

F. No. 10-25/2019-IA-III
Government of India
Ministry of Environment, Forest and Climate Change
(IA.III Section)

Indira Paryavaran Bhawan,
Jor Bagh Road, New Delhi - 3

Date: 15th October, 2020

To

Shri B D Dalwadi, CEO,
M/s Bharuch Enviro Infrastructure Limited
Plot no D-43, Dahej Industrial Estate, Taluka Vagra,
District Bharuch-392130, Gujarat
E-mail: patelm1@beil.co.in

Subject: Proposed expansion of secured landfill (Phase IV) of Integrated Common Hazardous Waste Treatment, Storage and Disposal Facility (TSDF) at plot number 9701-9716, GIDC Ankleshwar, proposed by M/s Bharuch Enviro Infrastructure Limited - Environmental Clearance - reg.

Sir,

This has reference to Application No. IA/GJ/MIS/22321/2014 dated 16th April, 2020, submitted over Parivesh Portal to this Ministry for grant of Environmental Clearance (EC) in terms of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986 to the project i.e. 'Expansion of Secured Landfill (Phase IV) of Integrated Common Hazardous Waste Treatment, Storage and Disposal Facility (TSDF) at plot number 9701-9716, GIDC Ankleshwar by M/s Bharuch Enviro Infrastructure Limited.

2. The project was considered by the Expert Appraisal Committee (Infra-2) in its 51st meeting held during 21-22 May, 2020 and thereafter in its 54th meeting held during 27-28 August, 2020. The details of the project, as per the documents submitted by the project proponent, and also as informed during the above meeting are as under:-

- (i) M/s Bharuch Enviro Infrastructure Limited (BEIL) pioneer in Treatment, Storage and Disposal of Hazardous waste is operating an Integrated TSDF at Ankleshwar with two Common Incineration Systems having thermal capacity of 6.5 million kcal/hour. The existing capacity of Landfill at Integrated TSDF site and their status are:
 - a. **Phase I:** 6,000,00 MT –Completed & Capped
 - b. **Phase II:** 17,00,000 MT completed.
 - c. **Phase III** was developed between Phases I and II, having capacity 11.58 Lacs MT
- (ii) The Environmental Clearance for enhancement in capacity from 11.58 Lacs MT to 14.58 Lacs MT was issued vide letter F. No. 10-10/2014- IA-III, dated 16.04.2018.
- (iii) The proposed **Phase IV** landfill development comprises of optimization of the landfill capacity of the entire site to add 8,90,000 M³ space to accommodate 13,40,000 MT of hazardous waste (waste density 1.5 Mg/m³) The objective of proposed expansion is to have continued operation of TSDF. The Phase-I and Phase-II sites has been completed and Phase-III is nearing completion. The total remaining capacity is approximately 8,30,000 tonnes, equivalent to about 3 years landfill operations. Till



September, 2019, an amount of 31,049,29.65 MT waste has been disposed at the site.

- (iv) The feasibility report has identified a proposed scheme to extend the life of the hazardous waste landfill at Ankleshwar for an additional approximately 5.5 years. The additional landfill capacity would comprise an extension to the existing landfill, at four locations around the perimeter. Engineering solutions have been identified to deliver the proposed Phase IV landfill extension. Area and classification of land is as under:

Phase II	Phase III	Phase IV
Total Site Area = 69 acre. (2,79,233.09 sqm) = 27.92 ha	Total Site Area = 69 acre. (2,79,233.09 sqm) Phase III Pit Area = 2.98 Acre (12,084 sqm) Phase III Closure Area = 14.755 Acre (59,731 sqm).	Available space: 8,90,000 m³

- (v) Permission for total water consumption of 657 KLD for existing facility including for domestic purpose (27 KLD) is already available from Gujarat Industrial Development Corporation (GIDC) supply. No additional water will be required, since; proposed capacity expansion will be the continued operation of secured land filling for disposal of hazardous waste.
- (vi) No additional power is required. The existing source of electricity is Dakshin Gujarat Vij Company Limited (DGVCL). In case of power failure, existing two D.G. Sets of 975 KVA each and 1 DG set of 600 KVA capacity shall be used.
- (vii) Project requires appraisal as Category "A" as the project lies in the Critically Polluted Area, as per the MoEF Office Memorandum J-11013/5/2010/IA-II (I) dated 25th November 2016. The moratorium has been lifted in Ankleshwar. Integrated TSDf is listed under Projects of activity at Sr No 7 (d) as per EIA Notification dated 14th September 2006 and its subsequent amendments.
- (viii) Leachate / Effluent from landfill will be treated in the existing Multiple Effect Evaporator (MEE) plant. Whenever MEE is not in operation, leachate will be sent to CETP of Enviro Technology Limited at Ankleshwar.
- (ix) Green belt is developed in area measuring total 41,000.82 sqm all along the plant area. Additionally, after the closure and capping of Secured Landfill landscaped area is developed as green area. This practice will also be undertaken for the SLF to be capped.
- (x) Terms of Reference (ToR) for the proposed expansion (Phase-IV) was granted by MoEF&CC vide Letter F.No. 10-25/2019-IA-III dated 17.05.2019.
- (xi) Earlier, Public Hearing was exempted as the project site is located in the GIDC Notified industrial area, Gujarat.
- (xii) Investment/Cost of the project is Rs. 50.58 Crores.
- (xiii) Benefits of the Project: Continuing the operation of TSDf for scientific disposal of hazardous waste in secured landfill will be a positive environmental impact and sustainable development.
- (xiv) Employment Potential: Long term employment opportunity for the local people as well as migrants from nearby areas.

3. The project/activity is covered under category 'B' of item 7(d) 'Common hazardous waste treatment, storage and disposal facilities (TSDFs)' of the Schedule to the EIA Notification, 2006 and its subsequent amendments, and requires appraisal at SEAC level. However, due to applicability of General Condition i.e. Project is located in Ankleshwar, one of Critically Polluted Areas; the proposal is appraised at Central Level by Sectoral EAC. The moratorium has been lifted in Ankleshwar.

4. The EAC also noted that the proposal is for capacity enhancement of Secured Landfill to utilize available space of 8,90,000 m³ to accommodate 13,40,000 MT of hazardous waste over a period of 5.5 years @ disposal rate of approximately 2,40,000 tonnes/year for Treatment, Storage and Disposal of Hazardous waste as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. The baseline study was carried out during 16.10.19 - 15.01.2020. The EAC also deliberated on the certified compliance report provided by the MoEF&CC's Regional Office (WZ), Bhopal vide letter No. 5-28/2008(ENV)/185 dated 02.03.2020 and asked the project proponent to submit additional information. Project Proponent submitted the additional information on Ministry's website on 29.07.2020. Subsequently the proposal was considered the EAC in its 54th meeting held during 27-28 August, 2020. The EAC also took note point wise reply submitted by Project Proponent towards observations of the EAC.

5. The EAC, based on the information submitted and clarifications provided by Project Proponent and detailed discussions held on all the issues, recommended the project for grant of environmental clearance with stipulated specific conditions along with other Standard EC Conditions as specified by the Ministry vide OM dated 4th January, 2019 for the said project/activity, while considering for accord of environmental clearance.

6. As per recommendations of EAC, the Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance for the proposed expansion (implementation of Phase-IV) of existing the facility subject to the following specific and general conditions:-

A. Specific Conditions:

- (i) The Environmental Clearance to the project is primarily under provisions of EIA Notification, 2006. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes as applicable to the project
- (ii) All possible measures shall be adopted for odor control. Odor shall be controlled by providing proper ventilation in the site, spraying ecosorb (organic and biodegradable chemical) around odor generation areas at regular intervals and by developing greenbelt with odour control species.
- (iii) Existing water consumption is 657 KL/day. No additional water will be required for proposed expansion. Water is being supplied by GIDC Ankleshwar. No ground water shall be extracted for proposed facility.
- (iv) Total 396.5 KLD of wastewater will be generated from existing as well as from proposed facility form Leachate of landfill and effluent from various sources like scrubber, washings from lab, drum washing, and cooling water blow down. It shall be treated in existing Multiple Effect Evaporator (MEE) plant. CETP facility shall only be used whenever entire MEE plant is put in maintenance as per SOP.
- (v) As proposed total greenbelt at 36.14 % (14.68% existing +21.46% capped SLF area) of total plot area shall be maintained.
- (vi) The landfill operating area should be kept covered during monsoon period. During monsoon period, waste shall be collected and temporally stored in the covered storage provided at site.
- (vii) Periodic inspection and routine maintenance at closed landfill site shall be carried out for a period, as proposed i.e. 30 years of closure. A maintenance schedule is to be drawn up in consultation with concerned SPCB. Such schedule should cover, inter-alia, cover system, detection of rupture/ faults, surface water drainage system etc.
- (viii) The Project proponent should ensure that the facility fulfils all the provisions of Hazardous and other Wastes (Management and Transboundary Movement) Rules,

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2016 & the Protocol for 'Performance Evaluation and Monitoring for the same as published by the CPCB and Bio-Medical Waste Management Rules, 2016 and the revised guidelines issued by CPCB for Common Bio-Medical Waste Treatment and Disposal Facility. Tracking system for movement of Hazardous Waste from generator to the facility site shall be put in place.

- (ix) The project proponents shall adhere to all conditions as prescribed in the Protocol for 'Performance Evaluation and Monitoring of the Common Hazardous Waste Treatment, Storage and Disposal Facilities' published by the CPCB.
- (x) Sufficient number of Piezometer wells shall be installed in and around the project site to monitor the ground water quality in consultation with the State Pollution Control Board / CPCB. Periodical ground water/soil monitoring to check the contamination in and around the site shall be carried out.
- (xi) Trend analysis of ground water quality shall be carried out each season and information shall be submitted to the SPCB and the Regional Office of MoEF&CC.
- (xii) Ambient air quality monitoring shall be carried out in and around the landfill site at up wind and downwind locations. On-line real time continuous monitoring facilities shall be provided as per the CPCB or State Board Directions
- (xiii) As proposed, onsite and off-site disaster management plan shall be operationalised in consultation with district level authority in order to minimize the hazards to human health or environment from fires, explosion or any unplanned sudden or non sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water.
- (xiv) As per the Ministry's Office Memorandum F.No. 22-65/2017-IA.III dated 01.05.2018, and as proposed, a fund of Rs. 0.8257 Crores shall be earmarked under Corporate Environment Responsibility (CER) for the activities such as Solar lights in adjacent villages, Construction of Toilets under Swachh Bharat Abhiyan, Construction of Water harvesting structures etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

B. Standard Conditions:

I. Statutory compliance:

- i. The Project proponent should ensure that the TSDF fulfils all the provisions of Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016.
- ii. Incinerator shall be designed as per CPCB guidelines. Energy shall be recovered from incinerator.
- iii. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- iv. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities

I. Air quality monitoring and preservation:

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in

Environment (Protection) Rules 1986 and connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
- iv. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- v. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- vi. Appropriate Air Pollution Control (As proposed, air pollution control device viz. gas quencher; treatment with mixture of hydrated lime and activated powder for adsorption of partial acidity and VOCs (if any); bagfilter/ESP for removal of particulate matter; venturi scrubber followed by packed bed scrubber with caustic circulation to neutralize the acidic vapours in flue gas; and demister column for arresting water carry over will be provided to the incinerator) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vii. The periodical monitoring of Dioxins and Furans in the Stack emissions shall be carried out. Analysis of Dioxins and Furans shall be done through CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram or equivalent NABL Accredited laboratory
- viii. Gas generated in the Land fill should be properly collected, monitored and flared
- ix. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 02 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 02 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

II. **Water quality monitoring and preservation:**

- i. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- ii. No discharge in nearby river(s)/pond(s).

- iii. The depth of the land fill site shall be decided based on the ground water table at the site.
- iv. The Company shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.
- v. All leachates arising from premises should be collected and treated in the ETP followed by RO. RO rejects shall be evaporated in MEE. Toxicity Characteristic Leaching Procedure (TCLP) test to be performed on leachates.
- vi. The Company shall review the unit operations provided for the treatment of effluents, specially the sequencing of MEE after tertiary treatment, the source of permeate when no R.O. is recommended and the treatment of MEE condensate. The scheme for treatment of effluents shall be as permitted by the Pollution Control Board/Committee under the provisions of consent to establish.
- vii. Scrubber water, leachate water or wheel wash effluent shall be treated in the effluent treatment plant followed by RO to achieve zero liquid discharge.
- viii. Rain water runoff from hazardous waste storage area shall be collected and treated in the effluent treatment plant.

III. Noise monitoring and prevention:

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.
- iii. Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

IV. Energy Conservation measures:

- i. Energy conservation measures like installation of LED/CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.

V. Waste management:

- i. The TSDF should only handle the waste generated from the member units.
- ii. Periodical soil monitoring to check the contamination in and around the site shall be carried out.
- iii. The Project proponent shall not store the Hazardous Wastes more than the quantity that has been permitted by the CPCB/SPCB.
- iv. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016.
- v. A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
- vi. Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Rules, 2016.

VI. Green Belt:

- i. Green belt shall be developed in an area as provided in project details, with native tree species in accordance with Forest Department. The greenbelt shall inter alia cover the entire periphery of the project site.
- ii. Top soil shall be separately stored and used in the development of green belt.

VII. Public hearing and Human health issues:

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iii. Occupational health surveillance of the workers shall be done on a regular basis.

VIII. Corporate Environment Responsibility:

- i. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- ii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- iii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- iv. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

IX. Miscellaneous:

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
 - vi. The criteria pollutant levels namely; PM_{2.5}, PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
 - vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
 - viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
 - ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
 - x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
 - xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 - xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
 - xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
 - xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
 - xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts/NGT and any other Court of Law relating to the subject matter.
 - xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
7. The Environmental Clearance is granted to M/s. Bharuch Enviro Infrastructure Limited for expansion; namely, to develop additional capacity (13,40,000 MT) of secured landfill (Phase IV) of Integrated Common Hazardous Waste Treatment, Storage and Disposal Facility (TSDF) in the space of 8,90,000 m³ at plot number 9701-9716, GIDC Ankleshwar.
8. This issues with the approval of the Competent Authority.


(Lalit Bokolia)
Director (S)

Copy to:

- 1) The Secretary to Government (Environment and Ecology), Forest, Forests & Environment Department, Government of Gujarat Block 14, 8th floor, Sachivalaya, Gandhinagar -382 010, Gujarat.
- 2) The Addl. Principal Chief Conservator of Forests (Central) Ministry of Environment, Forest and Climate Change, Regional Office (WZ) E-5, Kendriya Paryavaran Bhawan, E-5 Arera Colony, Link Road-3 Ravishankar Nagar, Bhopal - 462016.
- 3) The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
- 4) The Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhavan, Sector-10A, Gandhinagar - 382010, Gujarat.
- 5) Monitoring Cell, MoEF&CC, Indira Paryavaran Bhavan, New Delhi.
- 6) Guard File/ Record File/ Notice Board/ MoEF&CC website


(Lalit Bokolia)
Director (S)