Sanction

Sub: Administrative Approval and Expenditure Sanction for executing pilot/demonstration project - “Treatment of Galaothi drain, Bulandshahr using bio-remediation” at an estimated amount of Rs. 74,94,180/- (Seventy Four Lakhs, Ninety Two Thousand and One Hundred and Eighty Only) by M/s Bhagwati Gas. Ltd – reg.

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I am directed to refer to project submitted M/s Bhagwati Gas. Ltd (Agency) against NMCG’s Expression of Interest/Rolling EOI uploaded on NMCG web site and subsequent communications & presentations made before the Committee’s constituted for evaluating the innovative technologies and to convey the approval of the competent authority to undertake execution of the pilot project on “Treatment of Galaothi drain, Bulandshahr using bio-remediation” to demonstrate the efficacy of the innovative technology under Namami Gange program. Approval is based on decision taken in 10th Executive Committee meeting held on 26/03/2018 and subject to the terms & conditions mentioned here under:

2.0 General Condition:

a) Agency for executing the pilot/demonstration project is M/s Bhagwati Gas. Ltd.

b) This sanction is not the order for commencement of project. A separate work order shall be issued in favour of the agency for commencement of the project.
c) The agency shall submit the work plan indicating the reach in which bio-remediation technologies be implemented after undertaking the field visit as under para 2.d at the earliest so that the work order can be issued.

d) The agency & the monitoring committee shall jointly visit the site for onward activities such as estimation of flow, parameters of the allotted drain, reach in which technology is proposed for demonstration etc.

e) Period of experimentation/demonstration of the innovative technology proposed shall be at least one month or more as mentioned in the proposal of agency.

f) On successful demonstration and establishing the efficacy of the innovative technology over a period of 12 months (including the trial period), NMCG may decide for continuation of the treatment of drain beyond 12 months based on techno-economic considerations of the established innovative technologies.

g) NMCG; in association with its designated agencies, shall provide the monitoring protocol & acceptance limits to be adhered during trials/execution of the project and the executing agency shall be responsible for their implementation/adherence.

h) The product proposed to be used during demonstration shall not be changed without written approval of the NMCG. Necessary certifications by agency in respect of Genetically Modified Organism (GMOs), non-pathogen and indigenous nature of microbial consortia shall be furnished by the firm before start of the work.

i) The project shall be executed in accordance with the Water (Prevention and Control of Pollution) Act, 1974 and Environmental (Protection) Act, 1986 as amended from time to time.

j) For monitoring the performance of treatment/technology, the monitoring parameters output range shall be as specified in Annexure – I.

k) The progress of the project (physical & financial) will be verified through monitoring committee. The project performance will be assessed through Third Party Inspection (TPI) system. NMCG may appoint agency for Third Party Inspection/appraisal/evaluation of the efficacy of the technology. Expenses for the Third Party Inspection/appraisal/evaluation duly verified by the designated committee shall be borne by the NMCG.

l) The firm shall submit monthly progress report to NMCG through the monitoring committee.
m) Assessment of the progress/ performance at each suitable location shall be done by NMCG and if in the opinion of NMCG; progress is not satisfactory, NMCG may withdraw the approval accorded without any compensation to the firm.

n) The firm shall be accountable for any loss of lives & properties occurred due to normal or exceptional circumstances such as floods, earthquakes/ cloud burst or other natural calamities including local problems during execution/ demonstration of the project.

o) Any dispute arising during execution of the project shall be settled amicably and the decision of the Director General, NMCG shall be the final and binding.

p) The data generated during the execution of the project shall not be published anywhere without prior permission of NMCG.

q) The authorized signatory of the firm shall execute an indemnity bond to compensate NMCG for any loss due to non-adherence to the terms & conditions mentioned in the sanction.

3.0 Project Specific Conditions

a) Agency shall undertake “Treatment of Galaothi drain, Bulandshahr using bio-remediation”. The necessary arrangements for execution of the project shall be done by the agency itself.

b) The work related to the project shall be carried out by the agency after ensuring the objective and the methodology followed as per standard procedures/ methodology, especially for the laboratory analytical works.

c) While executing the demonstration project, an attempt will be made by the agency to focus on achieving maximum level of sewage treatment at the site.

d) For in-situ treatment, there shall not be any major alteration/ modification of the drains. However, the agency shall tie up on their own with the local department/ authorities regarding electrical fittings infrastructures facilities & assistances, if any.

e) The agency shall maintain proper record of microbial dosing and the provision be made for recording microbial dosing.

f) The final report shall be forwarded to NMCG/ CPCB after completion of the project and conducting performance study.

g) Acceptance of the terms and conditions of this sanction letter may be intimated within 15 days of issuance.

h) The project shall be executed as per the work plan submitted by the agency as per para 2.c.
i) Project duration will be 12 months including period of trial for one or more month(s).

j) Total project cost is Rs. 74,94,180/- (Seventy Four Lakhs, Ninety Two Thousand and One Hundred and Eighty Only) against treatment of 4.0 MLD flow in the drain. Payment shall be based on monthly reimbursement pro-rata basis against the per MLD cost for quantity of flow measured and treated in the drain.

The abstract of the project cost is given below:

<table>
<thead>
<tr>
<th>S. No</th>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CAPEX</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>HRAP Ponds including PP sheets etc./fencing etc.</td>
<td>₹ 10,00,000.00</td>
</tr>
<tr>
<td>b</td>
<td>Culture Isolation and Analysis</td>
<td>₹ 11,10,000.00</td>
</tr>
<tr>
<td>c</td>
<td>Mechanical &amp; Electrical equipments</td>
<td>₹ 95,000.00</td>
</tr>
<tr>
<td>d</td>
<td>Construction of check Barriers/pipe &amp; fittings</td>
<td>₹ 2,50,000.00</td>
</tr>
<tr>
<td>e</td>
<td>Make shift office cum laboratory/monitoring</td>
<td>₹ 2,80,000.00</td>
</tr>
<tr>
<td>f</td>
<td>Vehicle/Lighting/Security</td>
<td>₹ 3,00,340.00</td>
</tr>
<tr>
<td></td>
<td><strong>SUBTOTAL A</strong></td>
<td>₹ 30,35,340.00</td>
</tr>
<tr>
<td>2</td>
<td>OPEX</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Cost of dosing for 4 MLD Polluted water in drain @ ₹ 3054/ MLD</td>
<td>₹ 44,58,840.00</td>
</tr>
<tr>
<td></td>
<td><strong>GRAND TOTAL</strong></td>
<td>₹ 74,94,180.00</td>
</tr>
</tbody>
</table>

(k.) Mode of Payment

i. All expenditures incurred during demonstration of the project including collection & testing of water samples [initial & final] in the designated Government/ NABL accredited laboratories shall be borne by the firm. Unforeseen expenses incurred during the demonstration period on any account; whatsoever it may be; shall also be borne by the agency.

ii. On satisfactory completion/demonstration of efficacy of the technology adopted for treating polluted water and untreated sewage of the Galaathi drain joining river Kali, reimbursement of the actual expenditures duly verified by the monitoring agency and acceptable to NMCG shall be reimbursed by SPMG/ NMCG on monthly basis for a period not exceeding 12 months from the day of start of project/ inception.

iii. On successful completion of the trials period proposed by the proponent, NMCG may consider reimbursement of actual cost maximum up to 12 months including demonstration/free trials from inception. However, such reimbursement will be decided on a case to case basis strictly on its merits to be recorded by the committee or agency appointed for the purpose.
Reimbursement of the actual cost shall be made strictly on specific recommendations of the committee and on achievement of pre-defined objective parameters.

(1.) Cost escalation if any on any of the expenditure head shall be borne by the agency.

4. This issues with the approval of Director General, NMCG vide its Dy. No. 1545/dated 2\text{nd} \text{July} 2018 and the concurrence of Executive Director (Finance) vide its Dy. No. 97/dated 2\text{nd} \text{July} 2018

(K. K. Sapra)

Under Secretary, NMCG

Addressee List

To,

1. Project Director, Project Director, SPMG Group, 834, Bapu Bhawan, Sachivalya, Lucknow, - 226001

Copy to (for Information):

1. PS to Director General, NMCG, New Delhi-110002.
2. Dr. Roshan Jacob (IAS), District Magistrate, 519, Bhagwati Marg, Race Course Colony, Laxmi Nagar, Bulandshahr, Uttar Pradesh 203001
3. Municipal commissioner, Bulandshahr, Uttar Pradesh 203001
5. Member Secretary, CPCB, Parivesh Bhawan, CBD-cum-Office complex, East Arjun Nagar, New Delhi-110032
6. Prof. Vinod Tare, Founder Head, C-Ganga Kanpur, U.P.
7. Sanction Folder/ Guard File/MIS, NMCG
Evaluation criteria for Bioremediation of Drains during demonstration period under normal condition (Except heavy rains and Droughts)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Parameters</th>
<th>Inputs</th>
<th>Required output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>$\text{BOD}_{3,27}$ (Biochemical Oxygen Demand) of filtered sample</td>
<td>Minimum 100 mg/l or minimum hydraulic flow 10 MLD or Total organic load in terms of BOD minimum 1000 kg/l</td>
<td>$\leq 30$ mg/l  Or 40% reduction in BOD load value from the initial reading</td>
</tr>
<tr>
<td>2.</td>
<td>COD (Chemical Oxygen Demand) of filtered sample</td>
<td>Minimum 250 mg/l</td>
<td>$\leq 100$ mg/l  Or 40% reduction in COD load value from the initial reading</td>
</tr>
<tr>
<td>3.</td>
<td>TSS (Total Suspended Solids)</td>
<td></td>
<td>$\leq 100$ mg/l  Or 40% reduction in TSS load value from the initial reading</td>
</tr>
<tr>
<td>4.</td>
<td>FC (Fecal Coliform)</td>
<td></td>
<td>2500 MPN/100 ml</td>
</tr>
<tr>
<td>5.</td>
<td>pH</td>
<td></td>
<td>6.5-9.0</td>
</tr>
</tbody>
</table>

26/1/2017