



Central Pollution Control Board

Parivesh Bhawan, East Arjun Nagar, Delhi -110032

Date: 12-08-2022

Sub.: Pre-bid Meeting for discussion on tender document for Implementation of Centralised Barcode System for Tracking of Biomedical Waste (CBST-BMW)" – reg.

A pre-bid meeting was conducted on 02.08.2022 at 11:00 AM in hybrid mode to discuss the queries raised by vender on CPCB tender document for Implementation of Centralised Barcode System for Tracking of Biomedical Waste (CBST-BMW)". The list of participants is given at Annexure I.

One of the vender namely M/s Knowledge Lens could not attend the meeting till their turn to explain their queries due to some medical emergency and requested Committee to accept their queries through email. As agreed by the Committee the queries as raised by M/s Knowledge Lens are also addressed in following table.

Following is the detail of the queries raised by venders and CPCB response on the same.

Queries from Vigneshwaran P, Chief Executive Officer, Code Land InfoSolutions Pvt Ltd			
Section	Term in Tender Document	Queries/suggestions	CPCB Response
4(A)(viii)	Depiction of the data over spatial domain using ArcGIS software.	Purchase of ArcGIS software must be part of pricing or CPCB will procure required licenses for this project?	It will not be procured by CPCB, it will be purchased by Vendor
4(A)(xvii)	Develop Open source operator wise modules – for use by operators who does not possess their own tracking system	Scope of project & deliverables to include modules for communications with CBST-BMW. Does operator wise modules include only CBST-BMW integration modules & features, Kindly elaborate on the features required.	Open source modules will be for every individual operator.
4(C)	Provide 24x7 Support through a helpdesk to stakeholders to manage its connectivity	This help desk is via email or phone? The people involved must be stationed in CPCB or at Bidders office itself.	help desk will be via email or phone and vender's employee will be stationed in CPCB
4(D)	Get cyber security audit clearance and deploy with Application in NIC cloud domain.	Cyber security audit is to be done by Bidder or 3rd party employed by CPCB.	Cyber security audit will be done by bidder
4(G)	To maintain the system for five years (01year warranty+ 05 yr Maintenance including development) by assistance	Does the programmer has to be deputed for entire duration of 5 years?	Yes, programmer has to be deputed for entire duration of 5 years

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	and deploying at least one programmer / IT Engineer.		
5.1(2)	The software should be able to accept same User ID and password of the existing barcode softwaresystem.	Different CBMWTF'S use different software. Post integration with CBST-BMW. a new registration must bedone for issuing credentials	No new credentials will be issued for existing bar code users, using web services, existing credentials will be used by users.
5.1(5)	The developer may have to develop different API to fetch the data from all SPCBs or CBWTFs having barcode system for tracking of biomedical waste operational at their end.	A common API can be developed, via which individual operator software can send the data. Since the software aremany in number, developing different API will add to increased timeline.	No change is need.
5.2(4)	The CBSBTMW should support GPS tracking devices of any make and model as per the specifications given in this document.	A common API can be developed, via which individual operator GPS software can send the data. Since number of device models are numerous, developing integration capabilities will add to increased timeline.	Revised clause: The CBSBTMW should support GPS tracking devices of any make and model provided by the CBWTF operator.
5.2(6)	The CBST-BMW should be able to visualize the software on map preferably of Bhuvan andgoogle maps.	Purchase of Google maps license would be from CPCB orBidder or any free source map can be used?	We may restrict this to Bhuvan maps instead of google maps. Revised Clause: The CBST-BMW should be able to visualize the software on map preferably of Bhuvan.
5.4(2)	The Software should be capable of providing alerts if the occupiers not filing the daily records.	Occupiers data must go to the operator software for daily reporting so the data for occupiers will be integrated via operator software?	Explanation: Alerts will be generated at CBWTF level, once receipt of waste by CBWTF operator.
5.6(7)	The Software should support block chain cryptography based lineage tracking of the biomedical waste from the healthcare facility till the CBWTF operator.	Block chain cryptography of data will involve more than 3servers, can it be done on the same server via dockers?	This clause can be removed
5.7(6)	The CBST-BMW should be able to send pre-configured template based SMS and Emails for	As per latest TRAI Guidelines, DLT registration must be done by the owner of the software with respect to SMS templates.	No changes required

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	alerts and alarms generated based on the configured rules. This feature should be a built-in capability of the CBST-BMW and not external application software.	This activity is done in Trai website, feature is out of scope.	If CBWTF is not sending data to central server, alert will go to respective State
9.0(2)	VM for a period of at least one year to operate the software is to be provided by the firm.	It is said that servers must be hosted at NIC. So will NIC orCPCB bear the expenses	For one year expenses cost will be beared by vender. The application will be hosted on MEITY impanelled cloud service provider.
11.0(3)	Experience of having successfully completed similar works during last 7 years ending last day of month previous to the one in which applications are invited should be either of the following: - Three similar completed works costing not less than the amount equal to 40% of the estimatedcost. or Two similar completed works costing not less than the amount equal to 50% of the estimatedcost. or One similar completed work costing not less than the amount equal to 80% of the estimated cost.	Work Order contains variable pricing also increasing thevalue of project, can we submit the WO and invoices to substantiate claims? Can it be the sum of two or more projects?	No changes required
12.1	The firm has to qualify the eligibility criteria as given below;	Please clarify the weightage for each point.	M. Tech may be removed and B. tech with relevant field experience may be added.
17.1(7)	Testing and Certification of software Solution	By 3rd Party or by the bidder himself?	Bidder itself will give certificate for bug testing and give details and tools.
19(12)	First time auditing till LIVE! is the responsibility of the firm/bidder and thereafter if required auditing will be borne by CPCB and the	What is scope of auditing?	As the certificate of cyber security audit is mandatory before deployment in NIC. Hence cybersecurity audit is required by

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	responsibilities of closing NCs is of the firm.		MeitY empaneled vender.
20.0 (10)	Subletting of the work is not allowed without prior written permission from CPCB.	What about auditing of Software? Can the tender be applied like a consortium	No changes required
5.14	Mobile Application Capabilities	Clause does not include development for captive facilities	Clause can be revised and development of Mobile application for captive facilities may be included. Revised clause: 6. Mobile Application should support registration and status of the healthcare facility (including having captive treatment facility) and other biomedical waste generators, Common Biomedical Waste Treatment Facility Operator etc.
5.5 (1)	Reporting and Analytics Capabilities	The Software should be capable for collecting quarterly reports on waste generation and management from healthcare facilities as well as CBWTFs.	No separate part is required it will be generated as per required from daily reports.
Queries of Vineet Nimare, Associate Manager – Logistics, NEC Corporation India			
5.5(5)	The CBST-BMW should generate report on approved and validated data. There should also be a capability to see the raw data collected within the reports.	How raw data can be collected?	Raw data will be given by CPCB
5.1(6)	The system should be a highly scalable client server application where the client software resides in the industry site and the central server software resides at the central location hosted in NIC data center.	More clarity needed in this clause	No change required
Queries of Ajay Mujumdar, Atishay Limited			
5.1 (1)	Integration of existing barcode software system being operated by CBWTF	Could the technical details of the local soft wares be procured by the SPCB/PCC?	By using different APIs, existing bar code software system will be

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	operators and State Boards into the centralized barcode system.		integrated. Vender shall interact with individual CBWTF operator for their integration.
5.1 (1)& (2)	1. Integration of existing barcode software system being operated by CBWTF operators and State Boards into the centralized barcode system. 2. The software should be able to accept same User ID and password of the existing barcode software system.	In case of the same user ID in 2 different software how to differentiate?	
5.13 (1)	The software shall have provision for centralized generation of Barcode labels and allocation of the same through SPCBs	The provision is to print the barcode labels and send to the end users the HCF or to generate the label numbers, which would be then forwarded to the SPCB / CBWTF for the local software to use these label numbers in their software?	No printing is required at vender's end. Only label generation is to be done.
7.0(1) & (2)	1. To conduct ONE DAY professional training program at least 12 days in a year to all its stakeholders like MoEF&CC / MoHFW / CPCB & SPCB/PCC officials and other stakeholders (i.e. generators, CBWTF operator, etc.) for operating the proposed central waste tracking system. 2. To provide detailed training to two core team members of CPCB in programming of the basic technology used to upgrade the software program for a period of atleast one week either at an Institute or at CPCB through certified professionals only.	The training to the stakeholders could be through Video Conference?	No changes required in clause. Training in physical/hybrid/video conferencing shall be arranged by vender.
11.0(2)	Firms must be engaged in at least 03 Projects (only those project shall be considered which can be demonstrated live) of software development and maintenance during last four years (i.e. financial year	Is JV / Consortium bidding permitted with a company who has provided barcoding software to minimum 5 CBWTF? Any 1 of the following fields could be considered for eligibility?	As per the bid document.

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	2018-19, 2019-20, 2020-21 and 2021-2022) in any two of the following fields: i. Web Developments & Mobile APP development, ii. GPS Tracking & Integration development using open source platforms. iii. GIS deployment and a platform software development iv. SCADA implementation		
Queries from Rajesh Kumar V, Presales Executive, Madras Security Printers (P) Limited, Smart City Division			
5.1(6)	As discussed above		
Queries from Arushi Infotech			
11.0(2)	As discussed above		
Queries from Green earth			
5.6 (7)	As discussed above		
11.0(8)	Firm should have a valid ISO certification for software development/IT enabled services/ data management of process industries.	Is it required before or afterwards?	It is required during submission of bid
11.0(2)	As discussed above		
Queries from Astron e-solutions Pvt. Ltd.			
4(A)(vi)	SMS alert / Email alert to CPCB and SPCBs/PCCs as and when there is the waste is not picked up by CBWTF transporter or there is any pilferage in transportation of biomedical waste nags from HCFs to treatment facility or any other non-compliance.	Whether alert will be in one format or different for SPCBs?	Alert will be in one format
4(A)(viii)	Depiction of the data over spatial domain using ArcGIS software	Is it mandatory?	Yes, it is mandatory
4(A)(xii)	Creation of dashboards for visualization of live streaming data, waste movement, video streaming, alert generation, email records etc.	Whether video streaming is required?	In this clause, video streaming may be removed. Revised clause: i. Creation of dashboards for visualization of live streaming data, waste movement, alert

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			generation, email records etc.
4(A)(xiv)	Develop State specific module of tracking App for use by States	Whether it is to be done initially?	No changes required
4(A)(xvi)	Centralized barcode label generation	Whether printing machine will be required?	Only label generation will be done. HCF will print it
4(A)(xvii)	Develop Open source operator wise modules – for use by operators who does not possess their own tracking system	Whether training will be required for operator of CBWTF who are not yet adopted bar code system?	Operator of CBWTF will pay the fee directly to the vendor in case it will connect directly.
4(D)	Get cyber security audit clearance and deploy with Application in NIC cloud domain	Whether it can be done in any ways?	Security audit has to be done by vender
4(G)	To maintain the system for five years (01year warranty+ 04 yr Maintenance including development) by assistance and deploying at least one programmer / IT Engineer.	it may be 01+04 year maintenance	Yes, CPCB may correct it Revised clause: A. To maintain the system for five years (01year warranty+ 04 yr Maintenance including development) by assistance and deploying at least one programmer / IT Engineer.
5.2(11)	The CBST-BMW should have built-in capabilities for identifying anomalies for geospatial and time series anomaly detection using Machine Learning and Deep Learning Techniques.	Machine learning requires large data, is it required at initial stage?	No, it is required at later stage
5.5(1)	The Software should be capable for collecting quarterly reports on waste generation and management from healthcare facilities as well as CBWTFs	As discussed earlier	As discussed earlier
5.5(4)	The CBST-BMW should be able to support different data quality code and report	Kindly elaborate it more	No changes required

	data based on representativeness and data quality. Statistical significance of data should be reportable in respect to data density.		
5.5(5)	The CBST-BMW should generate report on approved and validated data. There should also be a capability to see the raw data collected within the reports	As discussed earlier	As discussed earlier
5.5(8)	The CBST-BMW should have provisions to accommodate printers of different model and make.	Is there any specification of printer?	No, there is no specification
5.14(7)	Mobile app will act as data entry, video entry at times, geo location entry, and various other entries having issues in emergencies.	Video entry will be difficult to do	Video entries may be deleted. Revised clause: 7. Mobile app will act as data entry, geo location entry, and various other entries having issues in emergencies.
11.0	Eligibility Criteria	There is serial number mistake in document no.	Corrected
17.1(7)	Testing and Certification of software Solution	Is there any start-up condition?	Clause will be applicable to every firm
Queries from In22 labs			
Others	Whether mapping of HCF and CBWTF is available		No, it is not available with CPCB
Others	Whether payment gateway is required		No, operator will directly pay to bidder, so no payment gateway required
Queries from MASO India, Indore			
5.1(1)	Integration of existing barcode software system being operated by CBWTF operators and State Boards into the centralized barcode system	Is it a mandate?	Yes, it is mandate of CBWTF operator
	Knowledge Lens		
4 (A)(ix)	Layers of different categories like road network, industries network, river network etc. (data to be procured by	This point is unclear, What does mean? Are referring to CBWTF(s) which lies on the bank of the river on road side? Or CBWTF(s) near to Industries? What CPCB is expecting from this ?	Map will include location of CBWTFs as well as HCFs.

	CPCB) to be implemented on the system.		
5.1 (6)	The system should be a highly scalable client server application where the client software resides in the industry site and the central server software resides at the central location hosted in NIC datacenter.	In the Scope of work it is mentioned that,(CBST-BMW) should capable of integrating with existing CBWTF software? Hence We would like to here Why Client software is required. Please Clarify.	Existing software of CBWTFs shall be integrated.
5.1 (11)	The system should generate centralized barcode labels for use by healthcare facilities.	Since All the CBWTFs are already maintaing various TPS for this, Is it like linking those module in CBST-BMW? Or Generate a new one from CBST-BMW alone? If yes what about the existing barcodes ? In 5.13 Centralized Barcode label generation and Distribution system says	Barcode labels will be generated by the centralised system.
5.2 (2)	The Software should be capable of receiving data from 02 different transmitters on the same vehicle. This situation will be used when the signal strength of particular carrier is weak in certain areas and this would need support for dual devices or dual SIM models.	BOQ Does not specify scope of supply of SIM models, we request you to clarify the same.	Revised Clause: 1. The Software should be capable of receiving data through GPS on real time basis without any delay or failure.
5.4 (1)	The Software should have capabilities to provide alert for any excess storage at the operator beyond its stipulated capacity considering expected generation of waste.	Capturing of General information is not defined in SOW . We are not Capturing information like CTO, Plant details. Generally these details can be pulled through OCMS system of SPCBs.	Clause is self explanatory
5.4 (2)	The Software should be capable of providing alerts if the biomedical waste stored at occupiers beyond the stipulated time frame as defined under authorization.	Capturing of Genereal information is not defined in SOW . We are not Capturing information like CTO, Plant details. Generally these details can be pulled through OCMS system of SPCBs.	
5.5 (4)	The CBST-BMW should be able to support different data quality code and report data based on representativeness and data quality. Statistical significance of data should	This point much confusing, Generating Data Codes is easy but point says different personas. Kindly help us the how maintain codes since it not time series data.	Clause is self-explanatory

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	be reportable in respect to data density		
5.5 (5)	The CBST-BMW should generate report on approved and validated data. There should also be a capability to see the raw data collected within the reports.	Please Clarify the process of validation.	Clause is self-explanatory
5.5(8)	The CBST-BMW should have provisions to accommodate printers of different model and make.	BOQ Does not specify scope of supply of Printers and their models, we request you to clarify the same.	Revised clause: Barcode labels will be as per the specifications given under CPCB guidelines.
5.11 (2)	The Web Server Interface module should support manual and automated data validation and approval workflow to review the various stakeholders (i.e healthcare facility, transporter and CBWTF operator) data and approve by providing appropriate comments based on the data quality.	Here SOW work specifies automatic data validation how every there is no clear procedure for automating the Data. Since CBST -BWM software aims to integrate TPS. How can we achieve such validations	Clause is self-explanatory
11.0(3)	Experience of having successfully completed similar works during last 7 years	Similar completed works costing not less than the amount equal is stated in percentage, to derive a value will have bit difficult. Hence we would like to request you to please specify the cost in proper figures.	No change is required
11.0 Missing Document	Document - 2 Missing Order of Serial number is missing	Document 2 is missing form Criteria, kindly notify which document has to be submitted as Document -2 Mentioned Serial number is are not is sequence, Please clarify the same so that we avoid the loss of information.	Corrected
11.0	DB Details (Table 1)	Owner ship of Data base is given as Regulator. As per SOW regulator is SPCB. Please clarify the point. Are these instructions for Development team or is there any specific criteria for SPCB to do so?	
15.0	Schedule of "Software Development for Centralised	SRS starts from August, whereas bid opens in 16.09.2022	Corrected


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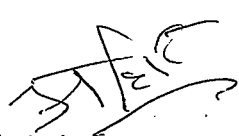
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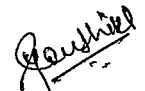
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	Barcoding System for Biomedical Waste	(September). We request you to kindly Update the Schedule accordingly.	
21.4 (A) (d)	TECHNICAL BID A scanned copy of Tender Acceptance Letter (Annexure-II) failing which bidder's bid may be rejected.	Annexure -II is BOQ, But here it is stated as Acceptance Letter.	Corrected
21.4 (A) (f)	TECHNICAL BID Scanned copy Earnest Money Deposit should be uploaded on the portal.	Procedure of EMD Submission is having improper tender details, for CPCB Tender Notice No.: C-12015/05/2018/IT/NHWTS-Tech/Sr. No.1. It is Referring NHWTS	Corrected
21.4(B)(1)	FINANCIAL BID Schedule of Financial bid is provided in the form of BOQ in .xls format, along with this tender document at https://eprocure.gov.in/eprocure/app Bidders are advised to download this template as it is and quote their offer/rates in the permitted column and upload the same in the manner.	Here this point says upload in the EProcurement website, where Annexure -II has a copy of BOQ. Kindly Clarify the same.	Xls format is also given to submit the financial bid in xls format.
Point - Repeated	Point -Repeated	Section 21.4 and 34.0 are mentioning about the bid submission, why 2 procedures are defined. We are getting confused with these. which one has to follow?	Corrected


Sh. B Vinod Babu
Director & DH, IT & WM-II


Sh. V P Yadav
Director & DH, WM-I Div.


Sh. Archit Uprit
Sc. 'D', IT Division


Ms. Youthika
Sc. 'D', WM-I Div.

S. No.	List of Participants
1.	Madras Security Printers Private Limited No. 72, T.H.Road, Tondiarpet, Chennai - 600081
2.	Vigneshwaran P Chief Executive Officer CodeLand InfoSolutions Pvt Ltd
3.	M/s Knowledge lens
4.	Ajay Mujumdar Atishay Limited
5.	Vineet Nimare, Associate Manager – Logistics, NEC Corporation India
6.	Arushi Infotech
7.	Green earth
8.	Astron e-solutions Pvt. Ltd.
9.	In22labs
10.	Butterfly Solutions
11.	MASO India, Indore
12.	Vigil Network
13.	Sh. B. V. Babu, Director, DH-IT Division
14.	Sh. V. P. Yadav, Director, DH-WM-I Division
15.	Sh. Archit Uprit, Sc. 'D', IT Division
16.	Ms. Youthika Puri, Sc. 'D', WM-I Division
17.	Ms. Niralee , Sc. 'B', WM-I Division

Central Pollution Control Board
(Under Ministry of Environment, Forest & Climate Change)
Govt. of India
Parivesh Bhawan, East Arjun Nagar
Delhi – 110 032
Tender for

**“Implementation of Centralised Barcode System for Tracking of
Biomedical Waste (CBST-BMW)”**

Important Information and Dates

S.No	Activity	Date & Time
1.	Date of publishing of tender	15.07.2022 at 17.00 hours
2.	Download of Bid Documents start	15.07.2022 at 17.00 hours
3.	Queries submission Last Date (via eMail)	25.07.2022 upto 18.00 hours
4.	Pre Bid Meeting (Hybrid Mode) (Video Conference Link to Join the meeting will be provided on portal)	02.08.2022 at 11.00 hours
5.	Bid Submission Start Date	16.08.2022 at 15.00 hours
6.	Bid Submission Closing Date	22.09.2022 up to 18.00 hours
7.	Technical Bid Opening	29.09.2022 at 15.00 hours

Any firm interested in supply, configuration and implementation of CBST-BMW can participate and submit its bids as detailed in the document. Meetings to be arranged through Video Conferencing within the permitted time lines. Change if any shall be intimated on CPP portal <https://eprocure.gov.in/eprocure/app> & CPCB website <http://cpcb.nic.in>.

Central Pollution Control Board
(Under Ministry of Environment, Forest & Climate Change)
Govt. of India
Parivesh Bhawan, East Arjun Nagar
Delhi – 110 032
August 2021

Contents

1.0	Introduction.....	5
2.0	Need for Centralized Barcode System.....	5
3.0	Stakeholders in Implementation of the Centralized Barcode System.....	6
4.0	Scope of Work	6
5.0	Software Requirements	8
5.1	Central Software Capabilities.....	8
5.2	Biomedical Waste Transportation Vehicle Tracking	8
5.3	Live Status Tracking.....	9
5.4	Alarms and Alerts Capabilities	9
5.5	Reporting and Analytics Capabilities.....	9
5.6	Access Control and Security.....	10
5.7	Backend Processing Requirements.....	10
5.8	Data Export and Archival Requirement	11
5.9	Data Acquisition Requirements	11
5.10	Corroboration and Workflow.....	11
5.11	Data Validation.....	11
5.12	Submission of Annual Reports by Stakeholders	12
5.13	Centralized Barcode label generation and Distribution system	12
5.14	Mobile Application Capabilities	12
6.0	Manpower Deliverables	12
7.0	Training to CPCB officials and other Stakeholders	13
8.0	New Pages Development	13
9.0	Intermediate Software & VM required for data transmission if any	13
10.0	Software Upgradation/ Development Methodology.....	13
11.0	Eligibility Criteria:	13
12.0	Selection Criteria	15
12.1	Parameters.....	15
12.2	Details of the Proposed Team.....	15
13.0	Hardware Requirement for regulator side.....	16
14.0	Data base specification for regulator side software	17

15.0	Schedule of “Software Development for Centralised Barcoding System for Biomedical Waste”	17
16.0	CPCB Deliverables	18
17.0	Penalties	18
17.1	Timeline for Delivery and Penalty for Delay:	18
17.2	Breakdown of system	19
17.3	Maximum Penalty applicable:	19
18.0	Mode of Payments:	19
19.0	Technical terms and conditions	20
20.0	General Terms and Conditions	21
21.0	Instructions for Online Bid Submission:	23
21.1	Registration:	23
21.2	Searching For Tender Documents:	23
21.3	Preparations Of Bids:	24
21.4	Submission of Bid:	Error! Bookmark not defined.
21.5	Check list for the Bidder	24
21.6	Assistance To Bidders:	24
22.0	Method of Evaluation and Award of Contract	25
23.0	Evaluation of bids	25
24.1	Criteria for Evaluation of Financial bid:	25
24.2	Method of Selection:	26
24.3	Negotiations:	26
26.0	Labour Laws and Safety Measures	26
27.0	Applicable Law and Jurisdiction	27
28.0	Insurance and Medical	27
29.0	INDEMNIFICATION	27
30.0	FORCE MAJEURE	27
31.0	Taxes and Duties:	27
32.0	Searching For Tender Documents:	28
33.0	Preparations Of Bids:	28
34.0	Submission of Bid:	29
35.0	Check list & Assistance for the Bidder	31
	ANNEXURES	33
	BID FOR - Development of Centralised Barcode System for Tracking of Biomedical Waste	33
	Annexure- I	33
	APPLICATION FORM	33
	Annexure-II	35
	FINANCIAL BID FORM – CBST-BMW	35
	Annexure – III-A	36

TENDER ACCEPTANCE LETTER.....	36
Annexure – III-B.....	39
UNDERTAKING	39
Annexure -IV	40
LOCATION OF DELIVERY AND INSTALLATION	40
Annexure- V	41
Agreement	41
INTEGRITY PACT	45

Implementation of Centralised Barcoding System for Tracking of Biomedical Waste

1.0 Introduction

Bio-medical Waste Management Rules, 2016 notified on 28.03.2016 and as amended thereof under the Environment (Protection) Act, 1986 by Ministry of Environment Forest & Climate Change by suppressing the earlier Biomedical Waste (Management & Handling) Rules, 1998 to implement these rules more effectively and to improve the collection, segregation, processing, treatment and disposal of these bio-medical wastes in an environmentally sound management thereby, reducing the bio- medical waste generation and its impact on the environment.

These Rules stipulates that State Pollution Control Boards / Pollution Control Committees are the prescribed authorities for ensuring implementation of said Rules and have been envisaged with the responsibility of issuing authorisation for generation, collection, reception, storage, transportation, treatment, processing, disposal or any other form of handling of bio-medical waste.

Rule 4 (i) of BMWM Rules, 2016, stipulate that it is the duty of every Health Care Facility (HCF) to establish a bar code system for bags or containers containing biomedical waste (BMW) to be sent out of the premises or place for any purpose, by 27.03.2019. Also, Rule 5 (c) of the BMWM Rules, 2016 stipulates that it is the duty of the every Operator of Common Bio-medical Waste Treatment Facility (CBWTF) to establish bar code system for handling of bio-medical waste. To facilitate implementation of barcode system by Operators CBWTFs and Hospitals at State levels, CPCB has prepared guidelines for “Barcode System for Effective Management of Biomedical Waste”

It is proposed that Occupier as well as Operator of CBWTF shall have uniformity in adoption of the bar code system throughout the country, for ensuring effective enforcement of the BMWM Rules, 2016, so that a centralised monitoring system can be developed to monitor day to day activity of BMW management in real-time by regulators and concerned departments such as CPCB / SPCBs / State Health Departments / MoH&FW / etc. Further, Hon’ble Supreme Court of India in the matter of IA No. 181745 of 2019 and I.A. No. 46339 of 2020, in W.P.C. 13029 of 1985 also passed orders directed MoEF & CC / CPCB to work out a national bar-coding system/portal for tracking of biomedical waste.

Hence this RFP seeks a centralised system that will capture data from every Healthcare Facility (bedded and non-bedded both) and Common Biomedical waste Treatment Facilities through State level tracking systems or to receive information directly.

2.0 Need for Centralized Barcode System

Centralised Barcode system would help in accounting the quantity of biomedical waste being collected, treated and disposed by every stakeholder. This system would also help Ministry of Environment Forest & Climate Change / Central Pollution Control Board / State Pollution Control Boards / State Health Departments in monitoring the implementation of BMWM Rules, 2016. The benefits of Barcode system are summarised below;

- i. To provide a unified web based access controlled platform accessible to Central Pollution Control Board (including Regional Offices), Ministry of Environment, Forests & Climate Change (including Regional Offices), Ministry of Health & Family Welfare and State Pollution Control Boards.
- ii. Tracking of biomedical waste from source of generation to intended destination for final treatment and disposal using GPS based tracking systems;
- iii. Daily check on the Occupier, transporter (involved in transportation of bio-medical waste within Healthcare Facility (HCF) as well as transportation of bio-medical waste from HCF to the CBWTF premises) and Operator of a CBWTF;

- iv. Preventing pilferage of bio-medical waste at HCFs as well as during transportation of waste from HCF to the CBWTF;
- v. To detect any route deviations or malpractices by the transporters while transporting of the biomedical waste to the designated locations (i.e. CBWTF).
- vi. Keeping record of visits made by CBWTF to the member HCFs for collection of waste;
- vii. Identification of source of generation of bio-medical waste in case waste is disposed of improperly;
- viii. Creates real time online monitoring of waste generation, collection, transportation, treatment and disposal; and
- ix. Quantification of bio-medical waste generated, colour coding-wise waste handed over to the CBWTF operator by the Occupier and waste collected daily by the Operator of a CBWTF from the member HCFs for further treatment and disposal.
- x. To generate alerts in case of deviations/non-compliances.
- xi. To generate various reports on district wise and State/UT wise about generation and management of biomedical wastes.
- xii. Regular check by State Boards on overall biomedical waste management in their respective State or Union Territory.

3.0 Stakeholders in Implementation of the Centralized Barcode System

According to BMWM Rules, 2016 as amended, following stakeholders are responsible for implementation of the Bar Code system as detailed below:

- A. Ministry of Environment & Forest & Climate Change / Central Pollution Control Board: To review the biomedical waste management in the Country through Centralised Barcode System.
- B. Prescribed Authority: The State Pollution Control Board (SPCB) in respect of the State, Pollution Control Committee (PCC) in respect of the Union Territory (UT). State Pollution Control Boards shall ensure adoption of Barcode system either through CBWTFs or State Board's portal by every Healthcare Facility.
- C. Director General, Armed Forces Medical Services (DGAFMS) in respect of Armed Forces Health Care Establishments fall under the jurisdiction of the Ministry of Defence are the prescribed authority
- D. Ministry of Health & Family Welfare and State Health Departments: State Health Departments for verifying the implementation of BMWM Rules, 2016 including authorisation of HCFs, their registration with CBWTFs and barcode system by Healthcare Facilities.
- E. Health Care Facility/Hospitals: The person having administrative control over the institution and the premises generating bio-medical waste, which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank, health care facility and clinical establishment, is responsible to implement bar code labelling system.
- F. Operator of a Common Bio-medical Waste Treatment Facility (CBWTF): The person who owns or controls a Common Bio-medical Waste Treatment Facility (CBWTF) for the collection, reception, storage, transport, treatment and disposal or any other form of handling of bio-medical waste is also responsible for implementing a Bar coding system.

4.0 Scope of Work

The scope of work includes the following

- A. Development of the Centralized Barcode System for Tracking of Biomedical Waste (CBST-BMW) shall include the following components or modules
- i. The proposed tracking platform shall integrate with existing barcoding software of individual CBWTF or captive treatment facility installed by HCF (including HCFs having only deep burial system for disposal of biomedical waste) or individual State's or UT's software for fetching the data of biomedical waste generation, collection, transportation, treatment & disposal.
 - ii. Tracking the movement of Biomedical Waste from Healthcare Facilities to CBWTFs along with live Vehicle Tracking system (GPS).
 - iii. Tracking of biomedical waste quantity in biomedical waste colour coded bags/container transported from the HCFs to the CBWTF.
 - iv. Analysis and Reporting Module for the biomedical waste generated, collected, treated & disposed by HCFs and CBWTFs.
 - v. A separate section called Waste Data Centre shall be provided in the CBSBMW for searching and reporting w.r.t. type, category and quantity of the biomedical waste and details of biomedical waste generator vis-a-vis thereof.
 - vi. SMS alert / Email alert to CPCB and SPCBs/PCCs as and when there is the waste is not picked up by CBWTF transporter or there is any pilferage in transportation of biomedical waste nags from HCFs to treatment facility or any other non-compliance.
 - vii. Reports on category wise, city wise, district wise and State/UT wise about generation and management of biomedical wastes.
 - viii. Depiction of the data over spatial domain using ArcGIS software.
 - ix. Layers of different categories like road network, industries network, river network etc. (data to be procured by CPCB) to be implemented on the system.
 - x. To develop the mechanism of integrating latest technologies of waste tracking, waste leakages controlling, video streaming, disposal site managing, systematic SMS/email generation on gate opening of closed types of trucks/lorries etc. as the project progresses etc.
 - xi. Development of technological improvement till the entire project duration.
 - xii. Creation of dashboards for visualization of live streaming data, waste movement, alert generation, email records etc.
 - xiii. Tabular Reports/graphical reports generation as per requirement along with framing or changing of the same in the future.
 - xiv. Develop State specific module of tracking App for use by States
 - xv. Provide public access to information on BMW management
 - xvi. Centralized barcode label generation
 - xvii. Develop Open source operator wise modules – for use by operators who does not possess their own tracking system
- B. Mobile Application Development:
- i. Development of the Mobile Application in Android and iOS based platforms for Live Entry, Tracking of biomedical waste, waste exchange center with maximum possible details of the system available in the system for each stake holder. Separate webpages created for each stake holder have to be generated in the Mobile APP with drop downs and user selectable system.
 - ii. The Android & iOS Mobile Apps for the system shall be listed on Google Play Store and Apple App Store in the already operational account with the name of Central Pollution Control Board.
- C. Provide 24x7 support through a helpdesk to stakeholders to manage its connectivity.
- D. Get cyber security audit clearance and deploy with Application in NIC cloud domain.
- E. Daily backup and storage of data to be done automatically.
- F. To provide training to CPCB officials (Five numbers) for one week for operating the proposed central waste tracking system and also provide detailed training to two core team members of CPCB in programming of the basic technology used for a period of at least one week either at an Institute or at CPCB through certified professionals only.

- G. To maintain the system for five years (01year warranty+ 04 yr Maintenance including development) by assistance and deploying at least one programmer / IT Engineer.

5.0 Software Requirements

5.1 Central Software Capabilities

1. Integration of existing barcode software system being operated by CBWTF operators and State Boards into the centralized barcode system.
2. The software should be able to accept same User ID and password of the existing barcode software system.
3. The Software should be flexible to capture the required fields and also expand the fields as required. In case of the key stakeholders does not exist, registrations of the same.
4. The Centralised Barcode Software System should have a web application to view, generate default reports, analyze the collected data, and corroborate with CBWTF operators, SPCB/PCC, CPCB, MoHFW and MoEF&CC to ensure proper compliance of the application.
5. The developer may have to develop different API to fetch the data from all SPCBs or CBWTFs having barcode system for tracking of biomedical waste operational at their end.
6. The system should be a highly scalable client server application where the client software resides in the industry site and the central server software resides at the central location hosted in NIC datacentre.
7. The Software should provide capability for the healthcare facilities to enter the daily biomedical waste generated and the amount of waste collected, treated and disposed by its own captive treatment facilities (including deep burial) and CBWTFs.
8. The software should be able to capture the details on category wise quantity of the biomedical waste as a "Waste Data Centre".
9. The Software should provide a User Interface presented in the browser and should be very user friendly and intuitive following the best practices in web based user interface design.
10. The User Interface should be supported on major browsers like FireFox, Chrome, Safari etc. The user interface should support rendering on a Tablet, smart phones which supports these browsers.
11. The system should generate centralized barcode labels for use by healthcare facilities

5.2 Biomedical Waste Transportation Vehicle Tracking

1. All vehicles of individual CBWTF should be equipped with a tamper proof GPS unit as required under BMWM Rules, 2016. These software of GPS unit provided in the vehicles shall be connected with CBST-BMW and should transmit the data to the same in real time. The CBST-BMW should be capable of receiving the GPS data in real time.
2. The Software should be capable of receiving data through GPS on real time basis without any delay or failure.
3. The CBST-BMW should be able to visualize the exact location of the various vehicles along with the weight and the biomedical waste carried by the same in real time.
4. The CBSBTMW should support GPS tracking devices of any make and model provided by the CBWTF operator.
5. The CBSBTMW should provide capability to configure the various device make and models and the protocols for data communication with the various GPS Tracking devices.
6. The CBST-BMW should be able to visualize the software on map preferably of Bhuvan.
7. The Software should support annotations and comments on specific vehicle routes based on abnormal events like accidents on the path, route diversions due to road work, road closure etc.
8. The CBST-BMW should support multiple trips and multiple schedules for each of the vehicles carrying biomedical waste.
9. The CBST-BMW should have alerting capabilities based on geofencing rules related to the routes of the vehicle pre-defined path.

10. The CBST-BMW should have capabilities to identify un-usual stoppage of the vehicle based on duration, unscheduled stops, unscheduled deviations etc. than its regular authorized route.
11. The CBST-BMW should have built-in capabilities for identifying anomalies for geospatial and time series anomaly detection using Machine Learning and Deep Learning Techniques.
12. The Software should have capabilities to over-ride exceptions in route deviations due to road accidents, road closure etc.
13. The software should be able to quantify the amount of biomedical waste collected from individual member healthcare facility at any given point of time.

5.3 Live Status Tracking

1. Software should support real time view of the data w.r.t. colour coded categorized biomedical waste from all the healthcare facilities and CBWTF operators throughout the country in real time.
2. Software module should support geo-location of the vehicles using specific latitude - longitude or as per cartographic coordinates overlay on a map and present information of site/vehicle, parameters connected and present value either graphically or numerically display.
3. Software should be able to show the status of each of the vehicle in a geographic map and should show alerts and alarms based on route deviation, unusual stoppage in real time.

5.4 Alarms and Alerts Capabilities

1. The Software should have capabilities to provide alert for any excess storage at the operator beyond its stipulated capacity considering expected generation of waste.
2. The Software should be capable of providing alerts if the biomedical waste stored at occupiers beyond the stipulated time frame as defined under authorization.
3. The Software should be capable of providing alerts if the occupiers not filing the daily records.
4. The CBST-BMW should provide an interface to view and list all alarms and alerts. There should be a filter to view only new alerts and alarms.
5. The CBST-BMW should provide an interface to acknowledge the alarms and alerts by regulators, occupier, operators, transporters etc. Once acknowledged, the alarms and alerts should disappear from the list.

5.5 Reporting and Analytics Capabilities

1. The Software should be capable for collecting quarterly reports on waste generation and management from healthcare facilities as well as CBWTFs.
2. The Software should be able to support various reports required by the CPCB and SPCB officials with respect to the handling of biomedical waste.
3. The CBST-BMW should have both default reports and also reports generatable by the end user as per requirements.
4. The CBST-BMW should be able to support different data quality code and report data based on representativeness and data quality. Statistical significance of data should be reportable in respect to data density.
5. The CBST-BMW should generate report on approved and validated data. There should also be a capability to see the raw data collected within the reports.
6. The CBST-BMW should have capability to compare, group sector wise generators, operators and generate report (text, numeric and graphical).
7. The CBST-BMW should support ability to export the reports data to csv, pdf and text file as and when required.
8. Barcode labels will be as per the specifications given under CPCB guidelines.
9. The software should be able to select the data quality code, the data representativeness, the time window and the generator specific parameters for generating reports.
10. The CBST-BMW should provide daily status of colour coded biomedical waste generated, stored, sent etc. and provide metrics on data quality.

5.6 Access Control and Security

1. The Software should have a built-in user management and role management modules.
2. The Software should be able to group users based on geographic territory or logical grouping
3. For each group of users, multiple user roles can be assigned and for each roles multiple users should be able to be assigned.
4. The Software should support role based access control for the various roles envisaged as part of the software. The roles include but not limited to
 - Operator Admin and Staff
 - Generator Admin and Staff
 - Transporter Admin
 - MoEF&CC Admin and Regional Officers
 - MoHFW Admin and State Health Departments
 - CPCB Admin and Regional Officers
 - SPCB Admin, Regional Officers and Head Quarter Officers
5. Each of the roles will have specific feature access. The Software should be configurable and modular such that for each user roles, a selected group of screen access can be provided.
6. The Software should be fully secured and be safe against vulnerabilities and security threats. All cyber security related threats and vulnerabilities should be addressed using secured coding practices.

5.7 Backend Processing Requirements

1. The CBST-BMW should provide a backend processing services for transmitted data and a highly scalable backend database capable of storing time-series geo-spatial data acquired from the various vehicles along with the data collected from various stakeholders (i.e. healthcare facilities and CBWTF operators, etc).
2. The database should be able to support data storage and query for 10 years of data collected from all the entities with minimum of 30 second interval.
3. The database should be scalable to support 10000+ concurrent connections and should be able to store and process more than 100 Terabyte of data.
4. The CBST-BMW should generate automated alarms and alerts based on route deviations, data connectivity failure, instrument failures, etc.
5. The CBST-BMW should be able to identify delayed data published from the vehicle due to network connectivity failures and mark those data separately from the live connected data. This should help in reconstruction of the travelled site by the vehicle in-case of any transmission failure.
6. The CBST-BMW should be able to send pre-configured template based SMS and Emails for alerts and alarms generated based on the configured rules. This feature should be a built-in capability of the CBST-BMW and not external application software.
7. The CBST-BMW should have facility to transfer data to other server at regulator side at periodic interval for data backup and recovery requirements.
8. The CBST-BMW should be able to generate report on alarms/events and violations/deviations with vehicle tracking and period wise say weekly, monthly, annually etc.
9. The CBST-BMW should provide automatic notification to the healthcare facility and CBWTF operator inbox for all new notifications and action items like fixing communication issues, route deviations, missing waste etc.
10. The CBST-BMW should be able to support data encryption and security at the server side. The data received from biomedical waste generators and CBWTF operator, etc. should be decrypted and data authenticity ensured.
11. The CBST-BMW captures the IP address and other device information from which the data was sent for audit purposes.
12. The CBST-BMW should be available 24/7 for 365 days for live GPS Tracking. The system should provide automated redundancy so that Live data from vehicles, operators, generators, recycler, utilizer/co-processor should be able to continuously send the data.

5.8 Data Export and Archival Requirement

1. The software should be able to export the reports for the various stakeholders and support export to Word or excel or pdf formats.
2. The software should be capable of archiving the collected data at specified intervals based on the data archiving policy. Currently any data after 15 years is archived. A shorter archival window will be specified for the live GPS tracking data from the vehicles.

5.9 Data Acquisition Requirements

1. The CBST-BMW for biomedical waste should also support an open Application Programming Interface (API)/ web services and TCP/Dialup that enables existing systems of barcode system adopted by the CBWTFs/captive treatment facilities (deep burial)/SPCBs/PCCs for consent management, to push the data to the central system.
2. The GPS Tracking Vehicle should directly transmit the Live GPS data from the Vehicle Tracking device without any intermediate hop or intermediate servers. All data should be directly received from the GPS Tracking Vehicle.
3. No data shall be accepted as output from GPS Simulator or mobile phone etc. The data from valid IMEI registered with the vehicle only will be accepted by the software.
4. During internet connectivity failure or a communication issue with the central server, the GPS Vehicle Tracker should store the data locally and retransmit when the transmission can be restored. Any such delayed transmission should be identifiable at the regulator side using data quality codes.
5. Each measurement should be associated with the data quality code inferred along with the auxiliary data such as battery levels, alarms, signal strength etc.

5.10 Corroboration and Workflow

1. The software should support corroboration between the various stakeholders by providing a built in workflow feature and an inbox feature. This feature should be a built-in functionality of the CBST-BMW and not additional software running separately to ensure that there is integration with the reporting module.
2. Whenever there is any a route violation or storage days exceedance or incomplete trace of biomedical waste, an alert should be generated in the corresponding inbox. The representatives from the HCFs, transporters and CBWTF operators should be able to update with the corrective actions and comments. These comments/reasons should show upon the graphs when the data for that particular period is viewed.
3. Healthcare Facilities, Transporters and CBWTF Operators should be able to inform the regulator of different maintenance events or incidents (vehicle breakdowns, route rerouting, accidents etc.) using workflow feature of the CBST-BMW.
4. The system should automatically generate events and inbox messages based on the route violations, anomalies and other incidents or software rules configured.
5. The system should provide the history of correspondence/communication between the various stakeholders and the regulator for specific events/workflows.

5.11 Data Validation

1. The Web Server Interface module should provide user interface for data validation and approval. The regulator should be able to select a particular time range and approve/reject the data with proper comments.
2. The Web Server Interface module should support manual and automated data validation and approval workflow to review the various stakeholders (i.e healthcare facility, transporter and CBWTF operator) data and approve by providing appropriate comments based on the data quality.

3. The Web Server Interface module should provide ability to annotate the data with the specific events/comments provided by the various stakeholders (i.e healthcare facility, transporter and CBWTF operator) such as maintenance schedules, vehicle breakdowns, accident etc.

5.12 Submission of Annual Reports by Stakeholders

1. The software shall have provision for submission of Annual Reports by Healthcare Facilities, Common Biomedical Waste Treatment Facilities and State Boards.
2. As per the format given by CPCB, the software shall have separate page for submission of Annual Reports.
3. The auto generated reports, based on the annual reports should be available with the software.

5.13 Centralized Barcode label generation and Distribution system

1. The software shall have provision for centralized generation of Barcode labels and allocation of the same through SPCBs.
2. Building appropriate interface with existing barcode tracking software to get integrated with central software.
3. The software should track the label, till its disposal and dynamic removal from tracking and archiving the information on the same.

5.14 Mobile Application Capabilities

1. Mobile Application should be developed for Android, and IOS Operating system.
2. Mobile Application should be supporting the needs for occupiers and Regulator needs for interacting with Central Software along with real time information.
3. For stakeholders/receiver view should show the live status of various vehicles scheduled for reaching the receiver facility (CBWTF facility).
4. The Transporter/driver view should show the live status of all vehicles owned by transporter and status of the biomedical waste loaded
5. Regulator should be able to view the individual state wise operations and also consolidated summary of various statistics with respect to biomedical waste
6. Mobile Application should support registration and status of the healthcare facility (including having captive treatment facility) and other biomedical waste generators, Common Biomedical Waste Treatment Facility Operator etc.
7. Mobile app will act as data entry, geo location entry, and various other entries having issues in emergencies.
8. Similarly, the MobileAPP will act as a visualization to stake holders for their data entered like geo locations of their waste carrying vehicles, manifest finalized for a route. Specific search for a specific type of waste, name of waste generator, route of transporting the waste, name of CBWTF etc.
9. To provide mobile application suitable for its various stake holders to enter the daily biomedical waste generated, to search for specific type, category, quantity, location based waste, track the waste till its disposal.
10. Design shall be finalized on SRS development.

6.0 Manpower Deliverables

1. One programmer has to be deployed at CPCB on five days a week in office hours at CPCB for the entire project duration.

i. Team Member: B. Tech., IT with at least two years of experience in the software development in open source programming or in the relevant discipline in which software is developed.

2. Support services will have to be provided, which will cater to the needs and co-ordinate between SPCBs/Stake holders and technical team to accomplish the given tasks in a given time frame.
3. Programmers should be capable to operate and create new pages in the system as per requirements of CPCB from time to time.

7.0 Training to CPCB officials and other Stakeholders

1. To conduct ONE DAY professional training program at least 12 days in an year to all its stakeholders like MoEF&CC / MoHFW / CPCB & SPCB/PCC officials and other stakeholders (i.e. generators, CBWTF operator, etc.) for operating the proposed central waste tracking system.
2. To provide detailed training to two core team members of CPCB in programming of the basic technology used to upgrade the software program for a period of atleast one week either at an Institute or at CPCB through certified professionals only.
3. To maintain the system for five years (01yr warranty+ 04 yr Maintainance including development) by assistance and deploying at least one programmer / IT Engineer at CPCB.

8.0 New Pages Development

Since the system is still evolving there are requirements all the time to upgrade/modify input and output in different query and reporting formats. Hence, development of such ten webpages per year is anticipated.

9.0 Intermediate Software & VM required for data transmission if any

1. Any intermediate software required for data transfer from the SPCBs/NIC/stakeholders etc. to central server at VM has to be provided by the firm.
2. VM for a period of atleast one year to operate the software is to be provided by the firm.

10.0 Software Upgradation/ Development Methodology

After the work award the developer will discuss the project requirements with CPCB officials and prepare SRS for the project. The SRS will be accepted by CPCB and firm will start writing code. The firm will provide Proto type and IT Division will analyze and provide its feedback. There will be three iterations for which firm will provide the change in source code without any additional cost. The firm will make final presentation before the CPCB Committee and Competent Authority, CPCB. Suggestions made by Committee or Authority will have to be incorporated by the firm and the system will be made LIVE! in NIC domain after auditing. The firm will provide the VM for initial period and operate the system. NIC domain will be procured by CPCB and thereafter the firm will deploy and operate the software in NIC domain. Any further development required in the software till the project duration will have to be done by the firm.

11.0 Eligibility Criteria:

1. The firm should be in existence for over 03 years in the development of on-line system (in support of the claim copy of Registration Certificate should be produced) **Document No. '1'**.
2. Firms must be engaged in at least 03 Projects (only those project shall be considered which can be demonstrated live) of software development and maintenance during last four years

(i.e. financial year 2018-19, 2019-20, 2020-21 and 2021-2022) in any two of the following fields:

- i. Web Developments & Mobile APP development,
- ii. GPS Tracking & Integration development using open source platforms.
- iii. GIS deployment and a platform software development
- iv. SCADA implementation

3. Experience of having successfully completed similar works during last 7 years ending last day of month previous to the one in which applications are invited should be either of the following: -

- Three similar completed works costing not less than the amount equal to 40% of the estimated cost.
or
- Two similar completed works costing not less than the amount equal to 50% of the estimated cost.
or
- One similar completed work costing not less than the amount equal to 80% of the estimated cost.

Table 1

S. No. (01)	Name of Project (02)	Type of project (03)						Software development component details Platform /DB /Language etc. (04)	Projects Undertaken				Software development component cost (10)	
									Start Date (05)	Expected Delivery date (06)	Actual delivery Date (07)	Cost (09)		
01		M	M	A	W	I	o							
02														
03														
04														
05														

Submit a summary sheet as per Table 1 of projects and attach supporting documents for the claims. **Document No. '2'**.

4. Firm should not have been blacklisted by any Government Agency. Self-declaration to be provided. **Document No.'3'**.

5. Firm should provide the customer list containing at-least two Organizations in Govt. /PSU /Semi Govt. Sector as per table 2. **Document No.'4'**.

Table 2

Sl. No.	Name of Organization	Org. Address	Concerned Officer			Name of Project	Cost of Project	Date of award of Project	Date of Compl Etion Of Project	Softwa re compo nent modul e name
			Name	Mobile	E-mail					
01										
02										
03										

6. Firm should have a valid ISO certification for software development/IT enabled services/ data management of process industries. **Document No.'5'**
7. The firm should have valid PAN and GST registration certificate. (Copy to be produced). **Document No.'6'**.

12.0 Selection Criteria

The software consultants/firms selection criteria are as below:

12.1 Parameters

The firm has to qualify the eligibility criteria as given below;

S. No.	Parameters	Number of project dealt in the specified area in last three years till date
1	Software Development with GPS Tracking	
2	Web Development with Mobile Application	
4	GIS Software development	
5	Working Experience with Government Organization and other organization	
6	Educational Qualification and working experience of the proposed team leader and members	
7	Team Leader having B. Tech (in relevant field) with more than 05 years of experience (minimum 3 year experience in any of the item at S. No. 2 of the eligibility criteria)	
8	Team Members having B. Tech with 05 years experience	
9	Team Member having B. Tech with 05 years experience of deployment at the client side	
10	Technical presentation (approach and work plan for the NHWTS)	

Document 8 & 9 to be submitted for each project done;

- Copy of Work award letters
- Copy of Work Completion Letters

12.2 Details of the Proposed Team

Team	Proposed Team Composition	Details of Team Members proposed to be deployed for the project work
Team Leader	Designation	
	Qualification	
	Experience	
	Skill	
	Responsibility	
Member 1	Designation	
	Qualification	
	Experience	
	Skill	
	Responsibility	
Member 2	Designation	
	Qualification	
	Experience	
	Skill	
	Responsibility	
Member 3 (Permanent residence engineer for next four years during AMC)	Designation	
	Qualification	
	Experience	
	Skill	
	Responsibility	

Submit the details as **Document No 10**

Note:

- *Team Leader cannot be engaged for more than one project and he/she shall also be regular employee of the consultant.*
- *Team Members to be engaged for this project and he/she shall also be regular employee of the consultant.*

13.0 Hardware Requirement for regulator side

The firms shall provide complete details of hardware requirement such as physical servers for DR, VC cloud requirement at NIC, Firm may also look into the requirement of additional Servers and security devices shall be proposed by the firms for Video Streaming, encrypted format along with necessary software. Requirement of firewalls, OS systems required, back-up requirement etc,

14.0 Data base specification for regulator side software

Sl. No.	Specifications	
1.	Software	Highly scalable Open Source database capable of storing time-series geospatial data like Cassandra, Hbase, MongoDB and compatible with GIS platform
2.	Storage	Minimum 100 TB
3.	Concurrent connections	Support minimum of 10000 concurrent connections
4.	Availability	High availability with 99.95% availability
5.	Latency	<5 seconds for standard site specific query
6.	Limitation	With No user number limitation
7.	Processing capability	Parallel Processing capability
8.	Expandable	Expandable as per requirement

Web-Server Interface Requirement (Apache httpd, nginx)

15.0 Schedule of “Software Development for Centralised Barcoding System for Biomedical Waste”

S. No.	Activities to be carried out	Aug-Oct, 22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23
1	Advertisement & Tendering & Finalization							
2	SRS Development							
3	Development of Software							
4	Development of Mobile Application							

5	CERT in Certification - Obtaining VM-NIC - Hosting							
6	Training							
7	Procurement of Servers, Software & Other peripheral items							
8	Fully Functional and connected system							

16.0 CPCB Deliverables

- Working space to the Programmer
 - Access to WM-I Div. and IT Div. during working hours.
 - Procurement of NIC domain for hosting application
 - Remote access of database/application.
 - VM at NIC

17.0 Penalties

17.1 Timeline for Delivery and Penalty for Delay:

S. No.	Items/Activity	Penalty for Delay
1	Signing of agreement with the successful bidder	1. System should be fully functional with all modules in 08 months. <i>Subsequent to that a penalty @1% of the project cost per week (sealable at maximum of 15% of the project cost) will be levied.</i> 2. During the O&M phase, the deployed solution shall be running with 99.5% efficiency & uptime. Any deviation shall
2.	Inception report to be submitted	
3.	SRS Development	
4.	Development of Basic Central software	
5.	Development of Mobile App.	
6.	Establishment of Central Server including networking with VM other than NIC with DDS & Dashboards	
7.	Testing and Certification of software Solution	
8.	System Ready for launch	
9.	Training	

		be liable for penalty of Rs. 1,000/- per day.
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17.2 Breakdown of system

1. In case the system breaks down and software has stopped functioning (i.e. no output available on web site marked for the system) the same should be made functional within maximum 2 (two) hours of time (for which no separate communication will be made from CPCB side) else penalty of Rs. 2000/- per hour (number of hours) will be levied on the firm and the Board shall have the right to deduct the same from the running bills of the firm.
2. In case the system throws error messages on website and data is not displayed or wrong data are displayed on web site marked for the system, the same should be corrected within two hours' time (02 hrs.) (for which separate communication shall be made by CPCB with error message's snapshots) else penalty of Rs. 1000/- per hour (One thousand rupees only) per error message shall be imposed on per hour basis.

17.3 Maximum Penalty applicable:

The total penalties amount inclusive of all penalties shall not be more than 25% of the yearly contract value. If penalties amount happens to be more than 25% of yearly contract value, then CPCB shall have the right to terminate the contract and shall deduct the maximum of 25% amount of yearly contract value and release the balance payment to the firm. During AMC period, the calculation will remain same and the amount shall be deducted from the PBG submitted to CPCB if penalty amount is higher than AMC amount.

18.0 Mode of Payments:

- a. Milestone 1: 10% of Total project cost shall be released after SRS Development (End of 4weeks) as project initiation cost against BG for equivalent amount
- b. Milestone 2: 25% of total project cost shall be released after 16 weeks i.e. at the time of completion of Development of Central Software with all its utilities against BG for equivalent amount.
- c. Milestone 3: Balance 65% Payment after LIVE! i. e. after 06 months from the date of work award after penalty deduction if any.
- d. Milestone 4: AMC of the software on successful operation of the software on six monthly basis after its one year warranty period.

Any payment to be released under the project will be subject to following conditions:

- i. Submission of final bill in triplicate,
- ii. Submission of source code in soft copies
- iii. Submission of two hard copies of software manual
- iv. Functionalities of software operational such as installation of new server, installation of new agency, display at web page etc.
- v. Certification from IT Division verifying that system is functional.
- vi. Penalty if any shall be deducted from the payments without notice.

Cost of the project work should be clearly mentioned by the firm. The Cost should be excluding all taxes etc. However, taxes should be clearly mentioned in the financial proposal submitted by the firm to CPCB. Taxes would be payable as per Government of India rules applicable from time to time.

19.0 Technical terms and conditions

1. First Prototype should be submitted as per schedule and thereafter final software should be submitted with three iterations.
2. The server of system has to be placed at location like Software Technology Parks of India, NICSI Shastri Park Data Centre, firm shall be responsible to provide software support on remote.
3. Efforts have to be made by the firm to get the continuous data in the system.
4. In case of any bug / error in the existing functionalities the firm will provide resolution.
5. The support Team should define the time required to resolve the incident & communicate the same to the contact person of CPCB through email.
6. Once the incident is resolved an email statement for the same would be initiated by the firm & the incident be considered closed after acknowledged by CPCB.
7. In case of new functionality requirement, it should be communicated in writing through mail and the firm shall respond within two working days along with the roadmap of time estimate.
8. The contract may be terminated any time, if CPCB desires to do so without assigning any reason with 15 days' notice to the firm in writing.
9. The contract can be renewed only upon written request by the firm to continue the contract on mutually agreed terms and conditions in future.
10. The software system / code developed shall become the property of CPCB and CPCB is free to replicate, reproduce, multiply or distribute and deploy the software at any other location. The CPCB will hold all the copyrights and IPR of the written code.
11. It is expected that at least three members team will work on the project. The educational qualification and work experience of team members should essentially be:

Team Member 1: B. Tech., with at least two years of experience in the software development.

Team Member 2: B. Tech., with at least two years experience in software development. Team Member 3: B. Tech., Computer/ IT with at least two years experience in networking. The firm may propose bigger team with higher qualification mentioned above, as per their work requirement understanding till the project delivery. Once it starts rolling after Live! Only one engineer will be required for the routine works. If any more assistance is required, the firm will provide support from its office.

12. First time auditing till LIVE! is the responsibility of the firm/bidder and thereafter if required auditing will be borne by CPCB and the responsibilities of closing NCs is of the firm.
13. The contract period will be for five years starting from the date of Live!
14. The quoted rates should be applicable during project duration and quoted rates shall not change for the project duration.
15. CPCB shall award the complete work to the lowest quote on total value basis.
16. The firm should quote in all works listed in the commercial document, otherwise bid will be disqualified / rejected.
17. There will be a team formed at CPCB to crosscheck the data availability, assessing the performance of the firm. This team will cross verify the data availability, new work assignment progress and any other related issue and shall communicate to the firm in writing. This team will also calculate the penalty as per mentioned clauses and recommend the amount of penalties considering all related issues of the software and other station related issues. The firm shall communicate with the team and should clarify each issue time to time.
18. If there is no running bill is pending the firm is liable to pay the penalty amount levied by CPCB on the firm as per penalty clauses of this document within 15 days time after the issue of the letter by CPCB to the firm, else the CPCB shall have the right to take legal action against the firm.
19. In order to meet the objective of the Centralized Barcode System for tracking Biomedical Waste, there might be changes or upgradation in the data input/output and processing of the data. The same shall be considered as part of the project and no extra cost shall be payable to the awardee firm.

20.0 General Terms and Conditions

To ensure that CPCB is provided with complete and accurate information in response to the attached document, it is requested that each software consultant responding to the document agrees to read the software specifications in detail, quote the time required, and adhere to the following terms and conditions.

1. Firm has to suggest:
 - a) From time to time the up-gradation requirements of technology.
 - b) Hardware and software requirement for Video Streaming application
2. **Performance Security:**

Performance Security is to be provided by the successful bidder awarded the contract. Performance Security should be for an amount of 3 % of total Project cost except taxes. Performance Security may be furnished in the form of an Account Payee Demand Draft, Fixed Deposit Receipt from a Commercial bank, Bank Guarantee from a Commercial bank. The Performance Security should remain valid for a period of Sixty-two months from the date of letter of intent issued by the Board and should be submitted within 15 days of issue of letter of intent. If Performance security is not submitted within 15 days of issue of letter of intent, bid will be considered as non-responsive and EMD shall be forfeited.
3. Bid security (EMD) if any will be refunded to the successful bidder on receipt of Performance Security while EMD of unsuccessful bidders will be returned without interest on the finalization of work award.
4. The bidder is expected to examine all instructions, forms, terms and conditions and specifications mentioned in the bidding document. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding document in every respect will be at the bidder's risk and may result in the rejection of it's bid.
5. This call of tenders does not bind the Central Board to place order. The Tenders submitted in response to this invitation can be rejected without assigning any reason.
6. The final authority for acceptance of a bid will rest with the Chairman, Central Pollution Control Board who does not bind himself to accept the lowest bid and is vested with the authority to reject any or all of the bids received without assigning any reason.
7. The bid shall contain no interlineations, erasures or overwriting words except as necessary to correct errors made by the bidder, in that case such correction shall be initialed by the person or persons signing the bid.
8. Canvassing in any form will disqualify the Bid
9. **Adherence to timeline** – The bidder agrees to adhere to the timeline for the software development and delivery within stipulated time lines.
10. Subletting of the work is not allowed without prior written permission from CPCB.
11. **Costs and Expenses** – Any costs (and expenses) incurred by the bidder in responding to the tender document, Pre Bid engaging in any other activity required in connection to this bid are to be solely borne by the bidder; these will not be reimbursed by CPCB.

12. **Right to modify the list of functionalities and scenarios** – The list of scenarios / functionalities / requirements detailed in SRS document is not exhaustive. CPCB, at its sole discretion, may modify or delete any of the existing scenarios, or provide additional scenarios. Any such modification / addition shall be duly communicated to the bidders.
13. **Right to interview** – As a part of the evaluation process, CPCB may interview the bidders who participated in the Bid. The interviews may be conducted over telephone, video conference, or face to face. CPCB reserves the right to reject any bidder.
14. **Right to Share Proposal with designated personnel** – The response to the tender submitted by the authorised representative of the bidder, along with all the supporting documents / materials shall become the property of CPCB and shall not be returned to the Bidder. CPCB does not undertake to hold the content of the responses to this tender document and any subsequent information or contractual documents related thereto (“Bidder Information”) in confidence. Further, CPCB reserves the right to disclose any and all Bidder Information on a need to know basis to its employees, agents and subcontractors.
15. **Right of Refusal** - The bidder understands and agrees that CPCB reserves in its absolute discretion the right to select or reject any bidder any time during or after the tender process or any subsequent evaluation or contractual process. The bidder further understands and agrees that any such selection or rejection may be based on the bidder’s responses to this Bid, on any subsequent information or contractual documents related thereto, or for any other reason whatsoever.
16. **Ownership of documents and copy rights** - Complete Software developed under this project, documentation and other work products will be fully owned by CPCB. CPCB will get unlimited rights to modify, enhance, install and otherwise use the software as it deems fit.
17. **Transfer of ownership** - The bidder shall grant the purchaser a perpetual license to use the software without any additional payment or obligations to enter into a contract for maintenance or support. There is no limit on the number of users for Software and for the Central Server Software. Concurrent number of servers may be used if required. All study documents, data and specification prepared by the Bidder shall be the property of CPCB.
18. **Compatible with NIC and NICS** – Bidder should not be using any 3rd party tool which is not allowed by NIC or NICS while hosting in their domain. It’s the responsibility of the Bidder to provide the software documentation and engage in the coordination activities for setting a part of the software or full at the NIC server.
19. In case of disintegration or dissolution of Bidder due to any reason what so ever it is, the individual members will be accountable for deliverable to CPCB. If Bidder’ firm is purchased by another firm or agency, that new owner or agency shall be responsible for deliverables to CPCB in too.
20. **FORCE MAJEURE:** Firm 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 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 Bidder to the owner by registered letter. In the event of delay due to such cases a length of time equal to the period of force majeure or at the option of the owner the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of owner. In the event of such cancellation the bidder shall refund any amount advanced to the bidder by the Board and delivery back any material issued to him by the Board and release facilities, if any, provided by the Board.

21. **Taxes and Duties:** The firm shall be entirely responsible for all taxes, duties, license fees, and other such levies.
22. **Integrity Pact:** Bidder shall submit integrity pact as per the format of 'Integrity pact' given at Annexure along with technical proposal.

21.0 Instructions for Online Bid Submission:

The bidders are required to submit soft copies of their bids electronically on the CPCB portal as well as CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

21.1 Registration:

1. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link "**Online bidder Enrolment**" on the CPP Portal which is free of charge.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

21.2 Searching For Tender Documents:

1. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
2. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

3. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

21.3 Preparations of Bids:

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders.

Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

21.5 Check list for the Bidder

1. Bid on original format of the tender only
2. Submit all documents as prescribed in Eligibility & Selection Criteria from Documents 1 to 10 duly signed by the authorized representative.
3. EMD (Document-11) & Tender Fee (Document-12) for software development or documentary evidence for exemption of EMD & Tender Fee.
4. Price bid must be Part-II of the bid in the form provided at Annexure II of the Bid document.
5. The Taxes, etc. must be quoted clearly separately in the price bid only.
6. Price bid form should not be with any condition.
7. CVs of team members likely to be deployed for the project should be attached with technical bid. (Document-10)
8. Annexure I, II & III signed, filled & submitted with technical bid.

21.6 Assistance to Bidders:

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
2. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

22.0 Method of Evaluation and Award of Contract

1. Prior to evaluation of Proposals, CPCB will determine whether each Proposal is responsive to the requirements of the RFP. A Proposal shall be considered responsive only if:
 - a. it is received in the specified format;
 - b. it is received by the due date including any declared extension thereof;
 - c. it contains all the information (complete in all respects) as requested in the RFP;
 - d. it does not contain any condition or qualification;
 - e. it is signed by authorized signatory at all the required places.

CPCB reserves the right to reject any Proposal, which is non-responsive and no request for alteration, modification, substitution, or withdrawal shall be entertained by CPCB in respect of such Proposals.

23.0 Evaluation of bids

1. Bidders are requested to submit all requisite documents as per the uploaded RFP along with their bids failing which the bids are liable to be rejected. A duly constituted Evaluation Committee will scrutinize and evaluate the bids for selection of an agency.
2. From the time the bids are opened to the time the contract is awarded, the Agency should not contact the CPCB on any matter related to its Technical and/ or Financial bid.
3. Any effort by the Agency to influence CPCB in verification, evaluation, ranking of bids and recommendation for award of contract may result in the rejection of the agency's bid.

For qualifying in the techno-commercial bid, CPCB should have received the EMD submitted by the bidder or proof of exemption there from

The Offered software by the bidder should meet the criteria of CPCB

Bidder should not have been debarred or holiday listed by any State / Central Government agency for a period that is not over as on the due date of this tender

Price bid of only those vendors would be opened who qualify Technical evaluation. **Price bid shall be evaluated on the overall Highest Quality and Lowest Cost Basis.**

24.0 Criteria for Evaluation of Technical bid:

Evaluation Committee shall evaluate the Technical bids on the basis of their responsiveness to the eligibility criteria mentioned in RFP. The eligible technical bids shall then be evaluated as per defined evaluation criteria **section no. 11.1** of the RFP.

Only Agency obtaining a total bid evaluation score of 70 (on a scale of maximum of 100) or more, would be declared technically qualified. Every technical bid shall be awarded an absolute technical score of 'T' marks out of a total of 100 marks. Agencies scoring less than 70 in the evaluation criteria (section 11.1) will be disqualified and their financial bids will not be opened.

24.1 Criteria for Evaluation of Financial bid:

The Financial Bids of the technically qualified bidders will be evaluated as per the evaluation criteria explained below.

The lowest evaluated Financial bid (**Fm**) will be given the maximum financial score of 100 points. The financial scores (**F**) of the other Financial bids will be computed as per the formula for determining the financial scores given below:

$$F = 100 \times (F_m / F_b)$$

Where,

Fb =Evaluated amount of financial quote by the particular bidder. **Fm** = Lowest evaluated amount of financial quote by the bidder.

Financial bids of only those Agencies which are declared technically qualified shall be opened on the specified date and time, in the presence of representatives of bidders who choose to attend. The name of the Agency, their technical score (if required), and their Financial bid shall be read aloud.

24.2 Method of Selection:

In deciding the final selection of the Agency, the technically qualified bid will be given a weightage of 70% on the basis of criteria for evaluation. The price bids of only those Agencies which qualify technically will be opened. The bid with the lowest cost will be given a financial score of 100 and the other bid given financial scores that are inversely proportional to their prices. The financial bid shall be allocated a weightage of 30%. For working out the combined score, the CPCB will use the following formula:

$$\text{Total points: } (0.7 \times T(s)) + (0.3 \times 100 \times F_m/F_b)$$

The bids will be ranked in terms of total points scored. The bid with the highest total points (H-1) will be considered for award of contract.

The Evaluation Committee will correct any computation errors, in case of discrepancy.

24.3 Negotiations:

Normally there will be no post tender opening negotiations and it would be only on exceptional circumstances, if considered necessary. This shall be held only with the Agency which is evaluated as H-1 bidder after combined evaluation of the Technical and Financial bids, as indicated above. Under no circumstance, the financial negotiation shall result into an increase in the price originally quoted by the Agency. 25.0 Competent Authority's Right to Vary to Vary Items/Activities at the time of award

The Competent Authority shall have the right to make any alterations, omissions, additions or subtractions in items/services at the time of award of contract. The Competent Authority will give such intimation to the successful Bidder, and additional cost/deduction in the Bid prices, based on the price schedule submitted by him, will be worked out with the Bidder.

26.0 Labour Laws and Safety Measures

Agency shall comply with all the provisions of labour law related legislation/acts as enacted by Government from time to time and in case of any prosecution / penalty, agency shall be liable for the same.

Agency shall be liable for payments of duties viz. P.F., E.S.I. etc. including any compensation payable under Workmen Compensation Act to the professionals employed by the Agency. CPCB shall have no responsibility, financial or other liabilities towards professionals employed by the Agency.

Agency will take all safety measures / precautions during the work. For any accident due to negligence / any other reason during the period of contract period, it shall be sole responsibility of the agency and CPCB shall not be held responsible for the same.

27.0 Applicable Law and Jurisdiction

his RFP, including all matters connected with this RFP, shall be governed by Indian laws, both substantive and procedural, for the time being in force and shall be subject to the exclusive jurisdiction of Delhi Court, if required.

28.0 Insurance and Medical

It shall be the responsibility of the agency to insure their staff and equipment against any exigency that may occur at site. Agency will also take insurance cover for third party liability, which might occur due to damages caused to their manpower, equipment etc. CPCB shall not be responsible for any such damages.

Medical facilities (as per law) for professional including insurance of the professional on site will be provided by the Agency.

29.0 INDEMNIFICATION

1.0 Agency shall at times indemnify and keep CPCB indemnified against all claims/ damages etc. for any infringement of any Intellectual Property Rights (IPR) while providing its services under this contract.

2.0 Agency shall at all times indemnify and keep CPCB indemnified against any claims in respect of any damages or compensation payable in consequences of any accident or injury sustained or suffered by its (Agency) employees or caused by any action, omission or operation conducted by or on behalf of Agencies.

3.0 Agency shall at all times indemnify and keep CPCB indemnified against any and all claims by employees, workman, suppliers, agent(s) employed engaged or otherwise working for Agency, in respect of their wages, salaries, remuneration, compensation or the hike.

4.0 All claims regarding indemnity shall survive the termination or expiry of the contract.

30.0 FORCE MAJEURE

Firm 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 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 Bidder to the owner by registered letter. In the event of delay due to such cases a length of time equal to the period of force majeure or at the option of the owner the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of owner. In the event of such cancellation the bidder shall refund any amount advanced to the bidder by the Board and delivery back any material issued to him by the Board and release facilities, if any, provided by the Board.

31.0 Taxes and Duties:

The firm shall be entirely responsible for all taxes, duties, license fees, and other such levies.

Instructions for Online Bid Submission:

The bidders are required to submit soft copies of their bids electronically on the CPCB portal as well as CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at:<https://eprocure.gov.in/eprocure/app>.

Registration:

Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “**Online bidder Enrollment**” on the CPP Portal which is free of charge.

As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.

Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.

Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.

Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.

Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

32.0 Searching for Tender Documents:

There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.

Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

33.0 Preparations of Bids:

Bidder should take into account any corrigendum published on the tender document before submitting their bids.

Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of

each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders.

Bidders can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

34.0 Submission of Bid:

Bids shall be submitted online only at CPPP website: <https://eprocure.gov.in/eprocure/app> Bidder/Contractor are advised to follow the instructions “Instructions to Bidder for Online Bid Submission” provided in the “Annexure-I” for online submission of bids. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.

For any clarification regarding tender, contact to Sh. B. Vinod Babu, Head & AD, IT Division at 011-43102296, email: bvbabu.cpcb@nic.in or Sh. Archit Uprit, Scientist ‘D’, IT Division, at 011-43102301, email: archituprit.cpcb@nic.in or Ms Youthika Puri, Scientist ‘D’ at 011-43102321, email: youthika.cpcb@nic.in in Central Pollution Control Board, Delhi .

Bidder shall submit integrity pact as per the format of ‘Integrity pact’ given at **Annexure-VII** along with technical proposal.

Not more than one tender shall be submitted by one bidder or bidders.

Bidder who has downloaded the tender from the CPCB website <http://www.cpcb.nic.in/tender.php> (for reference only) and Central Public Procurement Portal (CPPP) website <https://eprocure.gov.in/eprocure/app> **shall not tamper/modify the tender form including downloaded financial bid template in any manner**. In case if the same is found to be tempered/ modified in any manner, tender will be completely rejected and EMD would be forfeited and Bidder is liable to be banned from doing business with CPCB.

Intending Bidder are **advised to visit again** CPCB website <http://www.cpcb.nic.in/tender.php> (for reference only) and **CPPP website** <https://eprocure.gov.in/eprocure/app> **regularly till end date of submission** of tender for any corrigendum / addendum/ amendment.

At any time, prior to the deadline for submission of Bids, CPCB may, for any reason deemed fit by it, modify the Bid documents by issuing suitable amendment(s) to it. The amendment will be uploaded on CPP & CPCB website only. In order to provide reasonable time to the prospective Bidders to take necessary action in preparing their Bids as per the amendment, CPCB may, at its discretion extend the deadline for the submission of Bids and other allied time frames, which are linked with that deadline. Prospective bidders are advised to visit/see <https://eprocure.gov.in/eprocure/app> & <http://cpcb.nic.in> on regular basis for any change in NIT schedule, amendment/ corrigendum in Bid Document including technical requirement.

1. Bids will be opened as per date/time as mentioned in the Tender **Important Date Sheet**.
2. The Central Pollution Control Board reserves the right to cancel all the tenders without assigning any reasons at any time.
3. Canvassing in any form in connection with tender is strictly prohibited and the tenders submitted by the contractor who resort to be canvassing, will liable to be rejected.
4. All rates should be quoted in the prescribed 'Financial Bid' template (Annexure-II) in the tender. No documents may be enclosed with financial bid.
5. For a bidder, who has participated in the tender bids, it will be automatically assumed that he had accepted all the terms and conditions of the tender.
6. On acceptance of the tender, the name of the accredited representative (s) of the bidder who would be responsible for taking instructions from CPCB shall be communicated to the CPCB.
7. The tender shall remain open for acceptance for a period of 180 days from the date of opening of tenders.
8. Merely submitting the tender with all the requirements does not bind the CPCB to accept the lowest tender and Competent Authority, CPCB reserves the right to reject any or all of the tenders received without assigning any reason. Tenders not fulfilling any of the prescribed conditions or incomplete in any respect are liable to be rejected.
9. Technical bid of only those contractors will be opened, who submit the earnest money in the prescribed manner.
10. Failure of the successful tenderer to comply with the above requirement i.e. deposition of performance security, shall constitute sufficient grounds for cancellation of the letter of award & forfeiture of the earnest money.
11. The tender shall be submitted online in two parts, viz., Technical Bid and Financial Bid.

A. TECHNICAL BID: The following documents are to be furnished by the bidder along with Technical Bid as per the tender document:

- a. Scanned copy of all support documents mentioned at "Eligibility Criteria"
- b. List of Engineers employed in firm along with their CVs.
- c. Preventive maintenance schedule.
- d. A scanned copy of Tender Acceptance Letter (**Annexure-III A**) failing which bidder's bid may be rejected.
- e. A scanned copy of Checklist Section properly filled and signed (as per Annexure-IV).
- f. Scanned copy Earnest Money Deposit should be uploaded on the portal.

The original EMD in physical form duly sealed in envelope super scribed with "EMD for the tender no. <Tender No> for **Project: Development of Centralized Barcode System for Biomedical Waste (CBST-BMW)** must be reached at CPCB Office on or before Bid submission end date at the address mentioned below:

Divisional Head (IT)
Central Pollution Control Board
Parivesh Bhawan, CBD cum Office Complex,
East Arjun Nagar, Delhi 110 032

by post/speed post/courier/by hand on or before Bid Submission End Date & Time as mentioned in Critical Date Sheet. Otherwise the tender will be summarily rejected without assigning any reason.

B. FINANCIAL BID –

Schedule of Financial bid is provided in the form of BOQ in .xls format, along with this tender document at <https://eprocure.gov.in/eprocure/app> Bidders are advised to download this template as it is and quote their offer/rates in the permitted column and upload the same in the manner. In case if the same is found to be tempered/ modified in any manner, tender will be completely rejected and EMD would be forfeited and bidder is liable to be banned from doing business with CPCB.

The rates to be quoted in Financial Bid should be in Indian Rupees and without Taxes. The rate quoted shall be valid for 180 days from the date of opening of technical bid. The period can be extended with mutual agreement.

Note: Financial bids of only those bidders will be opened whose technical bids are found suitable by the committee appointed for the purpose. Date and time of opening of price bids given is tentative. Change if any will be uploaded on portal. In exceptional situation, an authorized committee may negotiate price with the qualified bidder quoting the lowest price before awarding the contract.

FORFEITURE OF EMD: - Not Applicable

The EMD will be forfeited under the following conditions:

1. If the Bidder withdraws or amend, impairs or derogates from the tender in any respect within the 180 days' period of validity of the tender.
2. If the bidder withdraws the bid before the expiry of the validity period of 180 days of the bid or within the time frame of extension given by CPCB in special case communicated before the expiry of the bid.
3. If the bidder fails to comply with any of the provisions of the terms and conditions of the bid document.
4. If the selected bidder fails to execute agreement in prescribed format and Furnish the bank guarantee within the prescribed time.

RETURN OF EMD: Not applicable

35.0 Check list & Assistance for the Bidder

1. Bid on original format of the tender only
2. Submit all documents as prescribed in Eligibility & Selection Criteria from Documents 1 to 12 duly signed by the authorized representative.
3. A brief writes up on scope of implementation of CBST-BMW in CPCB (based on understanding of the bidder) as per RFP
4. Price bid must be in the format of .xls format as provided separate BOQ along with Bid document.
5. The Taxes, etc. must be quoted clearly separately in the price bid only.
6. Price bid form should not be with any condition.
7. CVs of team members likely to be deployed for the project should be attached with technical bid.
8. Annexure I, III & III-A signed, filled & submitted with technical bid.
9. Bidder shall submit integrity pact as per the format of 'Integrity pact' given at Annexure VI along with technical proposal.

Assistance to Bidders:

Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

ANNEXURES

BID FOR - Development of Centralised Barcode System for Tracking of Biomedical Waste

Annexure- I

APPLICATION FORM

(To be filled by the bidder)

1.	Name and full address of the Bidder including Telegraphic Address/Telex No. and Fax No. :	
2.	Name and Designation of the Head of the Firm/Supplier and his Telephone No :	
3.	i) In case the supplier is located out of Delhi; Name of the official responsible in Delhi, if any. ii) Name, Designation, Address Telephone & Fax Numbers of the Authorized Person who may be contacted during the process of the software development concerned under this document : (Applicable for all the Bidders)	
4.	Whether Earnest Money Deposited (Amount : Rs. 4 lakhs in favour of Central Pollution Control Board, payable at Delhi)	
5.	If Yes, Demand Draft No, Date and Name of issuing Bank. :	
6.	Validity of Proposal :	180 days

7.	Income Tax Clearance Certificate attached (Latest) (Yes or No) with PAN No.	:	
Place		Signature with stamp	

Annexure-II

FINANCIAL BID FORM – CBST-BMW

File No:

Details of BOQ showing quantity, specification and other details of the system offered. (to be filled by the bidder and must be kept on “Price Bid” part of the Tender)

Sl. No.	Item description	Qty	Unit rate in figures in Rupees	Taxes (Sales Tax, G.S.T. etc.)*	Total cost with GST
1.0	Develop Centralized Barcode System with capability to integrate and fetch data from different applications being used by CBMWTFs across the country, including integration software, development of Mobile App for dashboard, Bar code label management module, Web-portal analytics and MIS dashboard, etc as per scope of work given at Section 4.	01			
2.0	Development of Biomedical Waste Transportation Vehicle Tracking Application with Interface development for GPS device (with interface software for 10 devices), facility for video streaming of movement of vehicles (with interface software for 10 devices) including visualise the software on Google and Bhuvan maps with Q-GIS. Including features for route deviation detection and SMS alert Generation.	01			
3.0	Additional Requirements				
(a)	Integration of Barcode tracking systems with Central Tracking System (essential) (pl specify cost of each integration)	300			
(b)	Develop module for viewing fixed and stationary video streaming from vehicles during transit and from CBWTFs (configuring 10 types of video devices) with capability to take remote pictures and short videos	01			
(c)	Additional Interface software (Protocol) development of Video Device if required	01			
(d)	Additional Interface of GPS device software (Protocol) development if required	01			
(e)	Additional interface of GPS cum Video Device software (Protocol) development if required	01			
(f)	Waste accounting and auditing module along with Annual Report Generation as per BMW M Rules, 2016	01			
4	Support				
(a)	Warranty of 01 year				
(b)	Annual cost of technical support centre with 4 nos of engineers for data/device integration (for 2 years) after go live	2			
(c)	One year software hosting at cloud server				
(d)	AMC every year renewable in performance verification including integration of remaining devices required to be integrated into system and other day to day configuration work, GIS layers integration and	4			

Sl. No.	Item description	Qty	Unit rate in figures in Rupees	Taxes (Sales Tax, G.S.T. etc.)*	Total cost with GST
	depiction, additional report development. DC & DR Operation in NIC Cloud domain for project duration (4 years)				
(e)	SMS Pack. Suitable pack to be purchased by the firm as and when required as consumable for project (till the end of warranty period)	LS			
(f)	Security audit of software after changes as and when required by NIC	LS			
(g)	Development of new dashboards or pages as and when required during the project duration (unit rate)	01			
(h)	Additional 01 Day Training Program (Organizer CPCB; Expert Manpower to be provided by firm (atleast two) at Delhi) (unit rate)	01			
(i)	Additional Annual Reporting Interface if required in future (unit rate)	01			
(j)	Additional Manpower, if required at CPCB for preparing reports/ managing day to day activities or to integrate and configure video devices, GPS devices, DVRs etc. and may require visit@ to occupiers for any device configuration in the system. Separate order shall be placed in such case. (unit rate)	01			
(k)	Additional helpdesk Manpower, if required to be increased by one Customer Support Executive for One Year.	01			
(l)					
	Net Cost				
	GST				
	Total Cost with taxes				

Note: Financial bid will be evaluated based on total cost of the project for the quantity mentioned in above Table.

* Tax Rate will be governed as per govt. rules at the time of payment @ For out of Delhi/assigned location;

**Additional Manpower, if required will be hired to be deputed at different SPCB/PCC Office to integrate and configure video devices, GPS devices, DVRs/ Handholding SPCBs in BMW Tracking/ Management etc. and may require visit@ to occupiers for any device configuration in the system. Separate order shall be placed in such case. Transportation, lodging, & Boarding will be provided by CPCB, as provided to Group'A', level officials in CPCB, after due approval of CA, CPCB, Each Visit of Engineer(s) shall be dealt with this procedure whenever it is required in the project duration.

Annexure – III-A

TENDER ACCEPTANCE LETTER

(To be given on Company Letter Head)

Date:

To,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: -

Dear Sir,

I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

_____ as
per your advertisement, given in the above mentioned website(s).

I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

The corrigendum(s) issued from time to time by your department/ organization too have also been taken into consideration, while submitting this acceptance letter.

I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.

I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization

shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract , without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

Annexure – III-B

UNDERTAKING

DATE _____

Development of Centralised Barcode System for Tracking of Biomedical Waste

Tender Notice No. :

THE CHAIRMAN

Central Pollution Control Board

(Ministry Of Environment & Forests, Government Of India)

C.B.D. Cum Office Complex

East Arjun Nagar, Delhi - 110 032.

Sir,

Having examined the conditions of Bid Document and requirement of the system, the receipt of which is hereby acknowledged. We, the undersigned, offer to develop, deliver and install the following:

1. Software for the project
2. Maintain the software for the project duration

The above software, installation shall be in conformity with the specifications and conditions of software development.

We undertake, if our bid is accepted to deliver the systems quoted by us, we shall deliver and install within the period indicated by CPCB in the tender document.

We agree to abide by this bid for a period of 180 days from the date fixed for Bid opening and it shall remain binding upon us and may be accepted at any time before expiry of that period.

We are submitting a Demand Draft/Pay order no.....datedissued by for Rs.....in favour of "Central Pollution Control Board", Delhi towards the Earnest Money Deposit.

This Bid, together with written acceptance (by the representative of the firm) thereof in notification of award shall constitute a bidding contract between us.

We understood that CPCB is not bound to accept the lowest or any bid may be received by CPCB.

Dated this.....day of.....2019

Signature of authorized Person, Name with Stamp & full Address.

Annexure -IV

LOCATION OF DELIVERY AND INSTALLATION

Project: Development of Centralised Barcode System for Tracking of Biomedical Waste, Tender Notice No. :

Location:

Central Pollution Control Board Head Office	Parivesh Bhawan, East Arjun Nagar, Shahadra, Delhi 110032
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Annexure- V

Agreement

Agreement below is to be submitted by the Vendor after issue of letter of Intent by CPCB within 7(seven) day's time.

AGREEMENT

An agreement is made on the _____ day of _____ 2019 between Central Pollution Control Board, 'Parivesh Bhawan', East Arjun Nagar, CBD-cum-Office Complex, Delhi-32 (herein referred to as the 'Board' which expression shall unless repugnant to the context or meaning thereof be deemed to include their successor and /or assignee) of the other part.

_WHEREAS the party of the first part is a statutory body, created and established under an act of the parliament known as Water (Prevention & control of pollution) Act, 1974 and the rule framed thereunder. Member Secretary of the Board is authorized person to sign the agreement on behalf of the Board.

AND WHEREAS the main objective of the board is to control the pollution of water and air at the same time take such measures as may be necessary to prevent pollution of water and air. One of the functions of the Board is to Plan and execute a nation-wide program for the prevention, control or abatement of water and air pollution.

AND WHEREAS, the Central Government has notified the Hazardous and Other Wastes Management and Transboundary Movement) Rules, 2016 (herein referred to as HOWM Rules, 2016) in exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986 and in supersession of the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008 (herein referred to as HWM Rules, 2008), for safe and environmentally sound management of hazardous and other wastes. In order to have effective implementation, Board has decided the **Project: Development of Centralised Barcode System for Tracking of Biomedical Waste, Tender Notice No. : C.....**

to be carried out by the firm amounting to Rs. _____
_____(.....Rupees only).

AND WHEREAS the party of the second part is a firm M/s _____

AND WHEREAS, the firm has approached the Board for the execution of the said work and have agreed to conduct and complete the work on the terms and conditions specified and agreed to between the parties hereto and as contained hereinafter.

AND NOW THEREFORE in consideration of the terms and mutual consent hereinafter mentioned, the parties hereby agree as follows:

1. DEFINITIONS

Agreement means this agreement and all appendices, annexure attached, work order, and subsequent amendment, modifications and additions directed by the Board to be carried out, provided that such directions are given by the Board.

'Work' means the total work to be conducted and completed by the firm as specified in details in the scope of work.

The Board means the Central Pollution Control Board includes its Member Secretary and any other officials authorized to act and on behalf of the Board by the Member Secretary.

The firm means M/s _____.

2. OBLIGATIONS OF BOTH THE PARTIES

The firm should carry out the work from the date of issue of the final work order and submit inception report within 15 days time after receipt of final work award letter, as detailed in scope of work and as entrusted to them under the instructions of the Board and the firm further undertakes to give full co-operation to the Board in this regard.

The Board shall have the right to depute its representative to work with the software developing firm and at all times such representative shall have access to the premises where and whenever the work is in progress. The software developing firm shall provide all facilities to the representative of the Board for inspection and/or assessment of work.

The software developing firm shall receive fees in the manner prescribed in the payment conditions. Fees for any additional work, not included in the scope of work at the time of issuing the work order and which shall have to be carried out by firm under this agreement being due to amendments, modifications or additions as per clause 1(i) of this agreement, will be decided amicably and will be paid.

This agreement comprises of detailed and definite enumeration of the rights and duties of the parties to the contract and covers all previous correspondence or negotiations etc., which may be contrary to this agreement in any way.

If one provision of this agreement should prove to be invalid or null, all remaining provisions shall remain effective without change. The contracting parties shall try to replace the invalid and null provisions by an admissible provision aiming of the same economic and legal rights.

Dimensions/standards and units wherever referred shall conform to the Indian Regulations wherever obligatory and in all other cases the same will be as per prevailing practice. If however, the Board specifies the dimensions and units of the work then same shall be final and the firm undertakes to adopt the same and to carry out the work in accordance with the instructions issued by the Board.

The software developing firm shall not engage or employ any sub-contractor for the execution of the work under this agreement without the prior consent in writing obtained from the Board. Any possible sub-contracts, which may concluded by the software developing firm in consent with the Board, shall be so concluded on the sole and full responsibility of the software developing firm. The fact of sub-contracting shall not absolve the software developing firm from his/her obligations and responsibilities under this agreement.

Subject to the provisions of this agreement the software developing firm shall not transfer or assign this agreement without the Board's prior consent in writing. In any case transfer or assignment that may be affected by the software developing firm shall not modify his/her liabilities under this agreement. In the event of assignment for transfer the assignees or transferee shall be responsible for the fulfillment of the conditions of this agreement.

3. SECRECY AND COPYRIGHT

The software developing firm hereby undertakes to treat all the data, information, drawings and details etc., received by the consultants during the execution of the work, directly or indirectly, as exclusive property of the Board.

No publication shall be effected or caused to be effected by the software developing firm without the consent of the Board in writing. All the information and data received or collected by the software developing firm during the execution of the work or at any other time in pursuance of this agreement shall be strictly treated as confidential and shall not be divulged to no other party, person or organization at any point of time.

4. EXTENSION AND TERMINATION

It is agreed between the parties that the Board may grant extension of time to the software developing firm for the completion of the work under this contract provided the Board is satisfied with the reasons for the extension stated by the consultant in his application in writing made to the Board, such extension stated would not entitle the consultant for any additional payment whatever under clause 2 of this agreement.

It is agreed by and between the parties that the Board shall have the right to terminate this agreement without assigning any reason thereof subject, however to the condition that it shall give one month's notice of termination in writing to the software developing firm.

In the event of termination of the agreement as provided herein, the software developing firm shall cease all further work and shall deliver to the Board all data, details, plans, specifications and other documents prepared or information collected upto the date of notice of treatment received thereof.

In the event of termination of the agreement as provided herein, the Board shall reimburse to the software developing firm a part of fees proportionate to the work carried out pursuant to this agreement upto the date of notice of termination.

The software developing firm hereby undertakes and agrees to handover all the drawings, specifications, plans, sketches and other data and such other documents, alongwith complete information and report to the Board within 15 days of the completion of the work or the notice of termination of the contract as the case may be.

The Board has the right to terminate the contract with or without assigning any reason at any stage besides reserve its right for the damage or any claim that the Board may have against the software developing firm.

In case of such termination by the Board, if any payment in excess has been paid to the software developing firm, the software developing firm hereby undertakes and agrees to repay the excess payment within 15 days of the termination of the contract.

5. INDEMINITY

a. The software developing firm hereby undertakes to indemnify the Board against any claim made by any person/persons or by a third party for any reason whatsoever such a claim or damage may arise because of a mistake, negligence and/or any other reason or an act of the consultant during the course of the work being carried out or after the work the work carried out by the consultant under this contract.

b. The parties to this agreement specifically agree that the Board shall have the right to withhold the payment of fees that may be due and payable to the software developing firm in the event of any breach committed by the software developing firm under this agreement and the payment withheld be paid whenever such breach is rectified.

6. ARBITRATION CLAUSE

In the event of any dispute, differences including breach and termination of the Agreement or claim arising out of or relating to the present Agreement, such event shall be resolved amicably by mutual consideration. If such mutual consultation fails, then the matter shall be referred to Arbitration of the Sole Arbitrator to be appointed by Chairman, CPCB who shall appoint Director (CP Division), Ministry of Environment & Forests, Government of India, New Delhi, or any other suitable person in the field of Computer Engineering as the sole arbitrator to adjudicate and decide upon the dispute referred to him " The Arbitrator shall pass their award in writing with reason. The venue of such Arbitration shall be at Delhi, India. The decision of the arbitrator shall be final and binding upon the parties. The cost of the Arbitration shall be shared equally by the parties to the Agreement. However, expenses incurred by each party in connection with the preparation shall be borne by the party itself.

Subject as aforesaid provision of the Arbitration & Conciliation Act, 1996, as amended from time to time and the Rules made thereunder and for the time being in force shall apply to the Arbitration proceedings under the clause."

It is a term of contract that party invoking the arbitration shall specify the dispute or disputes to be referred to the arbitrator under this clause together with the amount or amounts claimed in respect of each dispute.

It is also a term of contract that if any of the party do not make any demand for arbitration in respect of any claim(s) in writing within 30 days of receiving the information from the Board that final bill is ready for the payment, the claim of the contracting party(s) will be deemed to have been waived and absolutely barred and the Central Pollution Control Board will be discharged of all liabilities under the contract in respect of these claims.

7. Jurisdiction

The Court of Delhi, INDIA shall be exclusive jurisdiction in all matters or disputes arising under or in respect of this Agreement.

The decision of the arbitrator shall be final and binding upon the parties.

IN WITNESS WHEREOF THE parties of the first and second part of this agreement have subscribed their signatures on this agreement on the day and year herein above mentioned.

For M/s _____ ()

Member Secretary

For : Central Pollution Control Board

"Parivesh Bhawan", East Arjun Nagar, Delhi-110 032

SIGNED IN THE PRESENCE OF

1. Witness:

2. Witness

Annexure - VI

INTEGRITY PACT

General

This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made onday of the month of2021, between, CPCB, An autonomous body acting through the Member Secretary, CPCB, hereinafter called the "BUYER", which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns of the First Part and M/s..... represented by Shri....., Chief Executive Officer (hereinafter called the "BIDDER / SELLER" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part. WHEREAS the BUYER proposes to procure (Name of the Stores/Equipment/Item) and the BIDDER/Seller is willing to offer/has offered the stores and WHEREAS the BIDDER is a private company/public company/Government undertaking/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the BUYER CPCB work under the aegis of Environment & Forests, performing its functions as per the provisions of The Water (Prevention & Control of Pollution) Act 1974, The Air (Prevention & Control of Pollution) Act ,1981 and the Environment (Protection) Act,1986.

NOW, THEREFORE, To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to :- Enabling the BUYER to obtain the desired said stores/equipment at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the BUYER will commit to prevent corruption, in any form, by its officials by following transparent procedures. The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

Commitments of the BUYER

1.1 The BUYER undertakes that no official of the BUYER, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

1.2 The BUYER will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.

1.3 All the officials of the BUYER will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

1.4. In case any such preceding misconduct on the park of such official(s) is reported by the BIDDER to the BUYER with full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an inquiry is being conducted by the BUYER the proceedings under the contract would not be stalled.

2. The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-

2.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

2.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Government.

2.3* BIDDERS shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.

2.4* BIDDERS shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.

2.5* The BIDDER further confirms and declares to the BUYER that the BIDDER is the original manufacture/integrator/authorized government sponsored export entity of the defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

2.6 The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

2.7 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

2.8 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

2.9 The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

2.10 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

2.11 The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

2.12 If the BIDDER or any employee of the BIDDER or any person action on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the BUYER, or alternatively, if any relative of an officer of the BUYER has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filling of tender.

2.13 The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER.

3. Previous Transgression

3.1 The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.

3.2 The BIDDER agrees that if it makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

4. Sanctions for Violations

4.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the BUYER to take all or any one of the following actions, wherever required:-

(i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER (s) would continue.

(ii) The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the BUYER and the BUYER shall not be required to assign any reason therefore. (Not Applicable in view of COVID19)

(iii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.

(iv) To recover all sums already paid by the BUYER, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the BUYER in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.

(v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.

(vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/rescission and the BUYER shall be entitled to deduct the amount so payable from the money (s) due to the BIDDER.

(vii) To debar the BIDDER from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the BUYER.

(viii) To recover all sums paid in violation of this Pact by BIDDER (s) to any middleman or agent or broker with a view to securing the contract.

(ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.

(x) Forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

4.2 The BUYER will be entitled to take all or any of the actions mentioned at para 6.1 (i) to (x) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

4.3 The decision of the BUYER to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent Monitor (s) appointed for the purposes of this Pact.

5. Fall Clause

5.1 The BIDDER undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the BUYER, if the contract has already been concluded.

6. Independent Monitors

6.1 The BUYER has appointed Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission (Sh Jagdish Rai Garg, C/o Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032, Mobile No. 8008516763, email : jr.garg@yahoo.com).

6.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

6.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

6.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

6.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.

6.6 The BIDDER(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.

6.7 The BUYER will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations

between the parties. The parties will offer to the Monitor the option to participate in such meetings.

6.8 The Monitor will submit a written report to the designated Authority of BUYER/Secretary in the Department/ within 8 to 10 weeks from the date of reference or intimation to him by the BUYER / BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.

7. Facilitation of Investigation

In case of any allegation of violation of any provisions of this Pact or payment of Commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

8. Law and Place of Jurisdiction

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat/place of the BUYER.

9. Other Legal Actions

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

10. Validity

10.1 The validity of this Integrity Pact shall be from date of its signing and extend upto 5 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/Seller, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

10.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

11. The parties hereby sign the Integrity Pact aton.....

BUYER BIDDER

Name of the Officer. CHIEF EXECUTIVE OFFICER
Designation
Deptt./MINISTRY/PSU

Witness Witness

1..... 1.....

2..... 2.....