 6,02,500/- (Rupees Six Lakhs Two Thousand and Five Hundred only) inclusive all applicable taxes, in favor of the Comptroller, Acharya N.G Ranga Agricultural University, LAM, Guntur towards first installment i.e., 50% of the project cost of Rs. 12.05 Lakhs (Rupees Twelve Lakhs and Five Thousand only) to conduct study on "assessing the impact of effluents from M/s. Sentini Bio Products Private Limited, Gandepalli Village, Kanchikacherla Mandal, NTR District on the surrounding crops and soil".

Accordingly, the Chief Accounts officer is hereby advised to make payment of Rs. 6,02,500/- (Rupees Six Lakhs Two Thousand and Five Hundred only) and inclusive of all applicable

File No.492/APPCB/UH-II/TF/VJA/2008

taxes in favor of the Comptroller, Acharya N.G Ranga Agricultural University, LAM, Guntur immediately as 1st installment to conduct the study. The Bank account details to make the above payment are as follows –

|                              |   |
|------------------------------|---|
| Name of the Account Holder   | Comptroller, ANGRAU   |
| Telephone No./ Fax/Email     | 7673902147<br>Email ID: comptroller@angrau.ac.in            |
| Name of the Bank             | UNION BANK OF INDIA,<br>Guntur Main Branch, Guntur – 522001 |
| Complete Bank Account Number | 125510100071254   |
| IFSC Code                    | UBIN0801500   |
| MISR Code Bank               | 522026036   |

The above expenditure shall be incurred from "Environmental Compensation Fund"

**B Sreedhar Ias**

**MEMBER SECRETARY**

To  
The Chief Accounts Officer,  
APPCB, Head Office,  
Vijayawada.

Copy to the Registrar, Acharya N.G. Ranga Agricultural University, LAM, Guntur – 522034  
for information.

Copy to the JCEE, ZO, APPCB, Vijayawada for information.

Copy to the EE, RO, APPCB, Vijayawada for information.

Signed by B Sreedhar Ias

Date: 20-07-2023 12:32:04

Reason: Approved

# NANDYAL MUNICIPALITY

## DETAILED CUM ABSTRACT ESTIMATE



**Name of the work** : Providing of C&D plant for Processing and Recycling of Construction and Demolish Waste In Dumping Yard in Nandyal Municipality.

**Estimate Cost Rs.** : 45.00 Lakhs

**Mandal** : Nandyal

**District** : Nandyal

## NANDYAL MUNICIPALITY

Name of the Work: Providing of C&D plant for Processing and Recycling of Construction and Demolish Waste In Dumping Yard in Nandyal Municipality.

## DETAILED CUM ABSTRACT ESTIMATE

| Sl. No. | Description   | Nos. |   |     | L | B | D | Qty    | Rate   | Est. Amount |           | Lakhs |      |           |
|---------|---|------|---|-----|---|---|---|--------|--------|-------------|-----------|-------|------|-----------|
|         |   | 3    | 4 | 5   |   |   |   |        |        | 11          | 12        |       |      |           |
| 1       | 2   | 3    | 4 | 5   | 6 | 7 | 8 | 9      | 10     | 11          | 12        | 13    | 14   |           |
| 1       | 4ft x 12ft Vibrator screener - 4 decks<br>Body thickness - 8mm<br>Bottom beams structure - 8 inches x 4 inches<br>Schutes thickness - 4mm<br>Meshes - 10mm, 20mm<br>Platform with steps                       |      |   |     |   |   |   |        |        |             |           |       |      |           |
|         |   | 1    | x | 1   |   |   |   | 1.00   |        |             |           |       |      |           |
|         |   |      |   |     |   |   |   | Say    | 1.00   | Set         | 630000.00 | 1     | Set  | 630000.00 |
| 2       | Supply and erection of 9/16 Jaw crusher   |      |   |     |   |   |   |        |        |             |           |       |      |           |
|         |   | 1    | x | 1   |   |   |   | 1.00   |        |             |           |       |      |           |
|         |   |      |   |     |   |   |   | Say    | 1.00   | Set         | 345000.00 | 1     | Set  | 345000.00 |
| 3       | 2ft Conveyor 500mm belt<br>Top frame - 3 inches C channel<br>Legs - 3 x 1.5 inches C channel<br>Shaft size - 2 inches<br>Gear box<br>Rollars<br>Pillow block bearing - 211<br>30ft length                     |      |   |     |   |   |   |        |        |             |           |       |      |           |
|         |   | 1    | x | 3   |   |   |   | 3.00   |        |             |           |       |      |           |
|         |   |      |   |     |   |   |   | Say    | 3.00   | No's        | 300000.00 | 1     | Each | 900000.00 |
| 4       | 30 inches Conveyor 200mm belt<br>◆ Top frame - 3 inches C channel<br>◆ Legs - 3 x 1.5 inches C channel<br>◆ Shaft size - 2 inches<br>◆ Gear box<br>◆ Rollars<br>◆ Pillow block bearing - 211<br>◆ 30ft length |      |   |     |   |   |   |        |        |             |           |       |      |           |
|         |   | 1    | x | 1   |   |   |   | 1.00   |        |             |           |       |      |           |
|         |   |      |   |     |   |   |   | Say    | 1.00   | No's        | 340000.00 | 1     | Each | 340000.00 |
| 5       | 10ft X10ft Bunker<br>◆ Beams - 8 inches x 4 inches<br>◆ Top sheet thickness - 4mm<br>◆ Bottom sheet thickness - 6mm   |      |   |     |   |   |   |        |        |             |           |       |      |           |
|         |   | 1    | x | 1   |   |   |   | 1.00   |        |             |           |       |      |           |
|         |   |      |   |     |   |   |   | Say    | 1.00   | No's        | 440000.00 | 1     | Each | 440000.00 |
| 6       | 3ftX6ft Feeder<br>◆ Bottom frame - 5 inches C channel<br>◆ Side body thickness - 6 mm   |      |   |     |   |   |   |        |        |             |           |       |      |           |
|         |   | 1    | x | 1   |   |   |   | 1.00   |        |             |           |       |      |           |
|         |   |      |   |     |   |   |   | Say    | 1.00   | No's        | 96000.00  | 1     | Each | 96000.00  |
| 7       | 1/2 Inch foundation rods<br>◆ Nuts and washers  |      |   |     |   |   |   |        |        |             |           |       |      |           |
|         |   | 1    | x | 110 |   |   |   | 110.00 |        |             |           |       |      |           |
|         |   |      |   |     |   |   |   | Say    | 110.00 | No's        | 450.00    | 1     | Each | 49500.00  |
| 8       | Fabrication and Erection of Vibrated Screener for processed<br>Munure screening.  |      |   |     |   |   |   |        |        |             |           |       |      |           |
|         |   | 1    | x | 1   |   |   |   | 1.00   | 1.00   |             |           |       |      |           |
|         |   |      |   |     |   |   |   | Say    | 1.00   | No's        | 252000.00 | 1     | Each | 252000.00 |



- Name of Work : Providing Avenue Plantation along the approach road (from Plot.No.148 to 171) to at IIDC Nandyal , Nandyal District.

GENERAL ABSTRACT

|                         |                  |
|-------------------------|------------------|
| 1 For Avenue plantation | 438267.91        |
| Total =                 | <b>438267.91</b> |

**LS Provisions**

|  |                      |
|--|----------------------|
| a) Provision towards Quality Control @ 0.75%         | 3287.00              |
| b) Provision towards Unforseen item and rounding off | 631.62               |
| c) Provision towards PS & Contingency @ 1.50%        | 6574.00              |
| d) Provision towards Nac @ 0.1%                      | 438.00               |
| e) Provision towards GST @ 18%                       | 78888.22             |
| f) Provision towards Tender Premium @5%              | 21913.00             |
|  | <u>Rs. 550000.00</u> |

*Sr. Project Engineer*  
19/12/24  
Sr. Project Engineer  
APIIC Ltd.,  
KURNOOL

*Dy. Zonal Manager (Engg.)*  
19/12/24  
Dy. Zonal Manager (Engg.)  
APIIC Ltd., Kurnool.

Zonal Manager  
APIIC Ltd., Kurnool.

Data (SSR 2024-25)

Name of Work : Providing Avenue Plantation along the approach road (from Plot.No.148 to 171) at IIDC Nandyal , Nandyal District.

| S No | Description   | Unit | Qty     | Rate     | Amount   |
|------|---|------|---------|----------|----------|
| 1    | clearing light jungle along the edges of ROW suitable for Avenue plantation including all operational, incidental, labour charges, etc. complete for finished item of work  | Sqm  | 1       | 2.80     | 2.80     |
|      | Over head charges @ 13.615 %  |      | 0.13615 | 2.80     | 0.39     |
|      | Total for 1 Sqm   |      |         |          | 3.19     |
|      |   |      |         |          | sqm      |
| 2    | Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard with RCC jalli of size 0.60 x 1.05 x x0.04 m with lettering as APIIC embossing on jalli at scentre including white washing 2 coats over primary coat and maintaining the plants for one year including cost & conveyance of all materials to site and cost of watering the plants & watch and ward. |      |         |          |          |
|      | Unit = Each   |      |         |          |          |
|      | Taking output = 10 trees  |      |         |          |          |
|      | a) Labour   |      |         |          |          |
|      | Mate  | day  | -       |          |          |
|      | Mazdoor (Unskilled) for planting  | day  | 3.700   | 595.00   | 2201.50  |
|      | Mazdoor (Unskilled) for maintenance for one year  | day  | 15.000  | 595.00   | 8925.00  |
|      | b) Machinery  |      |         |          |          |
|      | Water tanker 6 KL capacity  | hour | 2.000   | 822.00   | 1644.00  |
|      | c) Material   |      |         |          |          |
|      | Cost of Plant (LMR)   | each | 10.000  | 40.00    | 400.00   |
|      | Sapling (LMR)   | each | 10.000  | 10.00    | 100.00   |
|      | Farm yard manure (LMR)  | cum  | 0.940   | 300.00   | 282.00   |
|      | Pesticide (LMR)   | kg   | 0.500   | 200.00   | 100.00   |
|      | Cost of water   | KL   | 12.000  | 135.00   | 1620.00  |
|      | Tree guard (RCC Jali os size 1.05X0.60X0.04Mts) including Lettering "APIIC" and White Washing (LMR)   | Each | 30.000  | 400.00   | 12000.00 |
|      | d&e) Overheads & Contractors Profit   |      | 13.615% | 27272.50 | 3713.15  |
|      | Cost for 10 trees = a+b+c+d+e   |      |         |          | 30985.65 |
|      | Rate per trees = (a+b+c+d+e)/10   |      |         |          | 3098.57  |
|      |   |      |         |          | Each     |

*[Signature]*  
19/11/24  
Sr. Project Engineer  
APIIC Ltd.,  
KURNOOL

*[Signature]*  
Dy. Zonal Manager (Engg-)  
APIIC Ltd., Kurnool

Zonal Manager  
APIIC Ltd., Kurnool.



L.P. N. 14/51/

REFERENCE

1. ...  
 2. ...  
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Avenue plantation.

3d/10/51/91

DIRECTOR OF TOWN & COUNTRY PLANNING  
GOVT. OF A.P. HYD.

"TRUE COPY"

DY. CHIEF ENGINEER  
APIIC HYD

Manager (Engg.)  
APIIC Ltd., Kurnool.

Dy. Zonal Manager (Engg.)  
APIIC Ltd., Kurnool.

*Handwritten signature and date*  
19/12/29

516 70  
11/2/29