

MAHARASHTRA POLLUTION CONTROL BOARD

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RED/LSI

Consent No: BO/RO(HQ)/HWMD/EIC No. NG-11661-14/CR/CC-6706 Date: ~~05/2015~~ 06/06/2015

Consent to Operate under Section 26 of the Water (Prevention and Control of Pollution) Act, 1974, as amended; under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981, as amended and Authorisation under Rule 5 of the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 notified under the Environment (Protection) Act, 1986 [To be hereinafter referred as Water Act, Air Act, HW Rules] is hereby granted to.

M/s. Maharashtra Enviro Power Ltd.
(Formerly M/s. Vidharbha Enviro Protection Ltd.),
Sr.No.7 to 15, 131 & 162, Butibori Industrial Area,
Mouza- Mandawa, Taluka- Hingana, Dist- Nagpur.

to operate a common facility as Operator for collection, treatment, storage and disposal of composite hazardous wastes (hereinafter referred as TSDF) subject to the following conditions :-

1. The Consent to Operate is granted as an Operator of the facility under Rule 5 of Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 and to set up common hazardous wastes collection, transportation, storage, treatment and disposal facility (CHWTSDf) Sr.No.7 to 15, 131 & 162, Butibori Industrial Area, Mouza- Mandawa, Taluka- Hingana, Dist- Nagpur.
2. The Consent to Operate is valid for the period upto – 31.10.2019
3. The installed and operating capacity of the common HW incinerator shall be as under:-

[a] Total Hazardous Waste Incinerator capacity	:	25,000 MT/A.
[b] Captive Power generation	:	6 MW / hr
4. The CHWTSDf shall cater to the requirements of environments of environmentally sound management as required under the HW Rules for the hazardous wastes generated by the industries possessing valid authorization by Maharashtra Pollution Control Board (MPCB) and operating in the following MIDC and nearby non-MIDC Industrial Areas, as per revised area allocation order of the Board No. MPCB/RO(HQ)/HSMD/TSDF/B-7446, dated 11/12/2008.
 - [a] Depending upon the technical capacity and feasibility, hazardous wastes from Industries operating in non- MIDC Industrial areas and also industries operating in MIDC areas within Maharashtra other than mentioned at Sr. No. [a] above and authorized by or prior permission of MPCB, can also be accepted by the CHWTSDf at Butibori, Nagpur.
5. MPCB will issues suitable amendment in the authorization issued under Rule 5 of HW Rules, to the member industries generating hazardous wastes and operating in the areas mentioned revised area allocation order of the Board No. MPCB/RO(HQ)/HSMD/TSDF/B-7446, dated 11/12/2008, directing them to send their wastes to the CHWTSDf at Butibori, through implementation of manifest stipulated in the HW Rules, and through MPCB authorized hazardous waste Transporter failing which their authorization shall be revoked, suspended or not granted.

6. The generators of the hazardous wastes utilizing the common facility of TSDF at Butibori shall be bound to pay the costs to the TSDF Operator (on polluter pays principle as enunciated by the Honorable Supreme Court of India) based on the criteria adopted by the MIDC in its RFP (Request for Proposal) document No.3 based on which MIDC has entered into agreement with the TSDF operator. The revision of costs involved in TSDF operations shall be further governed accordingly. MPCB will issue suitable directions in this regard to all concerned.
7. In case of variations in the quantities of hazardous wastes available for CHWTSDF operations, MPCB shall review, as may be required and revise the jurisdiction of the common area allocated to the CHWTSDF at Butibori vide revised area allocation order of the Board No. MPCB/RO(HQ)/HSMD/TSDF/B-7446, dated 11/12/2008.
8. The Operator of the TSDF shall accept only the hazardous wastes covered under the HW Rules and other waste as permitted by MPCB on case to case basis from time to time.
9. Transportation of hazardous wastes shall be done in compliance with the HW Rules and the guidelines issued by CPCB in this respect from time to time. Suitable transport vehicles, closed containers etc. shall be provided commensurate with the nature/characteristics of wastes. Transportation costs shall be recovered from the waste generators in accordance with the RFP and the agreement of MIDC with the TSDF Operator.
10. The TSDF operator shall be responsible for implementation of conditions and criteria as laid down in the RFP document and agreement with MIDC.
11. The TSDF Operator shall be legally bound under this authorisation to co-operate and comply with the directions as may be issued by MIDC in terms of its agreement with TSDF Operator.
12. Treatment and disposal of the hazardous wastes shall be done as under:
 - [a] Incineration by Plasma Gasification
 - [i] Direct Incineration by Plasma Gasification
 - [ii] Physical-Chemical Treatment as per requirement as the case may be followed by Plasma Gasification and disposal / reuse of non hazardous vitrified slag.
13. MIDC being an authority notified under Rule 8 of HW (M&H) Rules, 2003 shall coordinate with TSDF Operator for implementation of the project in accordance with its agreement with the Operator. For this purpose, continuance of the role of the Expert Committee for HWM set up by MIDC is envisaged for advice from time to time and this may *inter-alia* include arbitration in terms of cost escalations and dispute resolution.
14. Treatment and disposal of Incinerable Hazardous Waste shall be done as under :-
 - a) Plasma Gasification
 - i. Using Plasma Gasification Vitrification Reactor (PGVR) Technology
 - ii. Physical – Chemical Treatment as per requirement as the case may be will be followed by PGVR and disposal/ reuse of Non hazardous vitrified Slag.
1. MIDC being an authority notified under Rule 8 of HW (M & H) Rules, 2003 shall coordinate with TSDF operator for implementation of the project in accordance with its agreement with the operator. For this purpose, continuance of the role of the Expert Committee for HWM set up by MIDC is envisaged for advice from time to time and this may *inter-alia* include arbitration in terms of cost escalations and dispute resolution.

2. Plasma Gasification Vitrification Reactor (PGVR)

2.1 General Characteristics of PGVR –

- a. PGVR (Primary and Secondary chamber) should be of suitable design, lined with refractory & connected with Thermal Oxidizer, WHRB – ESP APC System, ID Fan & then flue gas through rubber lined stack of height 45 m.
- b. The PGVR shall be capable of operating to severe operating conditions in the ambient temperature range 0-50°C and humidity up to 95%.
- c. The PGVR shall be designed to gasify industrial waste with capacity as per requirement.
- d. The PGVR should be designed/ manufactured to meet specification and norms of CPCB, MoEF and SPCB norms and guidelines as may be published from time to time.
- e. The PGVR should be capable of gasifying the hazardous waste.

2.2 Technical Features :-

1. Material of construction for the PGVR should be of MS sheet of suitable specs. The reactor shall be lined with high quality refractory and insulation capable of with standing temperature up to 1500°C.
2. The PGVR should have adequate interlocks and safety system which are controlled by PLC.
3. The PGVR working temperature shall be maintained (1000°C to 1200°C) for complete gasification of Hazardous waste. The Thermal oxidizer temperature should be maintained at 1200°C +100°C.
3. The flue gas from Thermal oxidizer should pass through the air pollution control system. The system should be designed to remove the pollutant and particulate matter present in the flue gas from Thermal oxidizer.
4. The emission control system comprises of. Ventury (alkali) scrubber, Direct Contact Scrubber, Wet ESP, Polishing Scrubber, followed by ID Fans connected to Stack etc to meet the emission norms as given at sr. No 14.7, 14.7.1, 14.7.2, 14.7.3 of this document. This system also brings down the outlet temperature of flue gases to approx 50 ± 5° C.
5. Minimum Two Plasma Torches to be installed fully automatic along with auxiliaries of suitable capacity.
6. Burners shall be of standard make pressure atomized type, capable of maintaining the temperature uniform inside the Thermal Oxidizer

7. The Thermal Oxidizer shall be made of mild steel conforming to IS: 2062 and of suitable thickness lined with high grade refractory and insulation.
8. Suitable capacity blowers will be provided to provide sufficient air as per process requirement.
9. Automatic waste feed system to the PGVR should be provided.
10. Easily operating of charging door shall be provided with PLC control to facilities easy loading of the HW to the PGVR.
11. Liquid waste which is not suitable for handling and pumping shall be repacked in containers of suitable size for charging in PGVR.
12. The charging door should be fitted with the limit switches with PLC control which in turn shall cut off the feeding of HW and shall provide all safety measures to the operator while charging.
13. There shall be no waste accumulation inside the PGVR and shall have the capability of smooth working.
14. The control panel housing provided with the unit shall be of L & T or Siemens or any other reputed make, button, starters and contractors shall have digital temperature controls The ON/OFF switch shall light indication etc.
15. The Inorganic waste generated in the form of vitrified slag which is non Hazardous in nature should be disposal or reused in road filling, Brick Making for construction purpose.
16. Power consumption for gasifying hazardous waste is important consideration while selection of vendor. Power/ electrical consumption should also be considered.
17. A Stack of 45 meter height with conical base should be provided along with PGVR. It should be made as per the specification of guidelines of CPCB / IS – 5533 as applicable.
18. The PGVR shall be provided with suitable lifting lugs for maintenance purpose, as required.
19. The PGVR shall have sufficient number of peepholes fitted with Min 50 mm safety view glass for viewing.
20. The residence time for flow gases should not be less then 2 secs to achieve complete combustion in Thermal Oxidizer with minimum % of oxygen.

21. Sampling platform should be provided as per CPCB norms to collect stack samples from the stack for monitoring the air pollutants, as and when required. Pointed to be provided on stack as per standard CPCB norms against diametric calculations.
22. The FD fan should be centrifugal type, having standards make suitable power motor of suitable material.
23. The ID fans should be centrifugal type, with suitable power motor to meet with effective control of emission from stack.
24. The Venture Scrubber and Direct Contact Scrubber unit shall be of high energy type of MS make. The scrubbing medium should be water with 5% caustic approximately. It should bring the outlet temperature of the gas to $50 \pm 5^{\circ}\text{C}$.
25. Recirculation pumps of approximate capacity and of standards make motor should be provided for recirculation of scrubbing medium.
26. Oil service tank capacity min. 1000 Liters made out of 5 mm thick MS plate complete with pipping along with required MS supporting structure control valve and fuel indicators / gauge, fuel lifting pumps etc should be provided for Thermal Oxidizer.
27. The whole equipment should be painted with two coats of heat resistant aluminum paint.
28. Any other system required to bring the flue gas parameters within limits as per Central/ State Pollution Control Board norms should be provided.
29. You shall provide all civil works drawing for PGVR control room, foundation of stack and water tanks etc. You should also provide effluent treatment plant for the treatment of effluents at the discharge points of the scrubbing medium so that discharge of waste water comply with the General Standards of Waste Water Quality notified under the Environment (protection) Act, 1986 and rules made under.

2.3 Material of construction

- a) Body: Fabricated from MS sheet.
- b) Lining: Both the PGVR and Thermal Oxidizer to be lined with high quality refractory and insulation.
- c) Interlock system: Plasma Torches electrically interlocked with PLC system.
- d) Alarm : Audio visual alarm for all
 - i. Drive failure
 - ii. Excess temperature in PGVR / To.
 - iii. ID fan failure.
 - iv. Any other failure in the equipment, plant.
- e) Accessories
Standard spares –

- i) Min. One Plasma Torch for PGVR & Min. One Burner for TC.
- ii) Refractory Material.
- iii) Temperature controller and Indicators – one set.

2.4 Requirement of stack :

- a) Height: 45 meters.
- b) Material of Stack: Mild steel with rubber lining.
- c) Type: It shall be self supported having sampling points at appropriate places of appropriate dia. along with ladder and platform for testing emission level from stack. Ports to be provided at distances required for standard method of testing.
- d) Stack should be made as per the specifications of guidelines of CPCB / IS 6533 as applicable.

2.5 Approximate life of PGVR –

Expected life of PGVR shall not less than 20 years. You shall furnish the expected minimum life of PGVR for gasifying waste in terms of Kgs/day for moderate working of 24 Hrs/day.

2.6 Combustion efficiency :

After gasification vitrified slag will be free from organics.

2.7 Emission Standards:

The PGVT technology along with suitably designed pollution controlled devices should be installed operated and maintained, so that to achieve emission levels as given below:

Sr. No.	Parameters	Limiting concentration in mg/Nm ³ unless stated	Sampling Duration in (minutes) unless stated
1	Particulate matter	50	30
2	HCl	50	30
3	SO ₂	200	30
4	CO	100	30
5		50	24 Hrs.
6	Total Organic carbon	20	30
7	HF	4	30
8	Nox (NO and NO ₂ expressed as NO ₂)	400	30
9	Total dioxins and furane	0.1ng TEC / Nm ³	1. 8 Hrs
10	Cd + Zn + their compound	0.05	2 Hrs.
11	Hg and its compound	0.05	2 Hrs.
12	Sb + As + Pb + Cr + CO + Cu + Mn + Ni +V + their compounds	0.05	2 Hrs

Note: All values corrected to 11% Oxygen on dry basis.

11/11/2004

14.7.1 Hydrocarbons: 10 ppm over and hourly rolling average dry basis, measure as propane.

14.7.2 Opacity : While operating properly at 100% rated capacity, the system shall have a visible emission rate of less than or equal to 10% except for condensed water vapor from the discharge stake to atmosphere (one hour rolling average).

14.7.3 Dioxin / Furans: While operating properly at 100% rated capacity, the system shall have an emission of dioxins and furnaces of less than or equal to 0.1 ng TEQ / Nm³ corrected to 11% oxygen. Sampling period shall be minimum 6 hours and maximum 8 hours. Analysis of dioxin and furans as well as reference measurement methods to calibrate automated measurement systems shall be carried out as given by CEN – Standards. If CEN Standards are not available, ISO Standards, National or International Standards which will ensure the provision data of an equivalent scientific quality shall apply.

{Note: You should monitor Dioxin and Furans 6 monthly up to 2 years after commissioning and submit emission reports to MPCB.}

14.7.4 Metals: While operating properly at rated capacity the system shall have an emission rate from the discharge of stack to atmosphere less than or equal to as mentioned above.

14.7.5 Air Pollution Control devices: The emission control system shall be installed for gas cleaning and removal of air pollutants. The system shall comprise of following equipment singly or in combination with design efficiencies to meet the emission norms:

- i. Waste Heat Recovery Boiler / Heat Exchanger / Quencher
- ii. ESP
- iii. Dry / Wet Scrubber with hydrated lime or Sodium Hydroxide injection in case of Polishing Scrubber Caustic Lye solution of Min. 45% strength.
- iv. Stack of Min. 45m height or as per formula $14(Q) 0.3$ [Where Q is emission rate of SO₂ in Kg/Hr] whichever is more and designed as per GEP.

Note: Dry / Wet ESP and mist eliminator shall also be considered as may be required to meet the emission standards.

14.7.6 Monitoring Requirement: Three continues ambient air quality monitoring stations and recording system for opacity, CO, SO₂, and NO_x shall be installed and reports shall be sent to the Maharashtra Pollution Control Boards on regular basis. Interlocking arrangements for CO and temperature controls (in PGVR and Thermal Oxidizer) with feeding devices shall be also be provided.

Waste feed has also to be terminated on failure of PGVR system.
Vent valve in case of higher pressure development in the PGVR.

- 14.7.7 Online stack monitoring with display and recording system of standard makes for maximum possible parameters shall be provided.
- 14.7.8 Infrared / Digital temperature with display and recording system shall be provided at the PGVR, Thermal Oxidizer, stack outlet and other places as required to gasify.

15. Laboratory

The TSDF Operator shall set up the laboratory for analysis of hazardous wastes in accordance with the provisions contained in the RFP document. The laboratory shall have the capability to carry out the comprehensive and finger print parameter(s) analysis as may be necessary for treatment and disposal of the hazardous wastes. The laboratory shall be adequately staffed and equipped to carry out the above work. The laboratory shall be responsible to maintain the analytical records.

Laboratory instruments and equipments as indicated in the RFP document of MIDC and the techno-business proposal submitted by the TSDF Operator shall be installed and commissioned. Any additional instruments/equipments required for sampling, storage, transportation, analysis etc. shall also be procured by TSDF Operator.

16. Transportation of Wastes

The TSDF Operator shall also be responsible for safe transportation of hazardous wastes as "transporter", from H.W. Generator/ occupier authorized by MPCB to TSDF at Butibori, Dist: Nagpur. The transportation vehicles and containers shall be suitably designed to handle the hazardous wastes. The transporter shall carry / display the TREM card during transportation of the hazardous wastes and comply with the provisions under Motor Vehicles Act (MVA), 1988; as amended and rules made thereunder. The transporter shall comply with the guidelines for packaging, labeling and transportation for Hazardous Wastes given as under:

16.1 PACKAGING

The containers must be able to withstand normal handling and retain integrity for a minimum period of six months. In general, packaging for hazardous substances must meet the following requirements:

- 16.1.1 All packaging materials including containers shall be of such strength, construction and type as not to break open or become defective during transportation.
- 16.1.2 All packaging materials including containers shall be so packaged and sealed that spillages of hazardous wastes / substances are prevented during transportation due to jerks and vibrations caused by uneven road surface.
- 16.1.3 Re-packaging materials including that used for fastening must not be affected by the contents or form a dangerous combination with them.
- 16.1.4 Packaging material should be such that there will be no significant chemical or galvanic action among any of the material in the package.
- 16.1.5 The containers when used for packaging of the hazardous wastes shall meet the following requirements:
- Container shall be of mild steel with suitable corrosion-resistant coating and roll-on roll-off cover, which may either be handled by articulated crane or by a hook lift system comfortably for a large variety of wastes. Other modes of packaging, like collection in 200-litre plastic drums, cardboard cartons, PP and

HDPE/LDPE containers etc., also work for variety of wastes. However, all such container should be amenable to mechanical handling.

- b. It should be leak proof.
- c. In general, the containers for liquid HW should be completely closed, in fact sealed. There should be no gas generation due to any chemical reaction within the container, and, hence, there should not be any need for air vents; expansion due to increase / decrease in temperature normally does not need air vents.
- d. Container should be covered with a solid lid or a canvas to avoid emissions of any sort including spillage, dust etc. and to minimize odour generation both at the point of loading as well as during transportation.
- e. Container used for transportation of waste should be able to withstand the shock loads due to vibration effect/undulations of pavements etc.
- f. Container should be easy to handle during transportation and emptying.
- g. As far as possible, manual handling of containers should be minimized. Appropriate material handling equipment is to be used to load, transport and unload containers. This equipment includes drum, dollies, and forklifts, drum handling equipment, lift gates and pallets. Drums should not be rolled on or off vehicles.
- i. Where two-tier or three-tier storage is envisaged, the frame should have adequate strength to hold the containers.
- j. One-way containers (especially, 160-litre drums) are also allowed. The multi-use containers should be re-usable provided it should be cleaned and free from deterioration or defects.
- k. Loads are to be properly placed on vehicles. HW containers are not to overhang, perch, lean or be placed in other unstable base. Load should be secured with straps, clamps, braces or other measures to prevent movement and loss. Design of the container should be such that it can be safely accommodated on the transport vehicle.
- l. Dissimilar wastes shall not be collected in the same container. Wastes shall be segregated and packed separately. This is necessary to ensure that each waste finds its way to the right disposal point.
- m. Occupier / hazardous waste generator shall not resort to the dilution of wastes (predominantly organic wastes).

16.2 LABELLING

There are two types of labelling requirements:

- (i) Labelling of individual transport containers [ranging from a pint-size to a tank], and
- (ii) Labelling of transport vehicles.

All hazardous wastes containers must be clearly marked with current contents. The markings must be waterproof and firmly attached so that they cannot be removed.

Previous content labels shall be obliterated when the contents are different. Proper marking of containers is essential.

Containers that contain HW shall be labelled with the words "HAZARDOUS WASTE" in Vernacular language, Hindi / English. The information on the label must include the code number of the waste, the waste type, the origin (name, address, telephone number of generator), hazardous property (e.g. flammable), and the symbol for the hazardous property (e.g. the red square with flame symbol).

The label must withstand the effects of rain and sun. Labelling of containers is important for tracking the wastes from the point of generation upto the final point of disposal. The following are the requirements for labelling:

- The label should contain the name and address of the occupier and operator of the facility where it is being sent for treatment and final disposal i.e., Labeling of container shall be provided with a general label as per Form 12 of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008
- Emergency contact phone numbers shall be prominently displayed viz. the phone number of concerned Regional Officer of the SPCB / PCC, Fire Station, Police Station and other agencies concerned.

Explanation: As a general rule, the label has to state the origin / generator of the waste. He - and only he - is responsible and shall know, in case of any accident / spillage etc., what kind of wastes it is, what hazard may occur and which measures should be taken. The second in the line is the collector / transporter, who have to know the risk and what to do to minimize risks and hazards.

2. 16.3 COLLECTION, STORAGE AND TRANSPORTATION OF HW:

Safe transportation of HW to the Treatment, Storage and Disposal Facility (TSDF) is a collective responsibility of the waste generator, operator of a facility for treatment & disposal of HW and the transporter. The following guidelines shall be followed prior to handing over of the waste to the transporter:

- (a) The generator of the hazardous waste shall ensure that wastes are packaged in a manner suitable for safe handling, storage and transport. Labelling on packaging is readily visible and material used for packaging shall withstand physical conditions and climatic factors.
- (b) The TSDF operator shall be responsible for cleanup and remedial operation in case of spillage, leakage or any other accidental / incidental discharge of hazardous wastes at its own cost and consequences and shall keep the MPCB suitably informed.
- (c) The generator shall ensure that information regarding characteristics of wastes particularly in terms of being Corrosive, Reactive, Ignitable or Toxic is provided on the label.
- (d) Transport of hazardous wastes shall be in accordance with the provisions of the rules made by the Central Government under the Motor Vehicles Act, 1988 and other guidelines issued from time to time.

- (e) All hazardous waste containers shall be provided with a general label as given in Form 12 in Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.
- (f) Transporter shall not accept hazardous wastes from an occupier (generator) unless six-copies (with colour codes) of the manifest (Form 13) as per Rule 21 of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 is provided by the generator. The transporter shall give a copy of the manifest signed and dated to the generator and retain the remaining four copies to be used for further necessary action prescribed in the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 as under:

- Copy 1 (White) : To be forwarded to the SPCB/PCC by the occupier
- Copy 2 (Yellow) : To be signed by the transporter and retained by the occupier
- Copy 3 (Pink) : To be retained by the operator of a facility
- Copy 4 (Orange) : To be returned to the transporter by the operator of facility after accepting waste
- Copy 5 (Green) : To be forwarded to the SPCB/PCC by the operator of facility after disposal.
- Copy 6 (Blue) : To be returned to the occupier by the operator of the facility after disposal.

- (f) In case of interstate transportation of waste, the occupier (waste generator) shall strictly follow the manifest system as stipulated under Rule 21 of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.
- (g) In case of transport of hazardous wastes to a facility for treatment, storage and disposal existing in a State other than the State where wastes are generated, the generator shall obtain necessary "No Objection Certificate" from the concerned State Pollution Control Board or Pollution Control Committee of the UT where the facility is located.
- (h) The generator shall provide the transporter with relevant information in Form 14, i.e. Transport Emergency (TREM) Card regarding the hazardous nature of the wastes and measures to be taken in case of an emergency.
- (i) The operator of a facility (registered recyclers or re-processors of hazardous waste) while collecting the wastes from the waste collections points or Ports or ICDs, shall also follow the manifest system as per Rule 21 of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.
- (j) The operator shall follow the guidelines for storage of hazardous wastes issued/ amended by Central Pollution Control Board time to time.

3. 16.4 RESPONSIBILITIES OF THE HW TRANSPORTER

Transporter of hazardous wastes shall be responsible for:

- Obtaining permission from SPCB/PCC for transport of hazardous waste [in addition to any other permissions that may be required under the Motor Vehicles (Amendment) Act of 1988].
- The transport vehicles shall be designed suitably to handle and transport the hazardous wastes of various characteristics.
- The transporter should follow all the Rules pertaining to transportation of hazardous waste as stipulated under Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008
- Transporting the wastes in closed containers at all times
- Delivering the wastes at designated points only.
- Informing SPCB/PCC or local authority, occupier/operator of a facility, and others concerned immediately in case of spillage, leakage or other accidents during transportation
- The transporter shall train the driver with regard to the emergency response measures to be taken during the transportation of waste.
- Cleanup in case of contamination.
- Cleaning of vehicles shall be carried out at designated places i.e. either at TSDF/CETPs etc., or where there are facilities to treat such wastewaters.

16.5 TRANSPORTATION REQUIREMENT

The following are the requirements pertaining to the transportation of hazardous wastes:

- Vehicle used for transportation shall be in accordance with the provisions under the Motor Vehicles Act, 1988, and rules made thereunder.
- Transporter shall possess requisite copies of the certificate (valid authorization obtained from the concerned SPCB/PCC for transportation of wastes by the waste generator and operator of a facility) for transportation of hazardous waste.
- Transporter should have valid "Pollution Under Control Certificate" (PUCC) during the transportation of HW and shall be properly displayed.
- Vehicles shall be painted preferably in blue colour with white strip of 15 to 30 cm width running centrally all over the body. This is to facilitate easy identification.
- Vehicle should be fitted with mechanical handling equipment as may be required for safe handling and transportation of the wastes.
- The words "HAZARDOUS WASTE" shall be displayed on all sides of the vehicle in Vernacular Language, Hindi, English.
- Name of the facility operator or the transporter, as the case may be, shall be displayed.
- Emergency phone numbers and TREM Card in Form 11 of Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 shall be displayed properly

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- Vehicle shall be fitted with roll-on / roll-off covers if the individual containers do not possess the same.
 - Carrying of passengers is strictly prohibited and those associated with the waste haulers shall be permitted only in the cabin.
 - Transporter shall carry documents of manifest for the wastes during transportation as required under Rule 20 of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008
 - The trucks shall be dedicated for transportation of hazardous wastes and they shall not be used for any other purpose.
 - Each vehicle shall carry first-aid kit, spill control equipment and fire extinguisher.
 - HW transport vehicle shall run only at a speed specified under Motor Vehicles Act in order to avoid any eventuality during the transportation of HW.
 - Educational qualification for the driver shall be minimum of 10th pass (SSC). The driver of the transport vehicle shall have valid driving license for heavy vehicles from the State Road Transport Authority and shall have experience in transporting the chemicals.
- Driver(s) shall be properly trained for handling the emergency situations and safety aspects involved in the transportation of hazardous wastes.
- The design of the trucks shall be such that there is no spillage during transportation.

17. Emergency Preparedness Plan

- The TSDF Operator shall prepare an on-site emergency plan and provide adequate training to the staff at the facility. The emergency preparedness plan shall be prepared and put in place prior to the commencement of TSDF operations and shall be submitted to MPCB.

18. Conditions regarding Water Act :

- a) The applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Cess Act, 1977 (to be referred as Cess Act) and amended Rules, 2003 thereunder.

The daily water consumption for the following categories is as under:

(i) Domestic	10 CMD
(ii) Industrial processing	5 CMD
(iii) Industrial Cooling / Boiler	1478.0 CMD
(iv) Agriculture/ Gardening	350 CMD

The applicant shall regularly submit to the Board the returns of water consumption in the prescribed form and pay the Cess as specified under Section 3 of the said Act.

- (b) The daily quantity of trade effluent shall not exceed 224.0 M³.
- (c) The daily quantity of sewage effluent from the TSDF operations shall not exceed 8 M³.

(d) Trade Effluent:

Treatment :- The TSDF Operation shall provide comprehensive treatment system consisting of Primary/Secondary and/or Tertiary treatment as may be warranted with reference to influent quality and operate, maintain the same continuously so as to achieve the quality of the treated effluent to the following standards before disposal.

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Sr.No.	Parameters	Standard
1	pH	5.5 - 9.0
2	BOD, 3 days 27°C	100
3	Oil & Grease	20
4	Suspended Solids	100
5	Residual Chlorine	1
6	NH ₃ (as N)	50
7	TKN (as N)	100
8	COD	250
9	Arsenic (as As)	0.2
10	Mercury (as Hg)	0.01
11	Lead (as Pb)	1
12	Cadmium (as Cd)	2
13	Total Chromium (as Cr)	2
14	Copper (as Cu)	3
15	Zinc (as Zn)	15
16	Selenium (as Se)	0.05
17	Nickel (as Ni)	5
18	Cyanide (as CN)	0.2
19	Flouride (as F)	15
20	Sulphide (as S)	5
21	Pesticides	Absent
22	Phenolic Compounds (as C ₆ H ₅ OH)	5

(All parameters are in mg/l. except pH)

(e) **Trade Effluent Disposal Outlet Conditions:** - You shall incinerate the Leachate and other industrial effluent generated from your activity (scrubbing, spillages, lab effluent etc.) You shall become member of CETP, MIDC, Butibori and discharge trade effluent to this facility.

(f) **Sewage Effluent Treatment:** - The TSDF Operator shall provide comprehensive treatment system as is warranted with reference to influent quality and operate & maintain the same continuously so as to achieve the quality of treated effluent to the following standards before disposal -

Suspended Solids	Not to exceed	100 mg/l.
BOD, 3 days 27° C.	Not to exceed	100 mg/l.

(g) **Sewage Disposal Outlet Conditions:** - The treated effluent shall be soaked into a soak pit, which shall be got cleaned periodically. Overflow, if any shall be used on land for gardening/plantation/into MIDC drainage system.

(h) **Non-hazardous Solid Wastes:** - It shall be the responsibility of TSDF Operator to send this non-hazardous waste to the Municipal Disposal facility or shall incinerate it

(i) **Other Conditions:** - Industry shall monitor effluent quality regularly.

19. Conditions under the Air (P & CP) Act, 1981:

The applicant shall install a comprehensive control system considering of controls as is warranted with reference to generation of emission and operate and maintain the same continuously.

19.1 The TSDF Operator shall observe the following fuel consumption

Sr.No.	Type of Fuel	Quantity
1	Coal for incinerator	35 T/day
	Biomass	89.1 T/day
2	FC	0.3 T/day
3	Incinerable HW	80 T/day

19.2 The applicant shall erect the chimneys of the following specifications

Sr.No.	Chimney attached to	Height in mtrs
1	Waste Heat Recovery Boiler	30 mtrs
2	AFBC Boiler	30 mtrs

19.3 Qualifying Criteria:

The PGVR must be designed comprising of Plasma Reactor, Thermal oxidizer and emission control system as may be necessary. The air pollution control devices must have requisite technical capability to achieve hazardous waste emission standards.

20. DG set Conditions:

- i) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
- ii) TSDF operator should provide acoustic enclosure for control of noise. The acoustic enclosure/acoustic treatment of the room should be designed for minimum 25 dB(A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of Insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
- iii) TSDF operator shall take adequate measures for control of noise levels from its own sources within the premises in respect of noise to less than 55 dB(A) during day time and 45 dB(A) during the night time. Day time is reckoned between 6 a.m. to 10 p.m. and night time is reckoned between 10 p.m. to 6 a.m.
- iv) TSDF operator should make efforts to bring down noise level due to DG Set, outside industrial premises within ambient noise requirements by proper siting and control measures.
- v) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
- vi) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
- vii) The DG set shall be operated only in case of power failure.
- viii) The applicant should not cause any nuisance in the surrounding area due to operation of the DG set.

21. The TSDF Operator shall provide ports in the chimney/stack and facilities such as ladder/platform etc. as per requirements for monitoring the air emissions and the same shall be open for inspection and use by the authorities. The chimney / stacks attached to various sources of emission shall be designated by numbers such as S-1, S-2 etc. and these shall be painted/ displayed to facilitate identification.

22. The TSDF Operator shall take adequate measures for control of noise from its own source within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 db (A) during day time and 70 db (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.

23. The TSDF Operator shall provide uninterrupted power supply to the Air Pollution Control devices provided to incinerator. An interlock shall be provided between incinerator and the Air Pollution Control System.

24. Other Conditions:

- i. The TSDF Operator should not cause any nuisance in surrounding area.
- ii. The TSDF Operator should monitor stack emissions and ambient air quality

regularly, preferably by installing continuous stack monitors with record facility.

25. Whenever due to any accident or other unforeseen act or even such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith reported to board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of factories and local body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.
26. All the conditions of this Consent shall be strictly implemented and the Consent Order shall be displayed at a prominent location in the factory premises.
27. **General Conditions:**
 - I. The authorization shall comply with the provision of the Environment (Protection) Act, 1986 and the Rules made there under.
 - II. The Applicant shall maintain good house keeping and take adequate measures for control of pollution from all sources so as not to cause nuisance to surrounding area/inhabitants.
 - III. The applicant shall bring minimum 33 % of the available open land under green coverage plantation.
 - IV. Solid Waste - The non-hazardous solid waste arresting in the factory premises, sweeping, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permission from civic authorities for disposal to dumping ground.
 - V. The applicant shall provide for an alternate electric power source sufficient to operate all pollution control facilities installed by the applicant shall stop, reduce or otherwise, control production so abide by terms and conditions of this consent regarding pollution levels.
 - VI. The applicant shall not change or alter the quantity, quality, of discharge, temperature or the mode of the effluent/ emission or hazardous wastes or control equipments provided for without previous permission of the Board.
 - VII. The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous wastes to the Board staff at the terminal or discharged points and shall pay to the Board for the service rendered in this behalf.
 - VIII. The applicant shall make an application for renewal of the consent at least 60 days before the date of expiry of the consent.
 - IX. The firm shall submit to this office, the 30th day of September every year, the Environmental Statement Report for the financial year ending 31st March in the prescribed Form - V as per the provisions of rule 14 of the Environmental (Protection) (Second Amendment) Rules, 1992.
 - X. The industry shall submit the Annual Returns as per Rule 5(6) & 22(2) of Hazardous Wastes (M, H & T) Rules, 2008 for the preceding year April to March in Form - IV by 30th June of every year.
 - XI. An inspection book shall be opened and made available the Board officers during their visit to the application.
 - XII. The application shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluents treatment plants and air pollution control system. A register showing consumption of chemical used for treatment shall be maintained.
 - XIII. Separate drainage system shall be provided for collection of trade sewage effluents. Terminal manholes shall be provided at the end of collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes sewers down-stream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
 - XIV. Neither strong water nor discharged from other premises shall allowed to mix with the effluents from the factory.
 - XV. The industry shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.

- XVI. The authorization or its renewal shall be produce for inspection at the request of an officer authorized by the Maharashtra Pollution Control Board.
- XVII. The person authorized shall not rent, land, sell, transfer or otherwise transport the hazardous waste without obtaining prior permission of the Maharashtra Pollution Control Board.
- XVIII. Any unauthorized change in personnel, equipment as working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.
- XIX. It is the duty of the authorized person to take permission of the Maharashtra Pollution Control Board to close down the facility.
- XX. An application for the renewal of an authorization shall be made as laid down in Rule 5(7).

28. The capital investment of the unit is Rs. 86.14 crores.

29. The applicant shall get inspected the operational status of the pollution control systems from Regional Officer Nagpur Before restart of facility.

30. The applicant shall submit Bank Guarantee of Rs. 5.0 Lacs towards operation and maintenance of pollution control equipments.

31. This is issued subject to decision taken in the meeting of the Consent Appraisal Committee of the Board held on dt: 30/05/2015.

For and on behalf of the
Maharashtra Pollution Control Board

(P. K. Mirashe)
Member Secretary

To,
M/s. Maharashtra Enviro Power Ltd.
(Formerly M/s. Vidharbha Enviro Protection Ltd.),
Sr.No.7 to 15, 131 & 162, Butibori Industrial Area,
Mouza- Mandawa, Taluka- Hingana, Dist- Nagpur.

Copy forwarded with compliments to

1. Chief Executive Officer, MIDC
2. Dy. CEO (Env), MIDC

Copy to

1. Regional Officer (HQ)
2. Regional Officer, MPCB, Nagpur
3. Sub Regional Officer MPCB, Nagpur.
4. Chief Accounts Officer, MPCB, Mumbai.

Received Consent fees of

Amount	Demand Draft No.	Date	Drawn on
Rs. 500100/-	240955	23/09/2014	Punjab National Bank
Rs. 175000/-	301052	19/11/2014	Andhra Bank

5. Cess Branch, MPCB
6. Master File