

Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi 110032

Project: Development of National Hazardous Waste Tracking System (NHWTS) Software for CPCB Tender Notice No. : C-12015/05/2018/IT/NHWTS-Tech/Sr. No.1

1. Important Information and Dates

S. No.	Description of activities	Date & Time
1.	Date of publishing of tender	10.01.2019 at 11.30 hrs.
2.	Download of Bid Documents start	10.01.2019 at 11.30 hrs.
3.	Pre-Bid Meeting at CPCB	18.01.2019 at 03.00 hrs.
4.	Minutes of the Pre-Bid Meeting to be uploaded	23.01.2019 at 17.00 hrs.
5.	Bid Submission Start Date	23.01.2019 at 17.00 hrs.
6.	Bid Submission Closing Date (End Date)	12.02.2019 at 15.00 hrs.
7.	Technical Bid Opening Date	13.02.2019 at 15.00 hrs.
8.	Presentation by Shortlisted bidders	Date and Time will be informed

Request for Proposal

for

**Project: Development of National Hazardous Waste Tracking System (NHWTS) Software for
CPCB**

Tender Notice No. : C-12015/05/2018/IT/NHWTS-Tech/Sr. No.1

10.01.2019



CENTRAL POLLUTION CONTROL BOARD

Parivesh Bhawan, East Arjun Nagar

Delhi -110032

January'2019 (Ver-2.0)

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National Hazardous Waste Tracking System (NHWTS)

1.0 INTRODUCTION

The Ministry of Environment, Forest and Climate Change (MoEF&CC) has notified Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 (hereinafter referred as HOWM Rule, 2016) suppressing the earlier Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008, under the Environment (Protection) Act, 1986 for safe treatment, storage and disposal of hazardous waste in an environmentally sound manner without causing adverse affect to environment and human health. The HOWM Rules, 2016, lays down provisions w.r. to generation, packaging, storage, transportation, recycling/reprocessing, utilization, setting up and monitoring of Treatment, Storage and Disposal facility for hazardous wastes, authorization and reporting mechanism, import and export of hazardous wastes, etc. State Pollution Control Board (SPCB)/ Pollution Control Committee (PCC) of the concerned State/UT has been envisaged with the responsibility of granting authorisation for generation, handling, storage, packaging, transportation, recycling, utilization, disposal, etc. of the hazardous waste.

The hazardous waste generators may recycle, utilize or dispose the same at facility authorized by the concerned SPCBs/PCCs under the HOWM Rules, 2016. In order to impart the said recycling, utilization or disposal at facility other than the generation facility. manifest system (Movement Document) has been prescribed for movement of hazardous wastes under Rule 19 of the HOWM Rules, 2016. The manifest system requires filling various information by sender in the prescribed form and forwarding the same to receiver/SPCBs/recyclers/utilizers/disposal facility operators.

Rule 20(1) of the said Rules also lays down provisions of maintaining date wise records of hazardous wastes generated or received by the generator/recycler/utilizer/disposal facility operator/etc., as the case may be. There are also provisions under Rule 20(2) to prepare and submit annual returns by the generator/recycler/utilizer/disposal facility operator/etc. Based on the said returns, SPCBs/PCCs are required to prepare annual inventory of the waste generated, recycled, utilized, disposed, etc. for the respective State/UT and submit the same to CPCB. CPCB is required to prepare consolidated report and submit the same to the MoEF&CC.

The hierarchy in the management of hazardous waste is to reduce, reuse, recycle, recovery, utilization and finally disposal of wastes in disposal facilities in an environmentally sound manner. The disposal facilities may be having only a secured land fill (SLF) or may be having incinerator alone or combination of secured landfill & incinerator. There are 42 Common Hazardous Waste Treatment, Storage and Disposal Facilities (TSDFs) in 18 States/UT, of which 18 facilities are integrated TSDFs having both Secured Landfills and Incinerators; 10 facilities have only common hazardous waste incinerators and; 14 facilities have Common Secured Landfills. Besides, there are recyclers, utilizers and co-processors (in cement plant) authorized by respective SPCB/PCC.

In order to have on-line web portal system for filling daily records by the waste handlers, manifest document, etc. and generation of reports such as annual returns with regard to state-wise generation and management of hazardous waste, list of violators, list of disposal facilities, etc.; defaulters reports, etc., it is proposed to develop a unified web based system for the same named as National Hazardous Waste Tracking System.

The system will comprise various stake holders (as mentioned above) including NIC which has developed some of the information collection module operating as on date. These modules data has to be integrated into the system if available. If the same does not become available, a new system of obtaining information through sytem integration by designing new forms for data entry is to be created where all SPCBs and various stake holders will have to be provided the access and separate domain for their activities to be recorded in the system.

The above said rules also provide the data formats based on which work flow system is to be developed and data entry to be managed seamlessly which may vary as per the need and experience during the software development. Copy of the HOWM Rules,, 2016, is available at website i.e. <http://cpcb.nic.in/rules/> for ready reference and formats for data flow/inputs is given at Annexure.

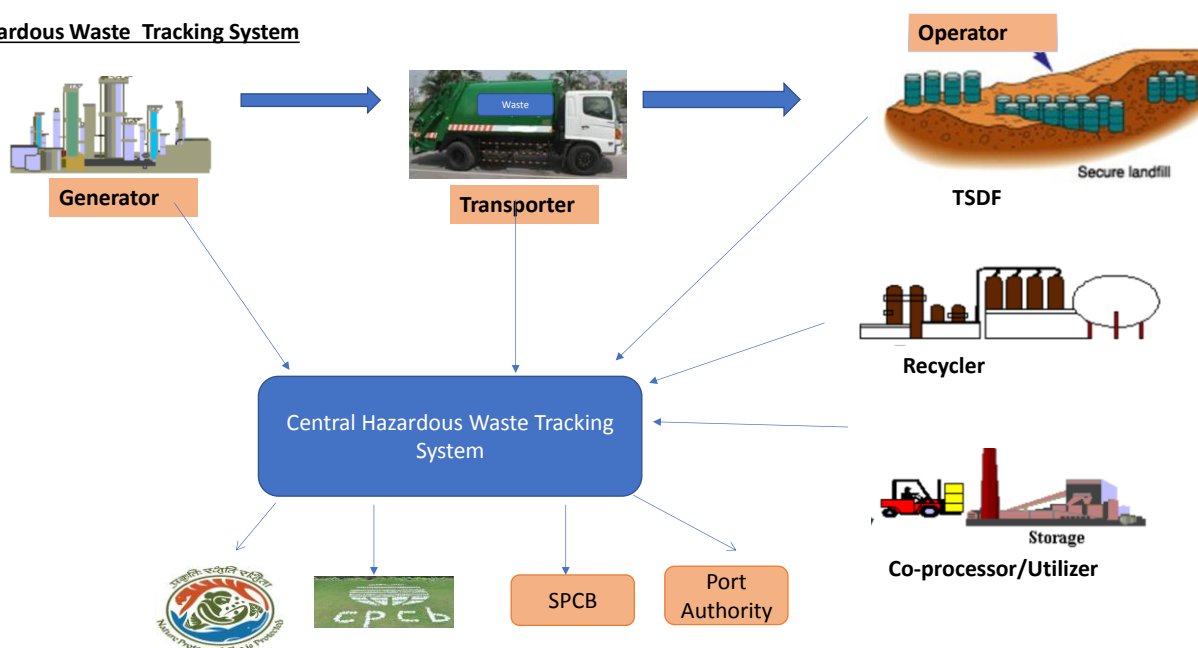
2.0 OBJECTIVE

1. 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), State Pollution Control Boards (Headquarters and Regional Offices), Custom & Port Authority, Occupiers (Generators, Transporters, Operators, Recyclers, Utilisers, Co-processors, Collector, importer, exporter, etc.) including NIC across India.
2. The Central Server Software for Hazardous waste should support an open Application Programming Interface (API) that enables existing systems like OCMS and other systems adopted by the SPCBs/PCCs for consent management, to push the data to the central system. The Central system shall also enable filing of additional information by the Occupiers and validation of the same by respective SPCB/PCC. Upon validation, the validated occupiers to fill the daily records (w.r.t production, generation and management of hazardous waste).
3. To register the authorized occupiers (which are not registered in the OCMMS & other system) in the Central system and filing of information and validation of the same by respective SPCB/PCC. Upon validation, the validated occupiers shall get rights for filing of daily records (w.r.t production, generation and management of hazardous waste).
4. To facilitate hazardous waste generators, transporters, recyclers, utilisers, operator, co-processors, collector, importer, exporter, etc. in knowing real time availability of hazardous waste, defnining route of their trip to have effective movement and management of entire collection and disposal system.

5. In turn, to provide the records on real time basis of amount of hazardous waste in movement, in storage facilities etc. to quantify the actual waste generation, disposal and to find the leakages if any at any point of time by tracking its guided movement and disposal.
6. To establish a real-time monitoring of Hazardous Waste Tracking System for monitoring the movement of hazardous waste from the generator/storage facility till recycling/utilizing/disposal facility of the recycler/utilizer/operator and subsequent uploading relevant characteristics of the wastes i.e. Finger print analysis in case of disposal and characteristics of wastes in case of recycling.
7. To provide real-time view of the transportation of hazardous waste from the generator/storage facility till recycling/utilizing/disposal facility of the recycler/utilizer/operator.
8. To detect any route deviations or malpractices by the transporters while transporting of the hazardous waste to the designated locations (i.e. disposal/recycling/utilizing/storage).
9. To provide information to the recyclers/utilisers/co-processor in the Waste Exchange Centre (i.e type, category, characteristics and quantity of the hazardous waste and generator details).
10. To provide a mobile application to various stakeholders to enter the daily hazardous waste generated and track the waste till it is disposed.
11. To generate alerts in case of deviations/non-compliances.
12. To generate various reports on district wise and State/UT wise about generation and management of hazardous wastes.

The key components of the Hazardous Waste Tracking System

Hazardous Waste Tracking System



The Key Stakeholders includes

- i. Generator
- ii. Collection and Storage facility operator
- iii. Transporter (either the sender or receiver)
- iv. Operator of disposal facility
- v. Recycler
- vi. Utiliser (includes Co-processor/pre-processors)
- vii. Regulators (MoEF&CC/CPCB/SPCBs/PCCs/ Custom & Port Authority)
- viii. Importers and Exporters

3.0 Scope of Work

The scope of work includes the following

- A. Development of the Central Hazardous Waste Tracking System shall include the following components or modules
 - i. To develop on the fly tracking facility for availability movement of hazardous waste as well as vehicle movement.
 - ii. To create a many to one waste pick up possible scenarios the moment one of the transporters is on the move to carry the waste from one place to another.
 - iii. Different logics for tracking the waste shall be imposed.
 - iv. To Regulate waste transportation for disposal/recycling/utilization/co-processing/storage/import/export effectively facilitating all its stakeholders with one defined destinations and amount of waste to be picked up as per scenarios generated and selected.
 - v. Fetching data of the OCMMS (Online Consent Management System of NIC)/other existing system (like X-GEN) registered key stakeholders (Generators, Collector, Operators, Recyclers, Utilisers, etc.) from OCMMS/X-GEN into the Central NHWTS and filing of additional information. In case OCMMS data is not available, through new registration of stakeholders.
 - vi. Validation of the above information by SPCBs/PCCs.
 - vii. Filling of daily records of Hazardous Waste generation and management of the same by the validated stakeholders.
 - viii. Tracking the movement of Hazardous Waste from sender to receiver alongwith live Vehicle Tracking system (GPS)
 - ix. Tracking of hazardous waste quantity carried from the source to the designated location.
 - x. Analysis and Reporting Module for the hazardous waste recycled/utilized/treated/disposed by the respective recycler/utilizer/disposal facility operator.
 - xi. A section called Waste Exchange Centre be provided in the NHWTS for searching and reporting w.r.t. type, category, characteristics and quantity of the hazardous waste and details of generator thereof.
 - xii. SMS/ Email to the respective stakeholders.
 - xiii. Alert and Alarm Module for alerting on non-compliances.
 - xiv. Reports on category wise, city wise, district wise and State/UT wise about generation and management of hazardous wastes.
 - xv. Depiction of the data over spatial domain using ArcGIS software.

- xvi. Layers of different categories like road network, industries network, river network etc. (data to be procured by CPCB) to be implemented on the system.
 - xvii. 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.
 - xviii. Development of technological improvement till the entire project duration.
 - xix. Creation of dashboards for visualization of live streaming data of waste movement, video streaming, alert generation, email records etc.
 - xx. Tabular Reports/graphical reports generation as per requirement alongwith framing or changing of the same in the future.
- B. Development of the Mobile Application (Window, Android and iOS based) for Live Entry and Tracking of Hazardous Waste with full fledged details of the system available without any restriction.
- C. Provide 24x7 support through a helpdesk to stakeholders to manage its connectivity.
- D. Deploy the software with remote backup procedure etc. at NIC end.
- 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.
- 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.

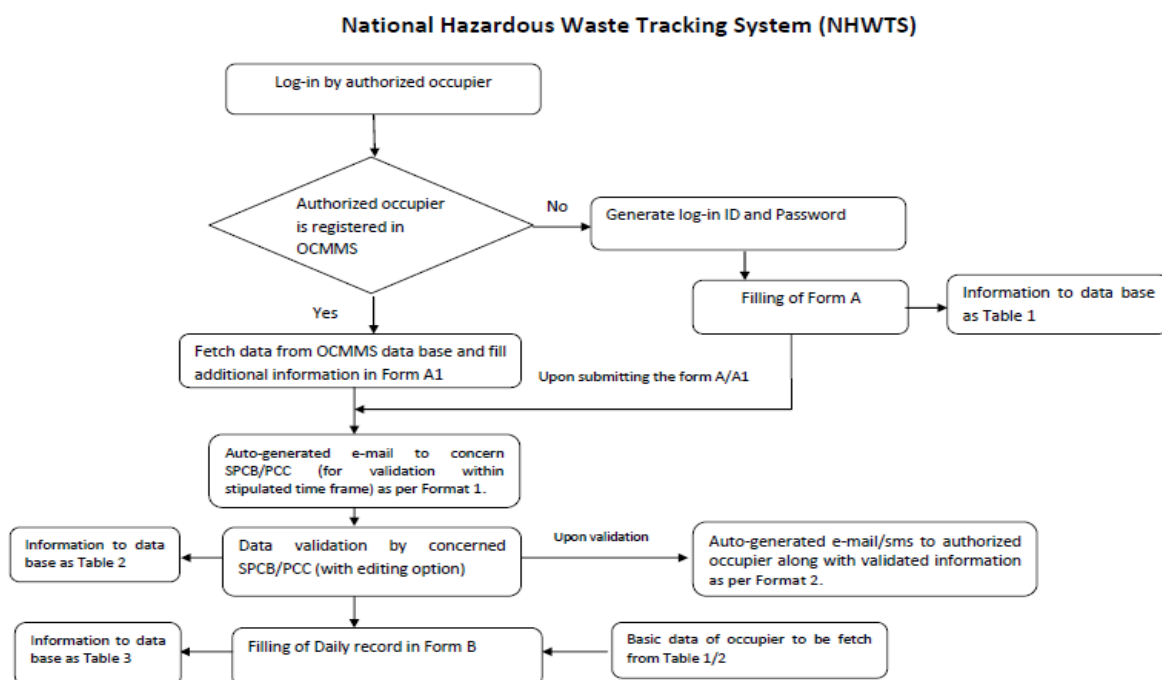
3.1 Summary of Scope of work

- i. Fetching data of the OCMMS (NIC) or other state softwares into the Central NHWTS and filing of additional information.
- ii. Development & registration of stakeholders
- iii. Filling of daily records of Hazardous Waste generation and management.
- iv. Integration of protocols for at least twenty devices for data integration with Software.
- v. Tracking the movement of Hazardous Waste from sender to receiver
- vi. Installation and operation of GIS software
- vii. Analytical and Reporting Module for the hazardous waste recycled/utilized/treated/disposed
- viii. Video streaming
- ix. Multiple Services
 - x. End parallel processing
 - xi. 24 x 7 Help desk
- xii. No. of industries upto One lakh should be considered in development of basic system with its on route scheduling
- xiii. Waste Exchange Centre.
- xiv. Alert and Alarm Module for alerting on non-compliances.
- xv. Reports generation.
- xvi. Training of atleast two CPCB IT officials who shall associate with developing team throughout development phase so that they can manage software without the assistance of the firm.
- xvii. First Audit after finalization of software.
- xviii. Installation and operation and NIC cloud.
- xix. Upgradation of Mobile Apps continuously for each modification within a week of finalization of changes.
- xx. At least 10 types of dashboards in project duration

4.0 Software Requirements

4.1 Central Software Capabilities

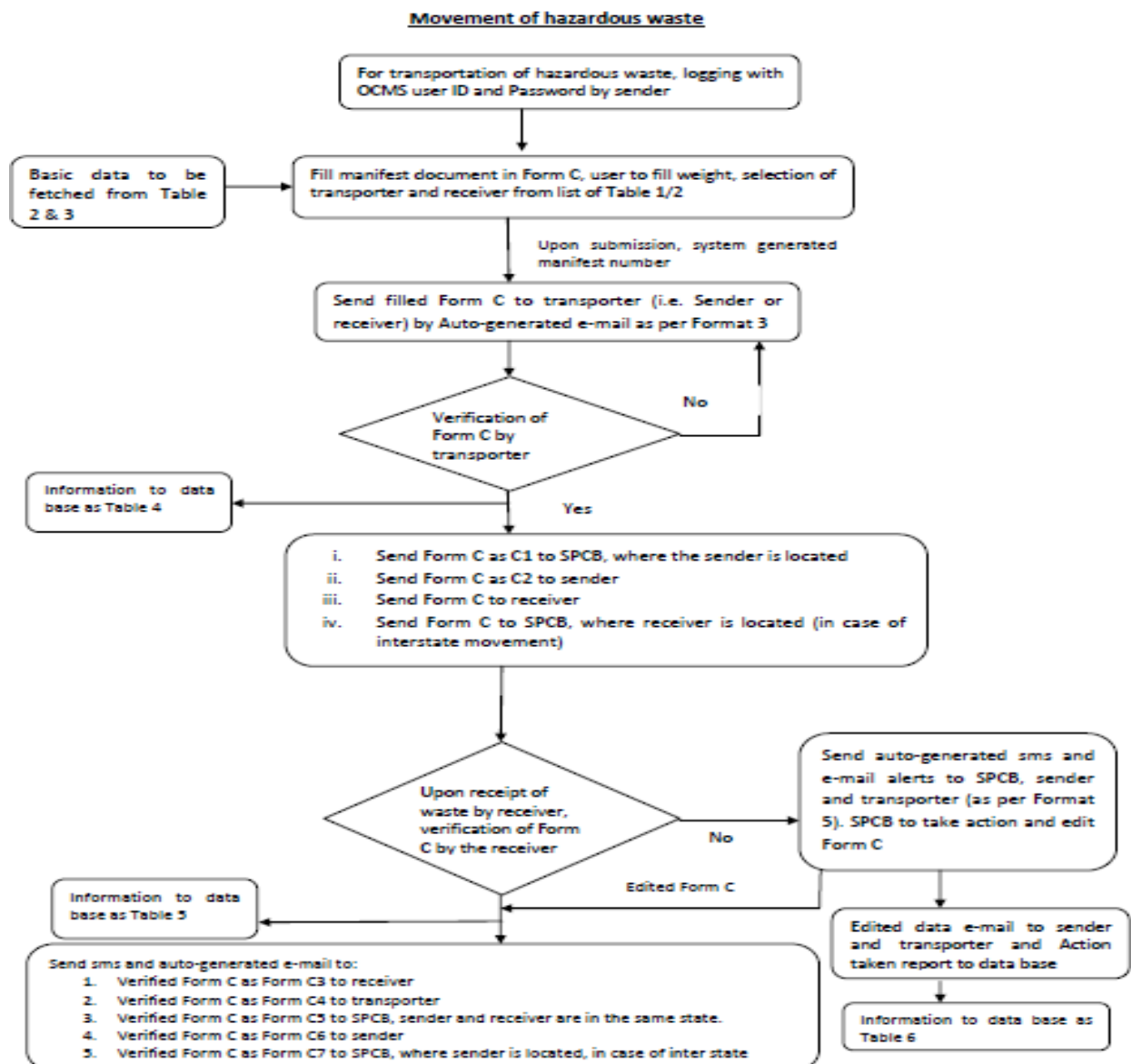
1. Integration of OCMMS data into the central system if available and if not creation of mechanism to create various categories of users and to generate user ID and password generation auto mechanism.
2. The software should be able to accept same User ID and password of the registered OCMMS or other existing 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 Central Software should have a web application to view, generate default reports, analyze the collected data, generate custom reports and corroborate with generators, collector, operators, recyclers, utilizers, importers, exporters, SPCB/PCC, CPCB, Port & Custom Authority 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 having waste disposal details in different OCMMS software 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 datacenter.
7. The Software should be able to capture the details for each of the entities and the associated limits of operations from the OCMMS & other systems.
8. The Software should provide capability for the above occupiers to enter the daily hazardous waste generated and the amount of waste stored at their premises, utilized, recycled and disposed.
9. The software should be able to capture the details of the operators in-charge of the consignment & vehicle and this details should be used during emergency response.



10. The software should be able to capture the details on type, category, characteristics and quantity of the hazardous waste desired by the recyclers/ utiliser as a “Waste Exchange Centre”.
11. 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.
12. 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.
13. Software should have all the features mentioned in the flow diagram and should work in the same manner as described in the flow diagrams

4.2 Manifest System/ Movement of the Hazardous Waste Capabilities

1. The Software should support the Manifest document (Form C of the HOWM Rules available in Annexure attached) used for movement of hazardous waste from the sender to receiver.
2. The Software should be able to support electronic Form C for the capture of the hazardous waste by the sender before dispatching through the transporter.
3. The Software should support mailing and printing of the 7 copies of the Form C once the Form is submitted by the sender to be used as the manifest during the transportation.
4. Before the printing of the Form C, the waste has to be associated to the particular vehicle whose route has to be defined by the transporter. The tracking of route to be defined by the system automatically.
5. At the collection point, transporter should be able to enter the weight of the hazardous waste received at each of the pickup point. This will ensure that that a real-time view of the weights in each of the vehicle can be tracked in real time.
6. The Software should have capabilities for the operator to accept the hazardous waste at the disposal facility as per the finger print analysis report. In case of recycling, the recyclers to accept the hazardous waste as per the specifications laid down for Used Oil/ Waste Oil/Others.
7. The workflow associated with Form C should be possible through the Central Software and the physical Form C process will act as a backup mechanism only. The Software should support transfer of chain of custody from the sender, transporter and receiver. The chain of custody should be irrefutable and should be secured using technology like Block Chain.
8. The Software should track the quantity of waste stored at the generator/collection facility/recycler/utiliser/co-processor/Operator premises and the duration of such storage.
9. The Software should have abilities of the Operator to provide inputs on the treatment and actions taken on the individual hazardous waste received from the various key stakeholders.
10. The Software should have capabilities to track the lineage of the waste from the generation/storage facility to the utilization/ recycling/ disposal.



4.3 Transport Route Schedules

1. The Software should provide capabilities to setup the route and route schedules by the various transporters for their collection from the various sender.
2. The Software should be able to capture the details of the vehicles and driver for each of the hazardous vehicle as per the daily schedule and route planning.
3. These route schedules should be setup by the transporter (sender/receiver) before schedule of the collection of the hazardous waste from the sender.
4. The transporter will update the daily schedule of the hazardous waste carrying vehicle routes and pickup points.
5. The Software should be able to handle any specific route exceptions for a particular days or a group of days from the regular schedule.
6. The Software should be able to add the various pickup points on the route schedule.
7. The Software should verify GPS Output transmitted from Vehicle before allowing for route schedules. Vehicle without Live GPS feeds will not be allowed for route scheduling.

8. Vehicles which have evidence of tampering GPS will be blocked permanently from scheduling trips unless over ridden by SPCB/CPCB officials.

4.4 Hazardous Waste Transportation Vehicle Tracking

1. All registered vehicles should be equipped with a tamper proof GPS unit and weight sensor as per the provided specification. These GPS unit alongwith weight sensor should transmit the data to Central Server in real time. The Central Server should be capable of receiving the GPS data in real time.
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.
3. The Central Server software should be able to visualize the exact location of the various vehicles along with the weight and the hazardous materials carried by the same in real time.
4. The Central Server software should support GPS tracking devices of any make and model as per the specifications given in this document.
5. The Central Server software 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 Central Server software should be able to handle a minimum of 1,00,000 hazardous waste handing units at the same time with its own route schedules.
7. The Central Server Software should be able to visualize the software on a geographic map.
8. 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.
9. The Central Server Software should support multiple trips and multiple schedules for each of the vehicles carrying hazardous material.
10. The Central Server Software should have alerting capabilities based on geofencing rules related to the routes of the vehicle pre-defined path.
11. The Central Server Software should have capabilities to identify un-usual stoppage of the vehicle based on duration, unscheduled stops, unscheduled deviations etc. than its regular authorized route.
12. The Central Server software should have built-in capabilities for identifying anomalies for geospatial and time series anomaly detection using Machine Learning and Deep Learning Techniques.
13. The Software should have capabilities to over-ride exceptions in route deviations due to road accidents, road closure etc.
14. The software should be able to list all the hazardous waste carried by the vehicle at any given point of time.

4.5 Live Status Tracking

1. Software should support real time view of the data from all the generators, collectors, transporters, operators, recycler, utiliser and co-processor throughout the country in real time with classification of the hazardous waste

2. Software module should support geo-location of the sites, 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.

4.6 Alarms and Alerts Capabilities

1. The Software should have capabilities to provide alert for any excess storage at the operator beyond its stipulated capacity.
2. The Software should be capable of providing alerts if the hazardous waste stored at occupiers beyond the stipulated time frame.
3. The Software should be capable of providing alerts if the occupiers not filing the daily records beyond the time frame i.e. 07 days
4. The Software should be capable of providing alerts if the occupiers/recycler/ utiliser/co-processor/ operator produced/ disposed (as the case may be) beyond the consented/authorized quantity.
5. The Central Server Software should provide an interface to view and list all alarms and alerts. There should be a filter to view only new alerts and alarms.
6. The Central Server Software 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.

4.7 Reporting and Analytics Capabilities

1. The Software should be capable for collecting quarterly reports on waste generation and management from each of the occupier (i.e generator/collector/recycler/utiliser/co-processor/operator, etc.).
2. The Software should be able to support various reports required by the CPCB and SPCB officials with respect to the handling of hazardous waste.
3. The Central Server Software should support standard reports for each generator, operator, recycler and utiliser based on the quantity, type, location, transporter etc.
4. The Central Server Software should have both default reports and also reports generatable by the end user as per requirements.
5. The Central Server Software 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.
6. The Central Server Software should generate report on approved and validated data. There should also be a capability to see the raw data collected within the reports.
7. The Central Server Software should have capability to compare, group sector wise generators, operators and generate report (text, numeric and graphical).
8. The Central Server Software should support ability to export the reports data to csv, pdf and text file as and when required.
9. The Central Server Software should have provisions to accommodate printers of different model and make.

10. The Central Server Software should support ability to develop custom reports by the regulator based on the data analysis requirements. The report generated should be both graphical and tabular form.
11. 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.
12. The Central Server Software should provide daily status of each hazardous waste generated, stored, sent etc. and provide metrics on data quality.
13. The Central Server Software should provide ability to generate custom reports.
14. Report should be able to calculate differential data from two parameter reading and show the trend of differential data.
15. The Central Server Software should provide custom reporting capabilities to support regulator's present and for future requirements.
16. The reports should have the capability to show both raw data and approved/validated data. There should be a provision to create custom charts. There should be a support to add new charts and dashboards as per the requirements.

4.8 Camera and Video Live Streaming Capabilities

1. The Software should support live streaming of camera from the hazardous waste storage area at the occupier/generator premises and also at the operator storage premises.
2. The Software should be able to capture the label/photo of the containers used for storage of hazardous waste.
3. The Software should be capable of viewing of the last 3 months camera footage of each of the captured video streams.

4.9 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 includes but not limited to
 - Operator Admin and Staff
 - Generator Admin and Staff
 - Storage facility Admin and Staff
 - Transporter Admin
 - Recycler Admin and Staff
 - Utiliser Admin and Staff
 - Drivers
 - Importer Admin
 - Exporter Admin
 - MoEF&CC Admin and Regional Officers
 - Port Admin and Regional Officers
 - CPCB Admin, IT 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.
7. The Software should support block chain cryptography based lineage tracking of the hazardous waste from the occupier/generator till the collector/recycler/utiliser/co-processor/operator.

4.10 Backend Processing Requirements

1. The Central Server Module 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. generators, transporters, collectors, recycler, utiliser, 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 Central Server Module should generate automated alarms and alerts based on route deviations, data connectivity failure, instrument failures, etc.
5. The Central Server Module 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 Central Server Module 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 Central Server Module and not external application software.
7. The Central Server Module should have facility to transfer data to other server at regulator side at periodic interval for data backup and recovery requirements.
8. The Central Server Module 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 Central Server Module should provide automatic notification to the operator, generator, transporter and regulator inbox for all new notifications and action items like fixing communication issues, route deviations, missing waste etc.
10. The Central Server Module should be able to support data encryption and security at the server side. The data received from generators, collectors, transporters, recyclers, utilisers, co-processors, operator, etc. should be decrypted and data authenticity ensured.
11. The Central Server Module captures the IP address and other device information from which the data was sent for audit purposes.
12. The central server 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.

4.11 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.

4.12 Data Acquisition Requirements

1. The Central Server Software for Hazardous waste should also support an open Application Programming Interface (API)/ web services and TCP/Dialup that enables existing systems like Online Consent Management and Monitoring System (OCMMS) and other systems adopted by the 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 along with Form C information and weight sensor data directly to the Central Server 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.

4.13 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 central server software 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 hazardous waste, an alert should be generated in the corresponding inbox. The representatives from the generator, operators, recycler, utiliser and transporters 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. Transporters, Collectors, Operators, recycler, utiliser and Generators should be able to inform the regulator of different maintenance events or incidents (vehicle breakdowns, route rerouting, accidents etc.) using workflow feature of the Central Server Software.
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 (generators, collector, recycler, utiliser, operators, transporters, etc.) and the regulator for specific events/workflows.

4.14 Configuration Management

1. The Central Server Software should provide the user interface to configure the operator, generator, collector, transporter, recycler and utilizer/co-processor. The detail screens for configuration, vehicle configuration, route configuration, hazardous waste category, type etc. should be available.
2. The Central Server Software should have list of device models for Vehicle Tracking, weight sensors and also all the standard hazardous materials transported.
3. The Central Server Software should support grouping of sites, across geographic dimensions like District, City, etc. and other custom attributes (like industry type) selected by the regulator.

4.15 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 generator collector, transporter, recycler, utiliser, co-processor, operator, etc.) 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 generator collector, transporter, recycler, utiliser, co-processor, operator, etc.) such as maintenance schedules, vehicle breakdowns, accident etc.

4.16 Mobile Application Capabilities

1. Mobile Application should be developed for Android, Window and IOS Operating system.
2. Mobile Application should be supporting the needs for Operator, Generator, collector, Transporter, recycler, utiliser and Regulator needs for interacting with Central Software along with real time information.
3. For stakeholders/reciver view should show the live status of various vehicles scheduled for reaching the reciver facility (collector/ recycler/utiliser/operator).
4. The Transporter/driver view should show the live status of all vehicles owned by transporter and status of the hazardous waste loaded
5. Regulator should be able to view the individual state wise operations and also consolidated summary of various statistics with respect to hazardous waste
6. Mobile Application should support registration and status of the operators, generators, transporters, recycler, utiliser, etc.
7. Mobile Application should serve the needs of recyclers/ utiser as Waste Exchange Centre w.r.t information on type, category, characteristics and quantity of the desired hazardous waste.

5.0 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.

6.0 Training to CPCB officials and other Stakeholders

1. To conduct ONE DAY professional class room training program atleast 12 days in an year to all its stake holders like CPCB & SPCB/PCC officials and other stakeholders (i.e. generators, recyclers/utilizers/occupiers, 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.

7.0 New Pages Development

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

8.0 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.

9.0 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.

10.0 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 atleast 03 Projects (only those project shall be considered which can be demonstrated live) of software development and maintenance during last three years (i.e. financial year 2015-16, 2016-17 & 2017-18) in any three of the following fields:
 - (i) Web Developments & Mobile APP development,
 - (ii) M2M with IoT (Internet of Things), and
 - (iii) GPS Tracking & Integration development using open source platforms.
 - (iv) GIS platform software application development
 - (v) SCADA implementation
3. The turnover of firm in the development of on-line system should be more than ₹ 2.0 Crore per annum during the last 3 years (in support of the claim certified balance sheets for last three years i.e. F.Y. 2015-16, 2016-17 and 2017-18 should be produced) **Document No.2** (balance sheets highlighting software development related information).
4. The firm should have undertaken atleast one similar software development contracts during last 03 years ending 31/12/2018 with Government Department/PSUs/Semi Govt./Autonomous bodies. A certificate or evidence to this effect is to be provided from the concerned Govt./PSUs/Semi Govt./Autonomous bodies.

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)
		M2M	MobApp	Web	IoT	SCADA	others		Start Date (05)	Expected Delivery date (06)	Actual delivery Date (07)	
01												
02												
03												
04												
05												

Submit a summary sheet as per Table 1 of projects and attach supporting documents for the claims. **Document No. '3'**.

5. Firm should not have been blacklisted by any Government Agency. Self-declaration to be provided. **Document No.'4'**.
6. Firm should provide the customer list containing at-least Two Organizations in Govt. /PSU /Semi Govt. Sector as per table 2. **Document No.5.**

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
			Name	Mobile	E-mail					

											e name
01											
02											
03											

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

11.0 Selection Criteria

The software consultants/firms selection criteria are as below:

11.1 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 Apps	
3	M2M with IoT	
4	GIS Software development	
5	SCADA Implementation	
6	Working Experience with Government Organization and other organization	
7	Educational Qualification and working experience of the proposed team leader and members	
8	Team Leader having M. Tech (in Information Technology/Computer Science) with more than 05 years of experience(minimum 3 year experience in any of the item at S. No. 2 of the eligibility criteria) OR Team Leader having B. Tech (in Information Technology/Computer Science)with more than 08 years of experience (minimum 3 year experience in any of the item at S. No. 2 of the eligibility criteria)	
9	Team Members having M. Tech with 03 years experience OR Team Members having B. Tech with 05 years experience	

10	Team Member having M. Tech with 03 years experience OR Team Members having B. Tech with 05 years experience of deployment at the client side	
11	Technical presentation (approach and work plan for the NHWTS)	

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

- a) Copy of Work award letters
- b) Copy of Work Completion Letters

11.2 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.*

12.0 Hardware Requirement for regulator side

Sr. No	Item Details	Quantity			
1	Rack Server 2U Model with the following server specifications <ol style="list-style-type: none"> 1. Hexa Core Intel Processor with minimum 2.4 GHZ or more 2. 64 GB RAM 3. 4* 1.2 TB HDD 4. Antivirus software with 3 years License 5. Preferably Dell / IBM or HP make with RAID 5 configured and a wireless adapter for remote access 	3			
2	RHEL 6.4 or higher OS for the Server	3			
3	Firewall Details as given or better <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Cyberroam UTM Device Model : CR25iNG</td> </tr> <tr> <td style="padding: 5px;">CISCO WAP 121 Wireless N-Access Point Model: WAP121-A-K9-IN Make : Cisco</td> </tr> <tr> <td style="padding: 5px;">CISCO 300 Series Rack mountable Switch Model : SF300-24PP Make : Cisco</td> </tr> </table>	Cyberroam UTM Device Model : CR25iNG	CISCO WAP 121 Wireless N-Access Point Model: WAP121-A-K9-IN Make : Cisco	CISCO 300 Series Rack mountable Switch Model : SF300-24PP Make : Cisco	1
Cyberroam UTM Device Model : CR25iNG					
CISCO WAP 121 Wireless N-Access Point Model: WAP121-A-K9-IN Make : Cisco					
CISCO 300 Series Rack mountable Switch Model : SF300-24PP Make : Cisco					
4	8 TB Disk Drive for Data Backup	2			
5	Additional Servers and security devices shall be proposed by the firms for Video Streaming of a model with 100000 industries recording in the encrypted format alongwith necessary softwares.	--			

13.0 Hardware specification for generator/transporter/collector/recycler/utiliser/operator

Initially the project will start with basic utilities like providing routing and managing movement through GPS and manual entries of weight data into the system through mobile application developed.

Six months time will be given for stabilization of the system and thereafter each specific module will be made compulsory sequentially. Like second module of weight sensor integration i.e. each vehicle will be asked to be equipped with weight sensor and again six months stabilization will be provided. Thereafter like third module the video streaming shall be implemented.

Hence, Each Transporter will be required to install a GPS Tracking device initially and thereafter six months the weight sensor in the Vehicle carrying Hazardous waste and thereafter six months video camera for live streaming and to transmit the data live to Central Server in specific cases where the vehicle is stopped in unusual conditions without presetting. Breakdowns will also be planned to catch if there is some possibility of leakage of waste from the vehicle.

The indicative specifications for the GPS Vehicle Tracking device and weight sensor are provided below. It is required to support all the GPS satellites systems (GNSS engine for GPS, GLONASS

and Galileo). It is also preferred to have Dual SIM based modules to ensure continuous data transmission.

GPRS	Quad Band – 850/900/1800/1900 MHz, Class 10 or better
GPS	GNSS engine for GPS, GLONASS and Galileo Minimum 50 Channels, or better AGPS Support Required
Antenna	External or Internal
Protocols	TCP/UDP/ FTP/HTTP Support
Storage	8 MB or better
Input/output	Two Isolated Digital Inputs Two non-Isolated Digital Outputs (Transistor coupled)
Communication	Two RS232 Port
Battery	3.7V/1100mAH LiPo with integrated Charger and should function even if power supply is cut off
Indications	Power and Communication Activity
SIM	Mini or Embedded SIM Support for Dual SIM will be preferred.
Input Supply	9-24 VDC, 2A Max
Operating Temperature	-20 to 70 °C or better
Humidity	10% - 90% RH or better
Enclosure Dimension	122 x 75 x 25 mm or smaller
Enclosure Type	Locked (Tamper proof)
Live Camera	Will be made public on CPCB website
Weight sensor	Will be made public on CPCB website

The software support will have to be provided by the firm to integrate these devices as per the directions of Competent Authority, CPCB in agiven time frame. Otherwise if some models are predominantly available or become available in future, the firm in contract with CPCB has to provide support to integrate new models for smooth operation of the project.

The development API will be made public by CPCB for all the stake holders to procure their devices accordingly.

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, Mongoddb and compatible with GIS platform
2.	Storage	Minimum 100 TB
3.	Concurrent connections	Support minimum of 10000 concurrent corrections
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 National Hazardous Waste Tracking System”

S. No.	Activities to be carried out	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
1	Advertisement & Trending & Finalization								
2	SRS Development								
3	Development of Software								
4	Development of Mobile APPs								
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 IT Division during working hours.
- Procurement of NIC domain for hosting application
- Remote access of database/application.
- Hardware for installation as suggested by the firm and connectivity
- 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	<p>1. @ 2% on Project Value for delay by 1 week in supply & installation of solution and increase @ of 0.25% of Project Value for every additional week delay.</p> <p>2. During the O&M phase, the deployed solution shall be running with 99.5% efficiency & uptime. Any deviation shall be liable for penalty of Rs. 1,000/- per day.</p>
2.	Inception report to be submitted	
3.	SRS Development	
4.	Development of Basic Central software	
5.	Development of Mobile APPs (Three iOS + Android + Windows)	
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	

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)
- 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.
- 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 developed application software has to be hosted on VM of NIC and 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., IT with at least two years of experience in the software development.
Team Member 2: B. Tech., IT 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 quotee 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 National Hazardous Waste Tracking System, 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) RDBMS and licensing requirements (if any) on which the software is proposed to be developed, so that CPCB can make necessary arrangements for its procurement if required and the cost component will be considered additionally. However, open source based technology is preferred.
 - b) From time to time the up-gradation requirements of technology.
 - c) 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 10% 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) 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 toto.

19. **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.

20. **Taxes and Duties:**

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

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 Enrollment**" 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.

21.4 Submission of Bid:

- i. 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.
- ii. 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.
- iii. 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.
- iv. For any clarification regarding tender, contact to Sh. B. Vinod Babu, Head & AD, IT Division at 011-43102296 or Sh. Aditya Sharma, Sc. ‘D’, IT Division, at 011-43102300 Central Pollution Control Board, Delhi .
- v. Not more than one tender shall be submitted by one bidder or bidders.
- vi. 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.
- vii. 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.
- viii. 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.
- ix. Bids will be opened as per date/time as mentioned in the Tender **Important Date Sheet**.
- x. The Central Pollution Control Board reserves the right to cancel all the tenders without assigning any reasons at any time.
- xi. 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.
- xii. All rates should be quoted in the prescribed ‘Financial Bid’ template (Annexure-II) in the tender. No documents may be enclosed with financial bid.
- xiii. 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.
- xiv. 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.
- xv. The tender shall remain open for acceptance for a period of 180 days from the date of opening of tenders.

- xvi. 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.
- xvii. Technical bid of only those contractors will be opened, who submit the earnest money in the prescribed manner.
- xviii. 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.
- xix. 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 supported 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) 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 of Rs. Two lakhs drawn in favour of ‘Central Pollution Control Board’, payable at Delhi in physical form duly sealed in envelope super scribed with “EMD for the tender no. <Tender No> for **“Project: Development of National Hazardous Waste Tracking System (NHWTS) Software for CPCB” Tender Notice No. : C-12015/05/2018/IT/NHWTS-Tech/Sr. No.1**” 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 template (Annexure-II) in PDF format, along with this tender document at <https://eprocure.gov.in/eprocure/app> Bidders are advised to download this template in PDF format 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. Each page of Financial Bid should be signed and with Company Seal/ Stamp. 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: The EMD will be forfeited under the following conditions:

- a. 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.

- b. 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.
- c. If the bidder fails to comply with any of the provisions of the terms and conditions of the bid document.
- d. If the selected bidder fails to execute agreement in prescribed format and Furnish the bank guarantee within the prescribed time.

RETURN OF EMD:

- a. The earnest money of all the unsuccessful bidders will be returned as early as possible on finalization of the selection.
- b. The EMD of successful bidder shall be returned after receiving the Bank Guarantee or may be adjusted against the BG
- c. No interest will be paid by CPCB on the Earnest Money Deposit.

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 of Rs 2.0 lakhs for software development or documentary evidence for exemption of EMD
- 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.
- 8. Annexure I, III & III-A 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.

BID FOR - National Hazardous Waste Tracking System (NHWTS)**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. 2 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	

FINANCIAL BID FORM - National Hazardous Waste Tracking System (NHWTS)**C-12015/05/2018/IT/NHWTS-Tech/Sr. No.1**

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

Name of items	Quantity (A)	Unit Price (B) in Rs.	Taxes etc. (Sales Tax, G.S.T, etc.) * (C)	Total Amount in Rupees (Price x Qty + Taxes)
1	2	3	4	5
A. Development of the Central Hazardous Waste Tracking System which includes the following components or modules as per Section 3 of tender document.	01			
B. Number of additional industries onboarding in a batch of 10,000 (ten thousand industries) increase in subsesequent module.	01 Set			
C. Procurement of GIS software with license	01 Set			
D. GIS License cost every year for next five years	01 Set			Bx5=
E. Integration of data layers (Layer will be procured by CPCB) into the system	01 Set			
F. Development of Mobile Apps on three (Windows & Android & iOS) different platforms	01 Set			
G. Training to CPCB/SPCB/PCC/Stakeholders to be conducted at State Capitals / major cities (About 5 training each in 5 years)	5 Training			
H. SMS Pack for 2 Lakhs SMS without time limit The item to be purchased by the firm as and when required as consumable for project.	01 Pack			=((BxA)+C) 10
I. One Year software hosting at cloud server	01 Set			=Rs.
J. Integration of 05 sets of protocols on and above 20 built in the basic software	05 Protocols			=Rs. X 25
K. Audit of software after changes as and when required by NIC	01 audit			
L. Additional Dashboards atleast 10 more in project duration	01			Rs. X 10 =
M. AMC every year renewable on performance	01 year			=(BxAx4+C)

* Rate will be governed as per govt. rules at the time of payment

Lowest quote will be calculated on the basis of total amount in last column.

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,

1. 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).

2. 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.

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

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

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

6. 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)

UNDERTAKING

DATE_____

Development of National Hazardous Waste Tracking System (NHWTS) Software for CPCB

Tender Notice No. : C-12015/05/2018/IT/NHWTS-Tech/Sr. No.1

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.

LOCATION OF DELIVERY AND INSTALLATION

**Project: Development of National Hazardous Waste Tracking System (NHWTS) Software for
CPCB Tender Notice No. : C-12015/05/2018/IT/NHWTS-Tech/Sr. No.1**

Location:

1. Central Pollution Control Board	Parivesh Bhawan, East Arjun Nagar, Shahadra, Delhi 110032
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Agreement

Agreement below is to be submitted by the Consultant 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 National Hazardous Waste Tracking System (NHWTS) Software for CPCB Tender Notice No. : C-12015/05/2018/IT/NHWTS-Tech/Sr. No.1**

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

- i. 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.
- ii. 'Work' means the total work to be conducted and completed by the firm as specified in details in the scope of work.
- iii. 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.
- iv. The firm means M/s _____

2. OBLIGATIONS OF BOTH THE PARTIES

- i. 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.
- ii. 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.
- iii. 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.
- iv. 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.
- v. 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.
- vi. 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.
- vii. 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.
- viii. 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

- i. 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.
- ii. 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

- i. 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.
- ii. 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.
- iii. 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.
- iv. 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.
- v. 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.
- vi. 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.
- vii. 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

The parties to the agreement hereby agree and consent that all disputes, claims etc., arising out of and touching upon clause of the agreement and their interpretation shall be submitted to the sole arbitrator to be appointed in the following manner:

“ The Chairman, Central Board 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 state this decision in writing and if amount of claim in dispute is 50,000/- (fifty thousand rupees) and above, the arbitrator shall give reasons for award.

Subject as aforesaid, the provision of the arbitration & conciliation Act, 1996 or any other statutory modification or reenactment there of and the rules made there under 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.

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 . _____

(Dr. Prashant Gargava)

Member Secretary

For: Central Pollution Control Board

“Parivesh Bhawan”, East Arjun Nagar, Delhi-110 032

SIGNED IN THE PRESENCE OF

1. Witness:

2. Witness:

Form 1 (For Occupier not registered in OCMMS)

1.	Name of the facility
2.	Address of the facility (drop down option for state and district)
3.	Name of the occupier of the facility
4.	Telephone Number
5.	Mobile Number
6.	Fax Number
7.	e-mail ID
8.	Year of commissioning and commencement of production
9.	Whether the facility works on (drop down option-01 shift, 02 shifts, round the clock)
10.	Whether possessing authorization under HOWM/HWM Rules (Yes/No) In case NO – then no user id and password is generated
11.	Authorisation Number (enclose copy of the same)
12.	Type of the facility (drop down option-Hazardous waste generating industries, Operator of the disposal facility , Recycler/Utiliser) Based on the above selected option, separate form for each selected facility shall be open.

Form A (For NHWTS registered Occupier)

1.	Name of the facility (Fetch data from Table 1)
2.	Address of the facility (drop down option for state and district) (Fetch data from Table 1)
3.	Name of the occupier of the facility (Fetch data from Table 1)
4.	Telephone Number (Fetch data from Table 1)
5.	Mobile Number (Fetch data from Table 1)
6.	Fax Number (Fetch data from Table 1)
7.	e-mail ID (Fetch data from Table 1)
8.	Authorisation Number (enclose copy of the same) (Fetch data from Table 1)
9.	Date of issue of authorization (calendar)
10.	Validity of the authorization (calendar)
11.	Year of commissioning and commencement of production (Fetch data from Table 1)
12.	Whether the facility works on (drop down option-01 shift, 02 shifts, round the clock) (Fetch data from Table 1)
13.	Type of the facility (drop down option-Hazardous waste generating industries, Operator of the disposal facility , Recycler/Utiliser) Based on the above selected option, separate form for each selected facility shall be open.
14.	Part A: Generator (for hazardous waste generating industries)
A.	Production details
(i)	Name of the Product (s) manufactured
(ii)	Quantity of Product manufactured (tonnes per month)
(iii)	Name of the By-product generated

(iv)	Quantity of the By-product generated (per tons of product generated)				
(v)	Raw material and Chemicals used (per ton of production)				
(vi)	Process flow sheet (document upload option)				
B.	Details on hazardous waste generation as per table below (options for adding multiple rows):				
	S. No.	Waste Type	Category of HW as per Schedule I, II and III of the Rule	Authorized for	Quantity (Tons per annum) Authorized Mode of management of HW
				Select option from drop down menu (multiple selection) <ul style="list-style-type: none"> • Generation • Collection • Storage • Transportation • Reception • Reuse • Recycling • Pre-processing • Co-processing • Utilisation Treatment • Disposal • Incineration 	Select option from drop down (multiple selection) <ul style="list-style-type: none"> • Disposal in captive secured landfilled • Disposed in captive incinerator • Disposed through common TSDF • Captive utilization within the plant • Sent for schedule IV recyclers • Sent for co-processing • Sent to other utilisers
C.	Characteristics of the hazardous waste generated (options for adding multiple rows):				
	S. No.	Waste Type	Category of HW as per Schedule I, II and III of the Rule	Physical Properties	Chemical Characteristics
				Select option from drop down (multiple selection option) <ul style="list-style-type: none"> • Solid • Liquid • Semi-solid • Specific Gravity • pH • Moisture content • Calorific value • Ash content • Sediment • Others (text box option) 	Select option from drop down (multiple selection option) <ul style="list-style-type: none"> • Fluoride • Silica • Iron • Zinc • Aluminum • Copper • Mercury • Vanadium • Molybdenum , • Lead • Arsenic • Chromium • Cadmium • Nickel • Cobalt, • Manganese, • Benzene • Toluene • Xylene • Cyclohexane • Acetone • Methyl isobutyl ketone

					<ul style="list-style-type: none"> • Methanol • Isopropyl alcohol • Methylene Dichloride • Tetra Hydro Furan • Ethyl Acetate, Iso Propyl Ether • Dimethyl formamide, Butyl acetate • Methyl Acetate • Butanol • Ethanol • Methyl Ethyl Ketone • Polyaromatic Hydrogen(PAH) • Polychlorinated biphenyls (PCB) • Total halogens • Sulfur • Carbon • Precious metals • Total Organic Carbon (to add Schedule II constituents mentioned in the HOWM Rules, 2016)
D.	Transportation details				
(i).	Whether, arrangement for transportation is by unit/actual user/TSDf (Yes/No)				
(ii).	If yes, details of the transportation vehicle authorized: (a) Type of the vehicle (drop down option Truck, Tanker/Special Vehicle) - (b) Vehicle registration number:				
15.	Part B: Operator of the disposal facility (for Common TSDf Operator)-				
A.	Type of facility available <ul style="list-style-type: none"> • Integrated facility (Both secured landfill and incinerator) – Yes/No • Exclusive Secured landfill – Yes/No • Exclusive Incinerator – Yes/No • Pre-processing– Yes/No • Others (Text box) 				
B.	Quantity authorized <ul style="list-style-type: none"> • SLF Capacity- (in Tons) • Incinerator Capacity – (in Ton/Hour) • Others (Text Box) 				
C.	Transportation details				
(i).	Whether, arrangement for transportation is by unit/actual user/TSDf (Yes/No)				
(ii).	If yes, details of the transportation vehicle authorized: (a) Type of the vehicle (drop down option Truck, Tanker/Special Vehicle) - (b) Vehicle registration number:				
16.	Part C: Recycler/ Pre-processing/Co-processor/Utilizer (for Schedule IV recyclers/pre-processor/Co-processor/Utilizer)-				
A.	Name and quantity of waste(s) received per annum from domestic sources or imported or both. (table for multiple entry)				
B.	Authorized capacity				
C.	Whether the unit possess permission for Import of Hazardous Waste (Yes/No) Please enclose copy of the same				
D.	Production details				
(i)	Name of the Product (s) manufactured				
(ii)	Quantity of Product manufactured (tonnes per month)				
(iii)	Name of the By-product generated				
(iv)	Quantity of the By-product generated (per tons of product generated)				

(v)	Raw material and Chemicals used (per ton of production)					
(vi)	Process flow sheet (document upload option)					
E.	Details on hazardous waste generation as per table below (options for adding multiple rows):					
	S. No.	Waste Type	Category of HW as per Schedule I, II and III of the Rule	Authorized for	Quantity (Tons per annum)	Authorized Mode of management of HW
				Select option from drop down menu (multiple selection) <ul style="list-style-type: none"> • Generation • Collection • Storage • Transportation • Reception • Reuse • Recycling • Pre-processing • Co-processing • Utilisation Treatment • Disposal • Incineration 		Select option from drop down (multiple selection) <ul style="list-style-type: none"> • Disposal in captive secured landfilled • Disposed in captive incinerator • Disposed through common TSDF • Captive utilization within the plant • Sent for schedule IV recyclers • Sent for co-processing • Sent to other utilisers
F.	Has the facility been set up as per CPCB guidelines (Yes/No)					
G.	Characteristics of the hazardous waste generated (options for adding multiple rows):					
	S. No.	Waste Type	Category of HW as per Schedule I, II and III of the Rule	Physical Properties	Chemical Characteristics	
				Select option from drop down (multiple selection option) <ul style="list-style-type: none"> • Solid • Liquid • Semi-solid • Specific Gravity • pH • Moisture content • Calorific value • Ash content • Sediment • Others (text box option) 	Select option from drop down (multiple selection option) <ul style="list-style-type: none"> • Fluoride • Silica • Iron • Zinc • Aluminum • Copper • Mercury • Vanadium • Molybdenum , • Lead • Arsenic • Chromium • Cadmium • Nickel • Cobalt, • Manganese, • Polyaromatic Hydrogen(PAH) • Polychlorinated biphenyls (PCB) • Total halogens • Sulfur • Carbon • Precious metals 	

					<ul style="list-style-type: none"> Total Organic Carbon (to add Schedule II constituents mentioned in the HOWM Rules, 2016)
H.	Transportation details				
(i).	Whether, arrangement for transportation is by unit/actual user/TSDF (Yes/No)				
(ii).	If yes, details of the transportation vehicle authorized: (a) Type of the vehicle (drop down option Truck, Tanker/Special Vehicle) - (b) Vehicle registration number:				

Form A1 (for OCMMS registered occupier)

1.	Name of the facility (<i>fetch from OCMMS data base</i>)
2.	Address of the facility (drop down option for state and district) (<i>fetch from OCMMS data base</i>)
3.	Name of the occupier of the facility (<i>fetch from OCMMS data base</i>)
4.	Telephone Number (<i>fetch from OCMMS data base</i>)
5.	Mobile Number (<i>fetch from OCMMS data base</i>)
6.	Fax Number (<i>fetch from OCMMS data base</i>)
7.	e-mail ID(<i>fetch from OCMMS data base</i>)
8.	Authorisation Number (enclose copy of the same) (<i>fetch from OCMMS data base</i>)
9.	Date of issuance of authorization and its reference number-(enclose copy of the same) (<i>fetch from OCMMS data base</i>)
10.	Validity of the authorization-(calendar)
11.	Year of commissioning and commencement of production (<i>fetch from OCMMS data base</i>)
12.	Whether the facility works on (drop down option-01 shift, 02 shifts, round the clock) (<i>fetch from OCMMS data base</i>)
13.	Type of the facility (drop down option-Hazardous waste generating industries, Operator of the disposal facility , Recycler/Utiliser) Based on the above selected option, separate form for each selected facility shall be open.
14.	Part A: Generator (for hazardous waste generating industries)
A.	Production details
(i)	Name of the Product (s) manufactured (<i>fetch from OCMMS data base</i>)
(ii)	Quantity of Product manufactured (tonnes per month)
(iii)	Name of the By-product generated (<i>fetch from OCMMS data base</i>)
(iv)	Quantity of the By-product generated (per tons of product generated)
(v)	Raw material and Chemicals used (per ton of production)
(vi)	Process flow sheet (document upload option) (<i>fetch from OCMMS data base</i>)
B.	Details on hazardous waste generation as per table below (options for adding multiple rows):

S. No.	Waste Type	Category of HW as per Schedule I, II and III of the Rule	Authorized for	Quantity (Tons per annum)	Mode of management of HW
			Select option from drop down menu (multiple selection) <ul style="list-style-type: none"> • Generation • Collection • Storage • Transportation • Reception • Reuse • Recycling • Pre-processing • Co-processing • Utilisation • Treatment • Disposal • Incineration 		Select option from drop down (multiple selection) <ul style="list-style-type: none"> • Disposal in captive secured landfilled • Disposed in captive incinerator • Disposed through common TSDF • Captive utilization within the plant • Sent for schedule IV recyclers • Sent for co-processing • Sent to other utilisers

C. Characteristics of the hazardous waste generated (options for adding multiple rows):

S. No.	Waste Type	Category of HW as per Schedule I, II and III of the Rule	Physical Properties	Chemical Characteristics
			Select option from drop down (multiple selection option) <ul style="list-style-type: none"> • Solid • Liquid • Semi-solid • Specific Gravity • pH • Moisture content • Calorific value • Ash content • Sediment • Others (text box option) 	Select option from drop down (multiple selection option) <ul style="list-style-type: none"> • Fluoride • Silica • Iron • Zinc • Aluminum • Copper • Mercury • Vanadium • Molybdenum , • Lead • Arsenic • Chromium • Cadmium • Nickel • Cobalt, • Manganese, • Benzene • Toluene • Xylene • Cyclohexane • Acetone • Methyl isobutyl ketone • Methanol • Isopropyl alcohol • Methylene Dichloride • Tetra Hydro Furan

					<ul style="list-style-type: none"> • Ethyl Acetate, Iso Propyl Ether • Dimethyl formamide, Butyl acetate • Methyl Acetate • Butanol • Ethanol • Methyl Ethyl Ketone • Polyaromatic Hydrogen(PAH) • Polychlorinated biphenyls (PCB) • Total halogens • Sulfur • Carbon • Precious metals • Total Organic Carbon (to add Schedule II constituents mentioned in the HOWM Rules, 2016)
D.	Transportation details				
(i).	Whether, arrangement for transportation is by unit/actual user/TSDf (Yes/No)				
(ii).	If yes, details of the transportation vehicle authorized: (a) Type of the vehicle (drop down option Truck, Tanker/Special Vehicle) - (b) Vehicle registration number:				
15.	Part B: Operator of the disposal facility (for Common TSDf Operator)-				
A.	Type of facility available <ul style="list-style-type: none"> • Integrated facility (Both secured landfill and incinerator) – Yes/No • Exclusive Secured landfill – Yes/No • Exclusive Incinerator – Yes/No • Pre-processing– Yes/No • Others (Text box) 				
B.	Quantity authorized <ul style="list-style-type: none"> • SLF Capacity- (in Tons) • Incinerator Capacity – (in Ton/Hour) • Others (Text Box) 				
C.	Transportation details				
(i).	Whether, arrangement for transportation is by unit/actual user/TSDf (Yes/No)				
(ii).	If yes, details of the transportation vehicle authorized: (a) Type of the vehicle (drop down option Truck, Tanker/Special Vehicle) - (b) Vehicle registration number:				
16.	Part C: Recycler/ Pre-processing/Co-processor/Utilizer (for Schedule IV recyclers/pre-processor/Co-processor/Utilizer)-				
A.	Name and quantity of waste(s) received per annum from domestic sources or imported or both. (table for multiple entry)				

B.	Authorized capacity					
C.	Whether the unit possess permission for Import of Hazardous Waste (Yes/No) Please enclose copy of the same					
D.	Production details					
(i)	Name of the Product (s) manufactured					
(ii)	Quantity of Product manufactured (tonnes per month)					
(iii)	Name of the By-product generated					
(iv)	Quantity of the By-product generated (per tons of product generated)					
(v)	Raw material and Chemicals used (per ton of production)					
(vi)	Process flow sheet (document upload option)					
E.	Details on hazardous waste generation as per table below (options for adding multiple rows):					
	S. No.	Waste Type	Category of HW as per Schedule I, II and III of the Rule	Authorized for	Quantity (Tons per annum)	Mode of management of HW
				Select option from drop down menu (multiple selection) <ul style="list-style-type: none"> • Generation • Collection • Storage • Transportation • Reception • Reuse • Recycling • Pre-processing • Co-processing • Utilisation Treatment • Disposal • Incineration 		Select option from drop down (multiple selection) <ul style="list-style-type: none"> • Disposal in captive secured landfilled • Disposed in captive incinerator • Disposed through common TSDF • Captive utilization within the plant • Sent for schedule IV recyclers • Sent for co-processing • Sent to other utilisers
F.	Has the facility been set up as per CPCB guidelines (Yes/No)					
G.	Characteristics of the hazardous waste generated (options for adding multiple rows):					
	S. No.	Waste Type	Category of HW as per Schedule I, II and III of the Rule	Physical Properties	Chemical Characteristics	
				Select option from drop down (multiple selection option) <ul style="list-style-type: none"> • Solid 	Select option from drop down (multiple selection option) <ul style="list-style-type: none"> • Fluoride 	

				<ul style="list-style-type: none"> • Liquid • Semi-solid • Specific Gravity • pH • Moisture content • Calorific value • Ash content • Sediment • Others (text box option) 	<ul style="list-style-type: none"> • Silica • Iron • Zinc • Aluminum • Copper • Mercury • Vanadium • Molybdenum , • Lead • Arsenic • Chromium • Cadmium • Nickel • Cobalt, • Manganese, • Polyaromatic Hydrogen(PAH) • Polychlorinated biphenyls (PCB) • Total halogens • Sulfur • Carbon • Precious metals • Total Organic Carbon (to add Schedule II constituents mentioned in the HOWM Rules, 2016)
H.	Transportation details				
(i).	Whether, arrangement for transportation is by unit/actual user/TSDf (Yes/No)				
(ii).	If yes, details of the transportation vehicle authorized: (a) Type of the vehicle (drop down option Truck, Tanker/Special Vehicle) - (b) Vehicle registration number:				

Form B (Daily records filing by all stakeholder (i.e Generator/Operator of TSDF/ Recyclers/Utiliser)

1. Name and address of the facility (fetch from details given in form A/A1 based on the unique ID of the occupier)
2. Date of issuance of authorization and its number (fetch from details given in form A/A1 based on the unique ID of the occupier)

Based on the Unique ID of the occupier, respective daily form for each type of facility will be opened (Hazardous waste generating industries/Operator of the disposal facility/ Recycler/Utiliser)

3. Description of hazardous and other wastes handled (to be filled by hazardous waste generating units only)
(Below table for multiple entry)

Date	Name & category of waste as per schedule I, II and III of HOWM Rules Fetch data from Table 2 & 3	Product & By-product manufactured Fetch data from Table 2 & 3		Quantity stored in Tons in shed (X value for first entry)		Quantity generated			Stored Cumulative quantity (Add quantity of Column 3)	Quantity of hazardous waste disposed (in case of captive facility)				Destined to				
		Name	Quantity	Landfillable	Incinerable	Landfillable	Incinerable	Recyclable/Utilisable		Landfillable	Incinerable	Direct landfillable	Land filled after treatment	Incinerated	Captive Utilization	Date	Quantity (Landfillable & Incinerable)	Name and address
				X		Y			X+Y = Z									
				Z		A			Z+A = B						B			
				0		C			C									

4. Description of hazardous and other wastes handled (to be filled by Operator of TSDFs)
(below table for multiple entry)

Date	Name & category of waste as per schedule I, II and III of HOWM Rules	Received from				Quantity stored in Tons in shed (only for first entry)	Quantity of Leachate generated	Quantity of ash generated	Stored Cumulative quantity (Add quantity of Column 3)		Quantity of hazardous waste disposed			Destined to In case of Co-processing /common incinerator (standalone) facility			
		Date	Quantity (Landfillable & Incinerable)	Name and address	Unique ID of the receiver				Landfillable	Incinerable	Landfillable	Incinerable	Direct landfillable	Land filled after treatment	Incinerated	Date	Quantity (Landfillable & Incinerable)

- i. Number of member units:
- ii. Details on leachate management (drop down option - MEE/ETP/CETP/In Spray Drier) any.
- iii. Mode of disposal of ash generated from incineration plant (Drop down option- Within the facility/sent to Common SLF)
- iv. In case sent to other Common SLF
(a) Name and address of facility

5. Description of hazardous and other wastes handled (generated and received)
(below table for multiple entry)- To be filled by Recylers/Utilisers/Co-processors/ Pre-processors

Date	Name & category of waste as per schedule I, II and III of HOWM Rules Fetch data from s.No 16 (G)	Received from				Product & By-product manufactured Fetch data from s.No 16 (D) (i) & (iii)	Quantity stored in Tons in shed (only for first entry)	Stored Cumulative quantity (Add quantity of Column 3)	Quantity generated			Quantity of hazardous waste disposed (in case of captive facility)				Destined to			
		Date	Quantity (Landfillable & Incinerable)	Name and address	Unique ID of the receiver				Name	Quantity	Landfillable	Incinerable	Recyclable/Utilisable	Direct landfillable	Land filled after treatment	Incinerated	Captive utilization	Date	Quantity (Landfillable & Incinerable)

Form C (Manifest System)

1.	Sender's Details- <ul style="list-style-type: none"> • Name • Address • Mobile number • e-mail ID 	<i>(Fetch data)</i>
2.	Sender's authorization number	<i>(Fetch data)</i>
3.	Manifest document number	<i>(System generated)</i>
4.	Enter unique ID of the receiver	
5.	Transporter's details- <ul style="list-style-type: none"> • Name • Address • Mobile number • e-mail ID 	<i>Fetch the data from the sender or receiver unique ID</i>
6.	Type of vehicle (drop down option-truck/tanker/special vehicle), to be retrieve from Unique ID as enter above.	
7.	Transporter's registration number	<i>Drop down options</i>
8.	Vehicle registration number	
9.	Receiver's details- <ul style="list-style-type: none"> • Name • Address • Mobile number • e-mail ID 	<i>Fetch the data from the receiver unique ID</i>
10.	Receiver's authorization number	<i>Fetch the data from the data base</i>
11.	Waste description	
12.	Total quantity (m ³ or MT) Number of containers (nos.)	
13.	Physical form (drop down option-Solid, Semi-Solid, Sludge/Oily/Tarry/Slurry/Liquid)	
14.	Special handling instructions and additional information	
15.	Sender's Certificate Name and Address Date-(calendar) (With option for submission)	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorized, packed, marked, and labeled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
16.	Transporter Acknowledge receipt of Waste (Repeat data of S. No 11 and 12) – Name and Address Date-(calendar) With option for Acknowledgement (Yes/No)	
17.	Receiver Certification for receipt of hazardous waste (Repeat data of S. No 11 and 12) – with editing option Name and Address Date-(calendar) With option for Acknowledgement (Yes/No)	