

Appendix I

(See Paragraph – 6)

FORM I

I. Basic Information

Sr. No.	Item	Details
1	Name of the Project	Solid Waste Management Facility at Cacora-Curchorem in South Goa
2	S. No. in the Schedule	7(i)-Common Municipal Solid Waste Management Facility
3	Proposed capacity/area/length/tonnage to be handled/command area/lease area/number of wells to be drilled	100 TPD/ 36500 TPA
4	New/Expansion/Modernization	New
5	Existing Capacity/ Area, etc	Not applicable
6	Category of the Project i.e. "A" or "B"	B
7	Does it attract the specific condition? If yes, please specify	No
8	Does it attract the specific condition? If yes, please specify	No
9	Location	
	Plot/ Survey/Khasra No.	165/1 (part), 164/8 (part), 167, 168/1, 168/2, 169
	Village	Cacora
	Tehsil	Quepem
	District	South Goa
	State	Goa
10	Nearest railway station/ airport along with distance in Kms	(Approximate distance) Savordem railway station: 5 km Dabolim Airport: 40 km
11	Nearest Town, city, District Headquarters along with distance in Kms	(Approximate distances) Quepem (10 km), Sanguem (10 km), Margao (20 km) South Goa Zilla Panchayat, Salcete (20 km)
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (Complete postal addresses with Telephone numbers to be given)	1. Cacora-Curchorem Municipal Council <u>Address:</u> Bepquegal, Curchorem, Quepem, Goa <u>Phone number:</u> 0832-2650547 2. South Goa Zilla Panchayat <u>Address:</u> Arlem, Raia, Salcete, Goa <u>Phone number:</u> 0832-2741966
13	Name of the Applicant	Department of Science, Technology and Environment (DST&E), Saligao.
14	Registered Address	Opposite Saligao Seminary, Saligao.

		Bardez, Goa - 403 507.
15	Address for correspondence	Same as above at (14)
	Name	Mr. Levinson J. Martins
	Designation (Owner/Partner/CEO)	Director / Ex.Officio Jt. Secy., (STE)
	Address	Opposite Saligao Seminary, Saligao, Bardez, Goa
	Pin Code	403507
	E-mail	dir-ste.goa@nic.in
	Telephone Number	0832-2407189/2407187/2407580
	Fax No.	0832-2407176
16	Details of Alternative Sites examined, if any, Location of these sites should be shown on a topo sheet	Not Applicable
17	Interlinked Projects	Nil
18	Whether separate application of interlinked project has been submitted?	NA
19	If yes, date of submission	NA
20	If no, reason	NA
21	Whether the proposal involves approval/clearance under: If yes, details of the same and their status to be given: (a) The Forest (Conservation) Act, 1980 (b) The Wildlife (Protection) Act, 1972 (c) The C.R.Z. Notification, 1991?	Not Applicable
22	Whether there is any Government Order/ Policy relevant/ relating to the site?	May kindly ascertain the notification w.r.t. notifying the proposed site as an Industrial area and enclose a copy.
23	Forest land involved (in hectares)	Nil
24	Whether there is any litigation pending against the project proposed to be set up? (a) Name of the Court (b) Case No. (c) Orders/ Directions of the Court, if any, and its relevance with the proposed project] ⁴⁹	N. A.

["I hereby given undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any, to the project will be revoked at our risk and cost.

Date: _____

Place: _____

Mr. Levinson J. Martins
Director / Ex.Officio Jt.Secy., (STE),
Opposite Saligao Seminary,
Saligao, Bardez, Goa – 403 507

NOTE:

1. The projects involving clearance under Coastal Regulation Zone Notification, 1991, shall submit along with the application, a C.R.Z. map duly demarcated by one of the authorized agencies, showing the project activities, w.r.t. C.R.Z. (at the stage of TOR) and the recommendations of the State Coastal Zone Management Authority (at the stage of EC). Simultaneous action shall also be taken to obtain the requisite clearance under the provisions of the C.R.Z. Notification, 1991 for the activities to be located in the C.R.Z.
 2. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden thereon (at the stage of EC).”
 3. All correspondence with the Ministry of Environment & Forests including submission of application for TOR/Environment Clearance, subsequent clarifications, as may be required from time to time, participation in the EAC Meeting on behalf of the project proponent shall be made by the authorized signatory only. The authorized signatory should also submit a document in support of his claim of being an authorized signatory for the specific project.]⁵⁰
-

(49) In the Appendix I, Form 1, for Item 1 relating to the Basic Information "*Name of the Project: Location/Site alternatives under consideration: Size of the Project: *Expected cost of the project: Contact Information: Screening Category: Capacity corresponding to sectoral activity (such as production capacity for mineral production, area for mineral exploration, length of linear transport infrastructure, generation capacity for power generation etc.)*" is substituted with new entries as at 49 above (S.O. 3067 (E) dated 01/12/2009)

(50) In the Appendix I, in Form I, for Item 1 relating to Basic Information new para is inserted at the end as at 50 above (S.O. 3067(E) dated 01/12/2009)

(I) Activity

1. Construction, Operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography), land use, changes in water bodies, etc

Sr. No.	Information/ Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates wherever possible) with source of information data
1.1	Permanent or temporary change in the land use/ land cover or topography including increase in intensity of land use (with respect to local land use plan)	Yes	The land is proposed to be utilized to set up a Solid-waste Treatment facility.
1.2	Clearance of existing land, vegetation and buildings?	Yes	Not Applicable
1.3	Creation of new land uses?		It is proposed to notify the proposed land as an Industrial zone.
1.4	Pre-construction investigations e.g. bore houses, soil testing?		It is in a process and will be submitted on its completion along with the EIA report
1.5	Construction works?	Yes	As per the civil plans enclosed herewith – Annexure - A
1.6	Demolition works?	No	Not Applicable
1.7	Temporary sites used for construction works or housing of construction workers?		On Need-based and purely on temporary basis
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations?	Yes	As per the plans enclosed herewith – Annexure – B.
1.9	Underground works including mining or tunnelling?	No	Not Applicable
1.10	Reclamation works?		Nil
1.11	Dredging?		Nil
1.12	Offshore structures?	No	Not Applicable
1.13	Production and manufacturing processes?	No	The proposed facility does not include any manufacturing or production.
1.14	Facilities for storage of goods or materials?	Yes	As per the detailed plans enclosed herewith – Annexure - C
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	The proposed facility precisely addresses the treatment of Municipal Solid Waste (MSW).
1.16	Facilities for long term housing of operational workers?		Not Applicable
1.17	New road, rail or sea traffic during construction or operation?	Yes	As per the enclosed Layout enclosed herewith – Annexure - D
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports, etc?	Yes	Not Applicable
1.19	Closure or diversion of existing transport routes or infrastructure		Not Applicable. However, during construction and after completion

	leading to changes in traffic movements?		(Operationalization) of the said facility, Traffic Management will be as specified in Environment Management Plan (EMP) enclosed herewith as Annexure -- E
1.20	New or diverted transmission lines or pipelines?	Yes	Borewell with pipeline network/ PWD water distribution network is proposed
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Nil. However, proper and suitable Storm Water Drains will be provided as per the layout provided.
1.22	Stream crossings?	No	Nil
1.23	Abstraction or transfers of water from ground or surface waters?		It is proposed to have a borewell at the facility
1.24	Changes in water bodies or the land surface affecting drainage or run-off?		Not Applicable
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Yes, as per the mode of operation during the construction and operation phase.
1.26	Long-term dismantling or decommissioning or restoration works?		Not Applicable
1.27	Ongoing activity during decommissioning which could have an impact on the environment?		Not Applicable
1.28	Influx of people to an area either temporarily or permanently?	Yes	Only temporary movement of workers during the Construction phase.
1.29	Introduction of alien species?	No	Not Applicable
1.30	Loss of native species or genetic diversity?	No	Not Applicable
1.31	Any other actions?	NA	Nil

2. Use of Natural Resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

Sr. No.	Information/ Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates wherever possible) with source of information data
2.1	Land especially underdeveloped or agricultural land (ha)	Yes	The land use is partly orchard, partly settlement and partly cultivable land as per zoning of TCP
2.2	Water (expected source & competing users) unit: KLD		Construction purpose: 12 KLD Source: Local Water Tankers Operation purpose: 10 KLD Source: PWD Water Distribution Network / In-plant Bore Well
2.3	Minerals (MT)		Nil
2.4	Construction material: stone, aggregates, sand/ soil expected source – MT		Source: Local Quarries Sand: 4250 cum Metal: 8500 cum
2.5	Forests and timber (source – MT)		Nil
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)		Construction: 100 KW Source: DG Set/State Grid (as available) Operation: 850 KW Source: State Grid
2.7	Any other natural resources (use appropriate standard units)		Not Applicable

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health

Sr. No.	Information/ Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC Rules) to human health or the environment (flora, fauna and water supplies)	No	Nil
3.2	Changes in occurrence of diseases or affect disease vectors(e.g. insect or water borne diseases)	No	Nil
3.3	Affect the welfare of people e.g. by	No	Nil

	changing the living conditions?		
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly, etc	No	Nil
3.5	Any other causes		Not Applicable

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

Sr. No.	Information/ Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes		Nil
4.2	Municipal waste (domestic and /or commercial wastes)	Yes	100 TPD treatment capacity
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)		Nil
4.4	Other industrial process wastes		Nil
4.5	Surplus product		The facility would generate: 1. Recyclables (5-6% of input waste) 2. RDF (8-10% of input waste) 3. Compost (8-10% of input waste) 4. Electricity (0.3-0.4 MW) from wet organic waste
4.6	Sewage sludge or other sludge from effluent treatment		Waste water to be generated in the facility shall be treated in an effluent treatment plant (MBR + RO) of 100 m ³ /day capacity The product water (90-95%) from ETP shall be recycled. The rejects (5-10%) shall be collected in an evaporation pond.
4.7	Construction or demolition wastes	Yes	As per actuals
4.8	Redundant machinery or equipment		As per actuals
4.9	Contaminated soils or other materials		Nil
4.10	Agricultural Wastes		Nil

4.11	Other solid wastes		Based on the input capacity, 10% is proposed as inert for land-filling purpose.
------	--------------------	--	---

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/Hr)

Sr. No.	Information/ Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources		Emissions as per actuals from Fossil fuels which shall be used during construction and operation (e.g.: wheel loader, JCBs, Fork lift, crane, etc)
5.2	Emissions from production processes		Emissions as per actuals from bio-gas based power plant during O&M period
5.3	Emissions from materials handling including storage or transport		Emissions as per actuals during: <ol style="list-style-type: none"> 1. Delivery of input solid waste at site through compactors, tippers, etc 2. Storage of products using fork-lifts as required 3. Transportation of products like recyclables, RDF and compost through transport vehicles.
5.4	Emissions from construction activities including plant and equipment		Emissions from construction equipments like wheel loader, JCBs, Fork lift, crane, trucks, mixer, tipper, road roller, etc.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste		Odours may be generated on tipping floor, compost shed, sorting station due to processing of mixed input waste. Effective odour control system shall be provided at the facility.
5.6	Emissions from incineration of waste		No incineration of waste
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)		No open burning of waste

5.8	Emissions from any other sources		Nil
-----	----------------------------------	--	-----

6. Generation of Noise and Vibration, and Emission of Light and Heat:

Sr. No.	Information/ Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers		Sources of Noise: Biogas based power plant, mobile machinery, Organic Extrusion Press, Baler, Shredder, Granulator, etc. Source of vibrations: Biogas based power plant, mobile machinery, Organic Extrusion Press, Baler, Shredder, Granulator, etc. Sources of heat: Biogas based power plant, Biogas flare unit (for emergency purpose)
6.2	From industrial or similar processes		Nil
6.3	From construction or demolition		As per point 5 during construction phase
6.4	From blasting or piling		Not Applicable
6.5	From construction or operational traffic		As per point 5
6.6	From lighting or cooling systems		Nil
6.7	From any other sources		Nil

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

Sr. No.	Information/ Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials		Nil
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)		It is proposed to install ETP for scientific treatment and disposal of sewage and other effluents, if any.

7.3	By deposition of pollutants emitted to air into the land or into water		Nil
7.4	From any other sources		Not Applicable
7.5	Is there a risk of long term build-up of pollutants in the environment from these sources?		Nil

8. Risk of accidents during construction or operations of the Project which could affect human health or the environment

Sr. No.	Information/ Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates wherever possible) with source of information data
8.1	From explosions, spillages, fires, etc from storage, handling, use or production of hazardous substances		Nil
8.2	From any other sources		Not expected to use any other source to cause any risk of accidents.
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst, etc)?		Not Applicable

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

Sr. No.	Information/ Checklist confirmation	Yes/No	Details thereof (with approximate quantities/ rates wherever possible) with source of information data
9.1	<p>Lead to development of supporting, ancillary development or development stimulated by the project which could have impact on the environment e.g.-</p> <ul style="list-style-type: none"> • Supporting infrastructure (roads, power supply, waste or waste water treatment etc) • Housing development • Extractive industries • Supply industries • Other 		<p>1. The proposed facility will include development of internal roads (1000m), utilization of 850 KW of power sourced through State Grid/Biogas-based power plant, quantity of waste treatment (100 TPD).</p> <p>2. Proposed facility will not include any housing development as it intends to treat the waste and generate value-added products like</p>

			compost and electricity. 3. Nil 4. Nil 5. Other
9.2	Lead to after-use of the site, which could have an impact on the environment		Not Applicable
9.3	Set a precedent for later developments		Nil
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar efforts		Nil

II. Environmental Sensitivity

Sr. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value		Nil
2	Areas which are important or sensitive for ecological reasons – Wetlands, watercourse or other water bodies, coastal zone, biospheres, mountains, forests		Zuari, Kushawati rivers
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration		Nil
4	Inland, coastal, marine or underground waters		Moisal dam
5	State, National boundaries		None within 15 km
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas		As per the Regional Plan in force
7	Defence installations		
8	Densely populated or built-up area		Margao, Sanguem, Quepem
9	Areas occupied by sensitive man-made		Places of worship: Damodar

	land uses (<i>hospitals, schools, places of worship, community facilities</i>)		temple-Zambaulim, Chandreshwar Bhootnath temple, Kamakshi temple, Chandranath Hill
10	Areas containing important, high quality or scarce resources (<i>groundwater resources, surface resources, forestry, agriculture, fisheries, tourism, minerals</i>)		Nil
11	Areas already subjected to pollution or environmental damage (<i>those where existing legal environmental standards are exceeded</i>)		It is proposed to transform the existing land use into a facility for effective treatment of solid waste.
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (<i>earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions</i>)		Nil

III. Proposed Terms of Reference (TOR) for EIA Studies