

Minutes of 103rd Meeting of Expert Appraisal Committee (Infra-II) for projects related to airports 7(a); common hazardous waste treatment, storage and disposal facilities 7(d); common bio-medical waste treatment facilities 7(da); common effluent treatment plants 7(h); common municipal solid waste management facility 7(i); building and construction 8(a) and townships and area development projects 8(b) was held in Narmada Conference Hall, First Floor, Jal Wing, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, New Delhi – 110 003 on 10th April, 2023.

103.1: The Chairman, Expert Appraisal Committee (Infra-II) welcomed all the Members and stated briefly the agenda items of the meeting. He then requested the Member Secretary to initiate deliberations. List of participants is placed at ANNEXURE I.

103.2: Confirmation of Minutes of 102nd Meeting of Expert Appraisal Committee (Infra-II) held on 24.02.2023.

The Expert Appraisal Committee (Infra-II) is hereinafter referred as EAC (Infra-II) confirmed the minutes of 102nd meeting of EAC held on 24.02.2023 with the following corrections:

- (i) Total Build-Up Area (BUA) noted in the Agenda No.102.3.5 (Construction of Residential Complex at village Sambalpur, Town-5 Sakhigopinath, District Sambalpur, Odisha by M/s JAS Construction Pvt. Ltd) in point no.iii of Page 12 of Minutes of 102nd EAC is corrected as 38,461.25 sq.m.
- (ii) The proponent shall be required to maintain parking area of 10,587.50 sq. m (considering round figure of BUA of 38,500 sq. m) since National Building Code recommends parking space of 2x13.75 sq. m (= 27.50 sq. m) for each 100 sq. m of BUA.

Further, typo errors, if any noticed during processing of these cases may be corrected appropriately in the light of relevant facts and figures.

103.3 Consideration of Proposals

103.3.1: Implementation of remediation and reclamation of existing dumpsite and construction, operation and maintenance of Sanitary Landfill at Village Nimbri, Panipat Dumpsite by M/s Municipal Corporation Panipat - Environmental Clearance (IA/HR/INFRA2/411223/2022; F.No.21-51/2021-IA.III)

The project proponent along with the consultant made a detailed presentation of their proposal related to remediation and reclamation of existing dump site at village Nimbri in Panipat along with operation and maintenance of sanitary landfill. They informed the EAC of the continued flow of 400 MT of municipal waste on daily basis. They were asked to explain how they would turn the entire dump site into dry sanitized land fill with the continued inflow of this huge quantity of fresh municipal waste reaching the dump site on daily basis. The Consultant then tried to explain that the fresh inflow of the municipal waste would not be allowed to come inside the dump site but was unable to explain as to why these figures have been mentioned repeatedly in the proposal. The Consultant admitted the mistake and agreed to cause necessary corrections of anomalies and resultant confusion throughout the proposal. Further it was noted that the proponent has not submitted the project brief hence project information is not annexed with these minutes.

*Accordingly, the EAC decided to **return the proposal** in its present form.*

103.3.2: Proposed Secured Landfill Facility (Capacity 10,43,500 cu.m.) at Kacholiya Village, Dasada Taluk, Surendranagar, Gujarat by M/s GSEC Enviro Solution Pvt.Ltd. Consideration for Terms of Reference (IA/GJ/MIS/218185/2021; F No.21-80/2021-IA.III)

The project proponent and the Consultant (M/s En-vision Enviro Technologies Pvt. Ltd) have made a detailed submission of their proposal for landfill facility at Kacholiya village, Dasad Taluk, Surendranagar District, Gujarat (Annexure-2). They explained that the facility is proposed to be established at a site 170 m from the boundary of the Wild Ass Sanctuary.

The EAC pointed out that establishment of waste disposal facilities including landfills is a prohibited activity within the Eco-Sensitive Zone (ESZ) and as per the Hon'ble Supreme Court decision of 03.06.2022 the ESZ extends upto one km from the boundaries of protected areas including wildlife sanctuaries and national parks. The EAC further noted that the matter has since come up for further hearing on 16.03.2023 before the Hon'ble Supreme Court and their final decision in the matter is still awaited.

It would thus be possible to consider this proposal only after the decision of the Hon'ble Supreme Court is made available to the EAC.

*The EAC therefore decided to **defer the proposal**.*

103.3.3: Integrated Municipal Solid Waste Management Facility at existing Dumpsite having Survey No.328 & 324, Village Plasva, Taluka & District Junagadh, Gujarat by M/s Junagadh Municipal Corporation - Environmental Clearance (IA/GJ/INFRA2/418178/2023; F.No.21-93/2021-IA.III)

The project proponent and the consultant (M/s Ramans Enviro Services Pvt Ltd) have made a detailed submission of their proposal for Integrated Municipal Solid Waste Management Facility at existing Dumpsite at Village Plasva, Taluka & District Junagadh, Gujarat (Annexure-3). The EAC observed that the EMP does not fully respond to the environmental impacts noted in the EIA study as well as the concerns of the public expressed during the public hearing. Further, the proposed activities for wildlife conservation do not have approval of the State Chief Wildlife Warden. The EAC further observed that greenbelt should cover the entire landfill site from all sides so that after a few years the landfill becomes invisible from outside. In view of above mentioned observations, the proponent with the help of consultant revised the EMP and submitted before the committee before the closing of the meeting.

After deliberation, EAC **recommended** the proposal for grant of Environmental Clearance with following specific conditions in addition to the standard general conditions stipulated by the Ministry for such projects:

- (i) Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- (ii) 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); bag-filter/ESP for removal of particulate matter; ventury 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.
- (iii) Online pollutant monitoring shall be provided as per CPCB guidelines for monitoring particulate matter, SO₂, NO_x and CO from the incinerator stack. The periodical monitoring of Dioxins and Furans in the Stack emissions shall be carried out.
- (iv) No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concern Authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Where the trees need to be cut/transplanted with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every one tree that is cut/ non-survival of any transplanted tree) shall be done and maintained. In selecting species for Plantations it should be ensured that there is no loss of native biodiversity.
- (v) Project Proponent shall develop green belt over a total area of 28,558 sq.m and try to cover the landfill from all sides as far as possible.

- (vi) Project proponent shall implement rainwater harvesting from rooftop, paved areas and landscaping areas.
- (vii) Project proponent should use LED Lamps and Solar panel as energy saving conservation in the project area as committed.
- (viii) The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive alien species should not be used for landscaping.
- (ix) Dioxins and furans shall be analysed through CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram, or equivalent NABL accredited laboratory.
- (x) Leachates to be collected and utilized within project after proper treatment. The proponent should submit the details of leachate collection and treatment system to be installed to concerned Integrated Regional Office of the Ministry. Toxicity Characteristic Leaching Procedure (TCLP) should be performed on leachates.
- (xi) No fresh water to be used except for potable use.
- (xii) Sufficient number of Piezometer wells shall be installed in and around the project site to monitor the ground water quality in consultation with the concerned State Pollution Control Committee/CPCB. Trend analysis of ground water quality shall be carried out in each season and information shall be submitted to the SPCB and concerned Integrated Regional Office of MoEF&CC.
- (xiii) Ground water monitoring for physico-chemical parameters should be carried out and record be maintained by providing piezometric wells along the flow channel (up and down).
- (xiv) Ambient air quality monitoring shall be carried out in and around the landfill site at up wind and downwind locations.
- (xv) The depth of the land fill site shall be decided based on the ground water table at the site.
- (xvi) Environmental Monitoring Programme shall be implemented as per EMP guidelines prescribed by CPCB. Periodic ground water/soil monitoring to check the contamination in and around the site shall be carried out.
- (xvii) The Company shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.
- (xviii) On line real time continuous monitoring facilities shall be provided as per the CPCB guidelines or State Board Directions.
- (xix) Scrubber water, leachate water or wheel wash shall be treated properly and recycled to achieve zero liquid discharge.
- (xx) Gas generated in the land fill should be properly collected, monitored and flared.
- (xxi) Pre-medical check-up to be carried out on workers at the time of employment and regular medical record to be maintained.
- (xxii) Emergency plan shall be drawn in consultation with the concerned SPCB/CPCB and implemented 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.

- (xxiii) Rainwater runoff from the landfill area shall be collected and treated in the effluent/leachate treatment plant.
- (xxiv) Adequate covering arrangement on site should be done to prevent the runoff of rainwater in the project premises.

103.3.4: Integrated Common Hazardous Waste Treatment, Storage and Disposal Facility (TSDf & Incineration) at Survey No.283, Village Surai, Tehsil Chotila, District Surendranagar, Gujarat by M/s Varni Enviro Care Pvt. Ltd. - Environmental Clearance (IA/GJ/INFRA2/419461/2023; F.No.21-40/2021-IA.III)

The project proponent and the consultant (M/s Ramans Enviro Services Pvt Ltd) have made a detailed submission of their proposal for Integrated Common Hazardous Waste Treatment, Storage and Disposal Facility (TSDf & Incineration) at Survey No.283, Village Surai, Tehsil Chotila, District Surendranagar, Gujarat (Annexure-4). The EAC observed that the EMP does not fully respond to the environmental impacts noted in the EIA study as well as the concerns of the public expressed during the public hearing. Further, the proposed activities for wildlife conservation do not have approval of the State Chief Wildlife Warden. The EAC further observed that greenbelt should cover the entire landfill site from all sides so that after a few years the landfill becomes invisible from outside.

After deliberation, EAC **recommended** the proposal for grant of Environmental Clearance with following specific conditions in addition to the standard general conditions stipulated by the Ministry for such projects:

- (i) The proponent should ensure that the project fulfil all the provisions of Hazardous and other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the 'Protocol for Performance Evaluation and Monitoring' for the same as published by the CPCB including collection, transportation, design etc.
- (ii) Guidelines for Secured Landfill issued by CPCB shall be followed.
- (iii) Necessary provision shall be made for fire fighting facilities within the complex.
- (iv) Project proponent should prepare and implement an on-site Emergency Management Plan.
- (v) Employees shall be provided work specific PPE such as helmets, safety shoes, masks etc.
- (vi) Project proponent should develop green belt all along the periphery of the TSDf with plant species that are significant and used for the pollution

abatement. Total green area of 21,405 sq.m in which approximately 2550 nos. of trees will be planted within the project site and additional 600 nos. of trees will be planted outside the project site with consultation of local authorities.

- (vii) Fresh water requirement shall not exceed 158 KLD during operational phase. Abstraction of ground water shall be subject to the permission of Central Ground Water Authority (CGWA).
- (viii) Gas generated in the Landfill should be properly collected, monitored and flared.
- (ix) 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. 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.
- (x) The depth of the landfill site shall be decided based on the ground water table at the site.
- (xi) Project Proponent shall ensure proper handling of all spillages by introducing spill control procedures for various chemicals.
- (xii) Wastewater generated from the process including leachates arising from premises shall be treated in Multi-Effect evaporation (MEE) System of adequate capacity. Treated water shall be reused within the project. Toxicity Characteristic Leaching Procedure (TCLP) test to be performed on leachates.
- (xiii) Rain water runoff from the landfill area and other hazardous waste management area shall be collected and treated in an effluent treatment plant.
- (xiv) The project proponent shall install continuous effluent monitoring system 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 recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- (xv) Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
- (xvi) No non-hazardous wastes, as defined under the Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016, shall be handled in the premises. The solid wastes shall be segregated, managed and disposed as per the norms of the Solid Waste Management Rules, 2016. 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 MSW generated from project.

- (xvii) Project should ensure that the site is properly cordoned off from general movement and no unauthorized person or goods permitted to enter the premises. Necessary security provision should be made as a condition in the Authorization under the Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 to prevent unwanted access.
- (xviii) Traffic congestion near the entry and exit points from the roads adjoining the project site shall be avoided. Parking should be fully internalized and no public space should be utilized.
- (xix) 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 2 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 2 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 PWD/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.
- (xx) The Environmental Clearance to the project is under the 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.

103.4: Additional Agenda with the Permission of Chairman, EAC

103.4.1: Representation dated 27.09.2022 regarding convening of Expert Appraisal Committee (EAC)/State Expert Appraisal Committee (SEAC) meetings through virtual/hybrid mode facility received in pursuant to the liberty granted by Hon'ble High Court of Delhi vide order dated 14.09.2022 in Writ Petition (Civil) No. 13309 of 2022 in the matter of Mihir Moitra Vs union of India

The Member Secretary informed that a representation dated 27.09.2022 regarding convening of Expert Appraisal Committee (EAC)/State Expert Appraisal Committee (SEAC) meetings through virtual/hybrid mode facility received in pursuant to the liberty granted by Hon'ble High Court of Delhi order dated 14.09.2022 in Writ Petition (Civil) No.13309 of 2022 in the matter of Mihir Moitra Vs union of India. Relevant portion of order is reproduced as under;

“Learned Senior Counsel arguing the matter, at this stage, has fairly stated before this Court that a liberty be granted to the Petitioner to submit a

detailed representation to the Ministry of Environment Forest and Climate Change within a period of two weeks and the Ministry be directed to look into the option of providing Hybrid Mode facility in respect of the meetings. The prayer appears to be a genuine one and, therefore, the Writ Petition is disposed of with the aforesaid liberty.”

Accordingly, the representation was received wherein Shri Mihir Moitra mentioned various benefits such as flexibility, transparency, safety, reduce travel cost, time-effective, reduce paper work, reduce overall carbon footprint, etc., of conducting online/hybrid meetings of EAC/SEAC/SEIAA.

After discussions, EAC opined that physical meetings are preferable due to ease and precision in appraisal process and cross questioning of the data and evidences presented. However, IA (Policy) Division of the Ministry may take a final decision in this regard.

103.4.2: Environment Management in the Building Construction Projects granted Environmental Clearance

The Member Secretary informed about a DO letter dated 21.03.2023 addressed to JS, IA(Policy) wherein the Regional Officer (RO), Nagpur has requested to revise provisions related to allocation of EMP funds. The RO has mentioned that SEIAA may be insisted to stipulate a condition in environmental clearance of building projects that the Project proponent should deposit 30% of EMP cost to the State Forest Department towards tree plantation/distribution of seedlings, rain water harvesting/water conservation.

After discussions, EAC has preferred not to comment in this matter as it is a policy matter to be further examined by IA (Policy).

Annexure - 1

LIST OF PARTICIPANTS

S.No.	Name	Designation	Remarks
1	Dr. Promode Kant	Chairman	Physical
2	Shri Monish Mullick	Member	Physical
3	Dr. Satish C. Garkoti	Member	Physical
4	Prof. Inderjit Singh	Member	Virtual
5	Prof. P. K Joshi	Member	Physical
6	Dr. Arun Kumar Saraf	Member	Physical
7	Dr. Hema Achyuthan	Member	Physical
8	Dr. Meenakshi Dhote	Member	Physical
9	Dr. Arun Jyoti Nath	Member	Virtual
10	Dr Pasupala Ravi	Special Invitee	Physical
11	Dr. Ashish Kumar	Member Secretary	Physical

103.3.2: Proposed Secured Landfill Facility (Capacity 10,43,500 cu.m.) at Kacholiya Village, Dasada Taluk, Surendranagar, Gujarat by M/s GSEC Enviro Solution Pvt. Ltd. – Terms of Reference

(IA/GJ/MIS/218185/2021; F No.21-80/2021-IA.III)

The project proponent and the accredited consultant, M/s. En-vision Enviro Technologies Pvt. Ltd., made following detailed presentation:

1. The proposal is for proposed secured landfill facility of capacity 10,43,500 m³.
2. The project is located at Survey No 274 to 277, 282, 283 and 297, Village Kacholiya, Taluka Dasada, District Surendranagar, Gujarat.
3. It is new project and greenfield falls under 7(d) of category A.
4. The project area 15.25 ha (i.e., 1,52,454 m²) of land is required for development of Secured landfill site. The proponent has acquired partial land. Land-use of the proposed land is partial barren and partial agricultural land. Proposed land use breakup is as follows:

S.No.	Particular	Area (m ²)
1	Built up Area	1,02,952.5
2	Greenbelt Area	38,312.0
3	Road/Paved Area	5,642.0
4	Open Area	5,547.5
Total Area		1,52,454.00

5. Major landuse of study area is crop land (around 69.8% of total land area).
6. The project is located within 10 km of Eco Sensitive area i.e. Wild Ass Sanctuary which is 0.48 km away in N direction. There is no involvement of forest land for development of landfill site.
7. There is no critically polluted area falls within 10 km radius area.
8. Parameters mentioned in Site Selection for Common Hazardous Waste Management Facility, October 2003 by CPCB and Siting Criteria based on Criteria for Hazardous Waste Landfills, February 2001 by CPCB are taken in to account for site selection.
9. Baseline data is collected considering period of March 2021 to May 2021 (Summer Season). Monitoring/ Sampling location were selected and finalized based on CPCB guidelines.
 - (a) Project component

Particular	Details
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Project Area	1,52,454 m ²
Area of Landfill cell	97,282 m ²
Nos. of Cells	1 No.
Volume of Landfill	10,43,500 m ³
Capacity of Landfill	Approximately 20,03,520 MT
Operating days of facility	245 days per Annum
Estimated waste	1,500 MT/d (Maximum daily)
Estimated lifespan	5-6 (Considering maximum daily waste)

10. Land-fillable waste meeting waste acceptance criteria shall be accepted like ETP Sludge, Iron Sludge, Inorganic Salts, MEE Salts, Spray dryer Salts, Gypsum, etc.
11. Waste will be received from the member industries generating hazardous waste as per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, located in Rajkot, Morbi, Surendranagar, Ahmedabad, Gandhinagar, Sanand, and also industries located in South Gujarat.
12. In 2007-08, 9 TSDF facilities were under operation and as per the report of October, 2020 total 3 facilities having capacity of around 6 Lac MT were closed. Against closed site two new facilities has been introduced and one facility has increased its capacity. Looking to continual industrial development, increase in waste generation in last decade & subsequently closing of the 3 facilities there is need of expansion of current facilities/ set up of new facilities. Hence proponent is proposing this facility
13. The waste will be collected in dedicated vehicles/closed containers equipped with GPS system and authorized by the State Pollution Control Board.
14. Analysis of parameters of composite samples will be carried out. After waste meeting acceptance criteria by CPCB, waste shall be allowed to TSDF site. If the waste does not meet the acceptance criteria, stabilization process will be required to comply with the concentration limit/ criteria stipulated by the CPCB.
15. There is no habitation within project site. Within study area of 10 km radius total 22 villages are present
 - Kacholiya Village – 2.01 km in south direction
 - Nana Goraiya – 2.29 km in North direction
 - Nani Majethi – 3.85 km in ESE direction
 - Surendranagar District Office – 45 km in SSW direction
16. Approach road of around 0.5 km will be constructed from project site to National Highway – 947.
17. The minimum elevation 7 meters above MSL. Land is almost flat.
18. Maximum water consumption will be 115 KLD out of which fresh water requirement will be 107 KLD. The source of water will be groundwater. Permission for ground water abstraction shall be obtained from CGWA.

19. Expected Waste Generation (Liquid and Solid) and proposed management strategy.

Liquid waste

S.No.	Particulars	Wastewater Generation (KL/d)	Mode of Disposal
A.	Domestic	3.0	Gardening after treatment in STP
B.	Industrial		
a.	Process (Leachate)	6.0	Zero Liquid Discharge: Treated in ETP followed by stripper & spray dryer
b.	Vehicle Washing	5.0	
c.	Floor washing	1.0	
d.	Boiler	0.8	
e.	Cooling tower	0.2	
f.	Other- Laboratory	2	
g.	Other - Dust Suppression	0.0	
h.	Other- Raw water RO for Boiler & Cooling Tower	5.0	Dust suppression
	Other - Spray dryer scrubber	2.0	Zero Liquid Discharge: Treated through Spray dryer
Total Industrial		22.0	
Grand Total		25.0	

In the proposed project the major source of solid waste generation shall from spray dryer for treatment of effluent. Sludge from effluent treatment plant and salts from spray dryer shall be disposed in Secured landfill within the site. Used oil from plant and machinery shall be selling to authorized recyclers. Stripper residue from stripper shall be sent to CHWIF. All the hazardous waste generated from the facility shall be stored and disposed as per MSW Rules.

20. No tree cutting is envisaged as project site is partly barren and partly agricultural land.
21. Landuse of current land is partial barren land and partial agricultural land. Hence, Rehabilitation is not involved.
22. There is no water body (lake/pond/river) within 200 m of project site
Nearest water body is Manmade Lake near project site which is 250 m away from project site. Natural drain is 280 m away from project site.
23. There is no court case against the project.
24. The power requirement is 200 kVA and shall be sourced from Paschim Gujarat Vij Company limited. Use of LED bulbs & Solar street lights.
25. Investment/Cost of the project is Rs.40.58 crore.

26. Total manpower requirement for the proposed project will be around 50 personnel.
27. Benefits of the project: Project will provide scientifically design land fill facility for the disposal of hazardous waste to reduce environmental impact of hazardous waste. Moreover employment opportunities will be created. Rs. 81.20 lacs will be spent towards Corporate Environment Responsibility (CER). Economic benefits to the local people & businesses/contractors. As per current scenario, many industries located in South & Central Gujarat are transporting and disposing hazardous waste in TSDF located at Kutch, Gujarat. Proposing landfill site at Surendranagar will reduce financial cost like transportation, etc.

Annexure - 3**103.3.3: Integrated Municipal Solid Waste Management Facility at existing Dumpsite having Survey No.328 & 324, Village Plasva, Taluka & District Junagadh, Gujarat by M/s Junagadh Municipal Corporation - Environmental Clearance**

(IA/GJ/INFRA2/418178/2023; F.No.21-93/2021-IA.III)

The project proponent and the consultant (M/s Ramans Enviro Services Pvt Ltd) have made following detailed presentation:

1. The proposal is for constructions of Integrated Municipal Solid Waste Management Facility (IMSWMF) at existing dump site.
2. The project site is located at Survey No.328 & 324, Village Plasva, Taluka & District Junagadh, Gujarat.
3. The project activity falls under 7(i) of category B as per the EIA Notification, 2006. General conditions are applicable to the project and hence the project is required to be appraised at Central Level (MoEF&CC) as category A project.
4. The proposed project is new and green-field project.
5. Total area required for the execution of project is 1,36,300 sq.m, out of which presently 86,194 sq.m is earmarked for Integrated Municipal Solid Waste Management Facility with new sanitary landfill site development. The project components are as follows:

S.No.	Description/ Facility	Status	Capacity
1	Municipal Solid Waste Sanitary Landfill (EC Category)	Old dumpsite area bio mined & new proposed SLF to be developed (New)	SLF- ~3,00,000 MT, Design life ~10 year
2	Bio-methanation plant (part of Integrated Facility- Non-EC Category)	existing	15 TPD
3	C&D Waste Crushing Facility (Part of Integrated Facility – Non-EC Category)	new	25 PD

The land is in the possession of the Junagadh Municipal Corporation. The land is historically used for the dumping of the mixed municipal solid waste.

6. The project site can be approached from Junagadh city through Junagadh Mendarda Highway (SH 26). The part of it is Innagar main road from city centre upto Innagar junction (~6.25 Km) and further via Junagadh Mendarda highway upto the site (~2.85 Km). Thus the site can be reached at a road distance of ~9.1 Km from Junagadh city centre.

7. The project area is in the possession of the Junagadh Municipal Corporation. The land is allotted to JuMC for the disposal of mixed municipal solid waste. (i.e., Government waste land).
8. The total fresh water consumption for the proposed unit will be 40 KLD mainly for IMSWMF. The required quantity of water will be met through Junagadh Municipal Corporation Water Supply System via tankers. Therefore the approval from Central Ground Water Authority (CGWA) is not required.
9. 13 KLD of washings and leachates shall be treated in Municipal STP. For the treatment of the leachates Pre-Treatment Unit will be installed at the STP site where 8.2 MLD capacity of STP is installed. 2 KLD of domestic sewage will be treated in Septic Tank & Soak Pit System.
10. Domestic waste such as paper & recyclables, food waste will be disposed of in MSW integrated facility. Biomedical waste and E-waste will be sent to authorized recyclers / disposal facility. C & D Waste will be treated and reutilized. Other scrap will be sent to approved/authorized recyclers. Rejects of treatment facilities will be disposed of to landfill site.
11. Total power requirement shall be ~150 kW and the source of electricity will be Paschim Gujarat Vij Company Limited (PGVCL). DG sets of 100 KVA x 2 (Nos) (W+SB) capacity will be installed for emergency backup supply. DG set will be used in case of power failure only.
12. Solar street lights/LEDs will be installed alongside the roads as a part energy conservation measure.
13. Rain Water Harvesting Plan is not applicable for the execution and operation of proposed project.
14. Dedicated parking area will be provided for the vehicle parking- 200 m².
15. The proposed project is not located in Critically Polluted Area.
16. A budgetary provision of Rs. 459.65 lakhs capital and Rs.113.8 lakhs per annum on recurring expenditure is allocated in the EIA/EMP with respect for mitigative measures.
17. The project is new and thus there can be no comparative analysis of existing/envisioned pollution load.
18. The project was granted ToR by MoEF&CC vide its letter dated 15th November, 2021.
19. Public hearing was conducted on 28th December, 2022 at Shamaldas Gandhi Town Hall, Sardar Chowk, Junagadh, Taluka Junagadh & District. The major concerns raised were in regards to present practices followed and related environment and health hazards are as follows:
 - (a) Open dumping of mixed MSW creates odour nuisance, air pollution, fires on the dump site, etc., have adverse impact to the surroundings.
 - (b) Disposal/burial of dead animals/slaughter house at the landfill site creates unfilthy situation leading to Impact on human health & spreading of diseases in the area and also attraction of wild animals and dogs in the area.

- (c) Soil and ground water pollution due to percolation of leachates, impact on the surrounding farmers, fields and crops.
 - (d) Spillages of waste along the roads and approach to the site due to poor condition of the vehicles carrying wastes.
 - (e) No proper operations of the transportation system leading to accidents on roads.
20. Details of period/season of baseline study and number of locations as under:
 17th March, 2021 to 20th June,2021 (Summer Season)
- | | | |
|-----------------------|---|-------------|
| Meteorology (Nos.) | : | 1 location |
| Ambient Air Quality | : | 9 locations |
| Surface Water Quality | : | 9 locations |
| Ground Water Quality | : | 8 locations |
| Noise Level | : | 8 locations |
| Soil Quality | : | 8 Locations |

PM₁₀ are in the range of 79 to 91 µg/m³, whereas the PM_{2.5} are in the range of 18 to 30 µg/m³. The SO₂ concentrations within the study area are in the range of 6.8 to 7.9 µg/m³. The NO_x are in the range of 15.1 to 18.1 µg/m³. Ozone concentrations were also monitored in the study area & are found to be in the range of 0.0 to 10.8 µg/m³, CO are in the range of 0.87 to 1.06 mg/m³, benzene observed below detection limit and within the specified limit of CPCB. Ammonia observed below detection limit and within the specified limit of CPCB. The observed pollutant levels were compared with CPCB National Ambient Air Quality Standards & found to be satisfactory & within the specified limit of CPCB.

21. The total fresh water consumption for the proposed unit will be 40 KLD mainly for IMSWMF. The required quantity of water will be met through Junagadh Municipal Corporation via tankers. The letter of commitment for supply of water through tankers is presented in the subsequent slide.
22. Total 15 KLD of wastewater will be generated which if bifurcated as below:
 13 KLD of washings and leachates will be treated in municipal STP.
 2 KLD of domestic sewage will be treated in Septic Tank and Soak Pit System Treatment.
- The leachates to the tune of 95 KLD (maximum during monsoon) generated along with other washings from the integrated facility will be treated in Municipal STP (SBR based 8.2 MLD capacity) with a pre-treatment system (120 KLD Capacity) for leachates. The waste waters will be transported to Municipal STP via dedicated tanker system.
- The waste water generated from the site like washing of vehicles, leachate generated etc. will be collected & transported by tankers for treatment at the Sewage Treatment Plant of 8.2 MLD capacity established by JuMC. The treated sewage water from the STP will be recycled back for use in gardening and green belt development on the site.

23. Domestic waste such as paper & recyclables, food waste will be disposed of in own MSW integrated facility. Biomedical waste & E Wastes will be sent to authorised recyclers / disposal facility. C & D Waste will be treated & reutilised. Other Scrap will be sent to approved recyclers. Rejects of treatment facilities will be disposed of to landfill site. Used/waste/spent oil will be stored at the site in dedicated drums/ barrels & Send to registered/authorized recyclers only for the final disposal/treatment.
24. Noise modelling with noise control measures not applicable as this project is of Integrated Municipal Solid Waste Management Facility.
25. No negative impact on water bodies/rivers/ponds has been envisaged. Runoff water outside the landfill area will be channelized through proper storm water drainage system & will be passed through storm water interceptors provided at the outlets within the site. The overflow of interceptors will be diverted to nearby natural drainage. Leachate/runoff water will be collected in leachate wells & not let out of the site. They will be pumped out & transported to the Leachate Treatment Facility at the location of Municipal STP. The site does not fall in the flood prone areas.
26. The Green belt will be developed in 28,558 m² (33.0% of total plot area which is 86,194 m²) using 7,150 trees/large shrubs of various species considering 2500 trees per hectare. There is no requirement of tree felling/transplantation.
27. Undertaking to the effect that no activity has since been taken up has been submitted.
28. Tentatively the project is expected to be completed its construction by December, 2023 and will be in operation phase after obtaining CCA by January, 2024.
29. Total Cost of the project is Rs.47.5 Crores.
30. Employment generation as under:
 - During the construction phase: 50 Nos.
 - During the operation phase: 20 Nos.
 - 5 Skilled + 3 Unskilled for biomethanation plant
 - 63 Skilled + 3 Unskilled for C&D plant
 - 73 Skilled + 3 Unskilled for sanitary landfill site operations
31. Due to implementation of this project, Municipal Corporation of Junagadh will comply with the Municipal Solid Waste Management Rules, 2016 and Swachh Bharat Mission Guidelines SMB 2.0, wherein it has been stated that the ULBs/ Municipal Corporation are responsible for scientific collection, transportation, segregation & disposal of MSW within their jurisdiction limits.

The systematic collection, transportation, segregation and disposal of the Municipal wastes will lead to an organized, accountable & reliable mechanism of segregation, treatment and processing and finally disposal of inert and processing reject waste. Regular monitoring of the surrounding will keep the area environmentally safe and under any adverse circumstance, immediate measures will be taken and enacted upon. The overall effect due to the proposed project

will be positive and will result in employment, better environment & well-being in nearby communities around the site, proper recycling and disposal of MSW leading to only inerts and waste processing rejects going to landfill site, compliance to SWM rules and Swachh Bharat Mission Guidelines, generation of recycling materials and Bio CNG and its utilization. Thus the proposed project will have an overall positive improvement to the surrounding environment at large and also proper SWM management for Junagadh city. After implementation of all mitigation measures & Environmental management & monitoring plan, the project activities during construction & operation phase would be manageable and would largely have reversible impacts on the environment.

32. The project will provide upliftment of social infrastructure in the region. After closure of the site the project would be a converted into a green space.

103.3.4: Integrated Common Hazardous Waste Treatment, Storage and Disposal Facility (TSDF & Incineration) at Survey No.283, Village Surai, Tehsil Chotila, District Surendranagar, Gujarat by M/s Varni Enviro Care Pvt. Ltd. - Environmental Clearance

(IA/GJ/INFRA2/419461/2023; F.No.21-40/2021-IA.III)

The project proponent and the consultant (M/s Ramans Enviro Services Pvt Ltd) have made following detailed presentation:

1. The proposal is for expansion of Integrated Common Hazardous Waste Treatment, Storage and Disposal Facility along with Incineration Facility.
2. The proposed project is located at Survey No.283, Village Surai, Tehsil Chotila, District Surendranagar, Gujarat.
3. The project activity falls under 7(d) of category A as per the EIA Notification, 2006.
4. The present proposal is for expansion of TSDF from existing 3,30,750 MT waste handling capacity (i.e., 47,250 MTPA, considering 270 days of operation, 7 years of life period) to 10,50,840 MT waste handling capacity (i.e., 1,50,120 MTPA, considering 270 days of operation, 7 years of life period) by increase in depth and area of landfill cell within an Integrated Common Hazardous Waste Treatment, Storage and Disposal Facility (TSDF + Incineration facility).
5. The land area of the project is 64,750 sq.m and there is no change in land area after proposed expansion of TSDF handling capacity.
6. Total fresh water required is 158 KLD for domestic purpose, for use in incineration plant including TSDF site. Fresh water will be sourced from bore-well for which ground water withdrawal approval has been obtained from Central Ground Water Authority (CGWA).
7. Total wastewater generation (domestic sewage, scrubber, other washings without leachates) from the proposed project is 55 KLD, which will be treated in proposed ETP (design capacity of 200 KLD) followed by reuse of RO rejects for quenching in incinerator.

Leachate generation from TSDF is estimated as ~85 KLD which will also be treated in the same ETP followed by recycling RO System. RO rejects will be reused for quenching in incinerator. The wastewater treatment system is a zero-liquid discharge system and treated water will be completely reused back for plant purposes.

As per applicable Solid Waste Management Rules 2016, domestic solid waste such as paper & food generated from the facility will be collected, stored and disposed off to approved MSW facility/recycler.

8. Total power requirement for project (existing + proposed expansion) is 1000 KVA and it will be supplied by PGVCL.
9. Following are proposed energy saving measures:

- (a) Provision of solar/LED lights as a part of energy conservation.
- (b) Use of energy efficient pumps and motors.
- (c) Conducting energy audits.
- (d) Site shall be used as solar/green park as a part of post closure activity.

Approximately 15% of energy savings is envisaged through use of LED bulbs, high efficient motors, solar street lights (~850 Nos) as per existing EC (F.No.21-40/2021-IA-III) dated 29th June, 2021 under EC condition 4, point no.(X) on page no 5. Further as a part of post closure activity it is proposed to develop 3 MW Solar Power Plant which will generate ~3.45 lakhs units per annum. This will substantially reduce the carbon footprint of the project moving forward.

10. Total storm water in rainy season will be ~4000 cu.m. Provision of 800 m³ capacity water pond shall be provided for temporary storage of storm water (guard pond). The storm water shall be reused within the premises.
11. Total 405.00 sq.m area will be provided for parking within the integrated common hazardous waste management facility. Out of which 300 sq.m area will be designated parking for trucks.
12. M/s. Varni Enviro Care Pvt. Ltd., have obtained environment clearance dated 29.06.2021 for their Integrated Common Hazardous Waste Treatment, Storage and Disposal Facility (TSDF + Incineration facility) at Survey No.283, Village Surai, Tehsil Chotila, Dist. Surendranagar, Gujarat.
13. Certified EC compliance report has been received from IRO vide its letter dated 17.02.2023. Action Taken Report for partially complied EC conditions has also been submitted vide e-mail dated 03.03.2023.
14. The project location is not within the critically polluted area.
15. To reduce the impact of air environment, below listed measures will be followed in Incinerator and landfill operations:
 - (a) The gases coming out of the incinerator stack are passed through quencher (spray dryer / forced evaporation), cyclone separator, bag filter, packed bed scrubber for the removal of all air pollutants.
 - (b) For proper dispersion of SO₂ and NO_x emissions into atmosphere, incinerator stack height meeting MoEF&CC/CPCB guidelines will be provided.
 - (c) To prevent the formation of dioxins, the flue gas temperature shall be lowered from 500 °C to less than 200 °C by adopting rapid quenching / catalyst / adsorption by activated carbon.
 - (d) De-mister shall be provided to eliminate mist in the stack emissions.
 - (e) Attenuation of pollution/protection of receptor through green belts/green cover.
 - (f) Regular monitoring of air pollutants concentrations.
 - (g) DG set will be used only in case of power failure. The DG set will be provided adequate height of stack, meeting MoEF&CC/CPCB guidelines.

- (h) During operation, part of the secured land fill will be daily covered with soil/ash and during rainy period with temporary cover (1 mm HDPE/plastic sheets) to minimize the odor and gases generation.
16. To mitigate the impact caused due to dust pollution following steps will be followed:
- (a) Regular water sprinkling on haulage roads to deliver continuous moisture to suppress dust in dust prone areas.
 - (b) Regulate speed of vehicles in unpaved areas to reduce fugitive dust created and reduce dust to a large extent.
 - (c) Care will be taken to keep all material storages adequately covered and contained so that they are not exposed to situations, where winds on site could lead to dust / particulate emissions.
 - (d) HDPE plastics will be used covering material as an effective means to reduce fugitive dust from the material stores/warehouses.
 - (e) Trees will be planted all around the project boundary and regularly watered to keep the area moist to have dust control.
 - (f) Use of PPEs when working in dusty areas of site.
17. To mitigate the impact due to noise pollution following steps will be followed:
- (a) Periodic Maintenance and servicing of mechanized equipment and vehicles used for site operations.
 - (b) Proper acoustic enclosures will be provided for DG Sets.
 - (c) Noise abatement measures will be provided in critical areas of high noise levels.
 - (d) Use of PPEs by workers and staff in noise generating areas.
 - (e) Periodic servicing & maintenance of equipment's and machinery to reduce operational noise.
18. The mitigative measures for hydrology, surface water and ground water are as follows:
- (a) Double liner system will be provided at base of landfill with proper leachate drainage layer and collection system
 - (b) Base of landfill is rocky strata which are relatively impermeable and hence no percolation of any leakages will be anticipated.
 - (c) Leachates will be collected in concrete leachate collection wells and further pumped to effluent/leachate treatment plant for complete treatment. Treated leachate will be reused back into Incinerator for quenching.
 - (d) No contaminated waters will be let outside the site premises.
 - (e) Spill control measures will be in placed in storage and operational areas of site to control and divert the contaminated waters to the ETP.
 - (f) All waste waters from different areas of site will be collected in a controlled bunding manner and diverted to effluent treatment plant for treatment
 - (g) Provision of separate storm water drainage surrounding the landfill cell and major site areas with connection to storm water interceptors and a storm water retention pond for control/arresting of any contaminated water.

19. Details of comparative analysis of existing/envisioned pollution load are as follows:

S.No.	Particulars	Size/Magnitude (As per existing EC)	Size/ Magnitude (Proposed Expansion)
TSDF			
1	Area, sq.m.	23,840	27,719
2	Depth of excavation for waste fill, m	5 - 7	14.75
3	Height of retaining wall above GL, m	3 - 5	18 (2 m above GWL based on ToC survey)
4	Total height of landfill phase, m	Around 15 – 18 m above ground, 5 – 7 m below ground.	32.75
5	Volume of waste deposition, cu.m.	2,54,500 cu.m	8,07,924
6	Density of compacted waste, MT/cu.m.	1.3	1.3
7	Total waste to be dumped in landfill site, in MT	3,30,750 MT	10,50,840 MT
Incinerator			
1	Incineration(Combined Liquid & Solid Hazardous Waste)	5.5 - 6 Million K. Cal per hr. – 1 No (1500 kgs. per hr)	No change
2	Area occupied	5187 sq.m	
3	Daily waste receipt at incineration facility	35 MT per day	
4	Annual waste receipts, considering operating days 310 and 23 - 24 hrs of operation per day	10,850 MTPA	

Details of changes in other project components are as follows :

S.No.	Description/ Facility	Existing Details as per EC granted on 29/06/2021	Proposed changes after expansion
1	Project land area	64,750 sq.m.	No change
2	Greenbelt area	21,405 sq.m. (33%)	No change

			(27.38% within the premises & 5.62% along the periphery of the approach road)
3	Open area	422 sq.m.	1334 sq.m.
4	Fresh water consumption	158 KLD	No change
5	Leachate generation	45 KLD (12150 KL/Annum)	85 KLD
6	Effluent generation	55 KLD	55 KLD
7	Capacity of effluent treatment plant	100 KLD	200 KLD
8	Power requirement	1000 kVa	No change
9	Fuel type and its consumption	HSD / LDO for incinerator : 450 kg/hr	No change

Details of Hazardous Waste Management as under:

S.No.	Type of waste	Category of Waste	Generation (quantity)	Method of storage	Method of treatment	Handling & Mode of Disposal
Hazardous Waste						
1	Used / Waste / Spent Oil	5.1	3 TPA	Drum	Treatment in Incinerator	Will be disposed of within premises
2	Bags/ Drums/ barrels	33.1	500 Nos./day	In impervious storage area	Decontamination at site	Sale to authorized Recyclers
3	Incineration Ash	37.2	450 kgs per hr x 24 x 310 days of operation = 3348 Say 3400 MTPA	-	Ash Cooling	Will be disposed in own Secured Landfill
4	ETP Sludge	35.3	100 Kgs per day x 360 days = 36	HDPE Bags	Dewatering	Will be disposed in own

S.No.	Type of waste	Category of Waste	Generation (quantity)	Method of storage	Method of treatment	Handling & Mode of Disposal
			MTPA			Secured Landfill
Non-Hazardous Waste						
	Domestic Solid Waste: Paper & Food Waste will be sent to approved MSW Facility / recycler. Small amount of e-waste & scrap will be generated which will be sent to approved recycler					

20. The project was granted ToR by MoEF&CC vide its letter dated 26.08.2022.
21. EMP/EIA Report has been prepared as per the ToR dated 26.08.2022.
22. The public hearing for the project was convened at the project site on 15.12.2022. The advertisement in local daily newspapers in Gujarati and English language was published on 12.11.2022. The public hearing was chaired by Deputy Collector & Sub Divisional Magistrate (Chotila) & RO-GPCB, Surendranagar. 48 nos. of people have attended the public hearing in person at site. 9 nos. of written representations from locally affected people were received before public hearing. 6 nos. of written representations from locally affected people were received after the public hearing. The major issues raised during PH and response of PP in the form of implementable action plan.

S.No.	Environmental Issue	Response from VECPL
1	Issue related to damage to Agriculture and animal husbandry	The project is being constructed as per the guidelines prescribed by CPCB & MoEF&CC as mentioned in the EIA study report. The work will be carried out as per the guidelines and will be periodically supervised by concerned government department.
2	Issue related to odour nuisance	Implementation of the designated and efficient Air Pollution Control Technology equipped with Quenching system, Spray Dryer (Forced Evaporation system), Cyclone Separator in series followed by bag filter, Ventury and bed scrubber will eliminate the anticipated odour nuisance if any.
3	Employment to local people	Employment will be provided to local people during construction and operation phase of the project as per the guidelines of GoG.

S.No.	Environmental Issue	Response from VECPL
4	Troubles to local people due to vehicular movement	A new approach road of 1.9 km will be developed for the ease of movement towards the project site.

23. Baseline Environmental Monitoring for the existing project was carried out during period of December 2019 to March 2020 and the same data was valid till December, 2022. However, to strengthen the database on baseline environmental conditions of the area, a fresh environmental baseline data for various environmental attributes is also collected for the period March-2022 to May, 2022. The study area was considered to be within 10 km radius from the project site. Ambient monitoring was carried out at 9 locations within 10 km of study area. Noise monitoring was carried out at 8 locations within the study area. Surface water samples were collected at 8 locations within the study area. Ground water samples were collected at 9 locations within the study area. Surface soil samples were taken from 9 locations within the study area. The study area covers 39 villages in Chotila, Sayla and Jasdan sub-districts of Surendranagar and Rajkot district and the details for the same have been compiled from Census, 2011 and through primary sample survey and presented to described socio-economic environment of the study area.
24. The maximum and minimum values of PM₁₀ are in the range of 67 µg/m³ to 85 µg/m³, whereas the PM_{2.5} is in the range of 19 µg/m³ to 27 µg/m³. The SO₂ concentrations within the study area are in the range of 8.1 µg/m³ to 9.9 µg/m³ and the NO_x are in the range of 17.2 µg/m³ to 20.1 µg/m³. The observed pollutant levels were compared with CPCB National Ambient Air Quality Standards and found to be within the prescribed limits.
25. The proposed project do not require FC/CRZ/WL clearances.
26. The project is not located inside / or within 10 km of Eco-Sensitive Zone of protected area.
27. The greenbelt in 17,730 sq.m area in which approximately 2550 nos. of trees will be planted within the project site and additional 600 nos. of trees will be planted outside the project site with consultation of local authorities.
28. Undertaking to the effect that no activity has since been taken up has been submitted on PARIVESH.
29. The construction work for the proposed expansion project is estimated to start by May, 2023 subject to approval of EC for the project.
30. Estimated cost of the project after expansion will be Rs.75.0 Crores (existing: Rs. 50.0 Crores + proposed expansion: Rs.25.0 Crores).
31. Employment during the construction phase is 100 people and during operational phase is 50 people.

32. The project will facilitate better management of hazardous wastes by Incineration and secured landfill will minimize the impact of solid waste disposal on land.
