Prefeasibility Report

of

Pest Control (India) Pvt. Ltd.

at,

Plot no. 38 and 39, MIDC Taloja, Taluka Panvel,

District Raigad, Maharashtra

Prepared by,

Sadekar Enviro Engineers Pvt. Ltd.

QCI-NABET Accredited EIA Consultancy for schedule 5(b) category 'A',
MoEF Recognized and NABL Accredited Laboratory

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1. Summary

- Name of the Project Proponent : Mr. Anil S. Rao
- Address of the Industry : M/s Pest Control (India) Pvt. Ltd. Plot No. 38 & 39, MIDC Taloja, Taluka Panvel, Dist. Raigad, Maharashtra.
- Total Plot Area : 5500.00 m^2
- Green Belt Area : 912 m^2. (Total after expansion)
- **Production Details**
- Production Details (MT/M) : R & D (Existing)
  : 200 Kg/M (Proposed)
  : 200 Kg/M (Total)
- Sr. No. in the Scheduled : 5(b)
- Project Category : A

- **Water Requirement**
- Existing Requirement :40 CMD
- Proposed Requirement :27.5 CMD
- Total water requirement :67.5CMD

- **Power Requirement**
- **Existing**
- Connected Load : 112 KW
- Power Demand : 90 KVA
- **Proposed**
- Connected Load : 112 KW
- Power Demand : 150 KVA
- Alternate Source of Power : D.G. Set
  : 1*82.5 KW

- **Fuel Consumption**
- Fuel to be used : LDO/FO, diesel.
- Amount of fuel to be used : LDO/FO-100 L/day
  : Diesel- 12 L/Hr. (D.G Set will only be operational during power failure)

- Existing Project Cost : 4.8423 Cr.
- Proposed Project Cost : 2.00 Cr

- **Total Cost of the project** : 6.8423 Cr

- **Pollution Load and Mitigation**
- **Quantum of Waste Water Generated** : 14.4 m^3
- **Process Effluent** : 12.6 m^3
- **Sewage Effluent** : 1.8 m^3

- **Effluent Treatment Plant**

Company has existing Effluent Treatment Plant of 34 CMD & for the proposed expansion the existing ETP will be used. The existing ETP will be upgraded to fully-fledged 3 stage consisting primary, secondary and tertiary treatment. The treated effluent will be discharged to CETP, Taloja.

Quantum of Hazardous Waste Generated:

Cat. No.	**Type**	**Quantity (TPM)**		**Total**
		Existing	Proposed	
1	ETP sludge	0.42	0.24	0.66
2	Residue & waste	0.12	0.24	0.36

2. Background Information of the industry:

M/s. Pest Control (India) Pvt. Ltd. (PCI) was established with a vision to manufacture high quality insecticide and advanced, safer products for the society.

Company is located on an area 5500 m^2 at Taloja MIDC. Presently the manufacturing is done at R and D level and company wishes to expand the production. Propagating integrated pest management techniques with the use of the Eco-friendly products being developed. Through the efforts of continuous development the company plans to strengthen its position in international market. The company is also certified as per ISO 9001:2008 for the quality system.

Expansion Details

- Expansion of this project is for insecticide product. The Existing Production Capacity is at R and D level and Proposed Production Capacity will be 200 kg/month. The industry expands with the increase in capacity and proposed for the new products.

Applicability for Environmental Clearance:

The proposed project of **M/s. Pest Control (India) Pvt. Ltd. (PCI)** comes under the schedule 5(b) category 'A', as per the "EIA Notification No. S.O.1533 (E)" dated 14th September 2006 amended on January 19, 2009. Now we are Applying for Environmental Clearance (EC), the procedure to get EC includes submission of Form 1, Consolidated Statement and the Prefeasibility Report for these proposed project.

Need of the Project and its importance to the country:

The company intends to manufacture insecticide (rodenticide) at large capacity as the formulation of Bromadiolone technical have great demand and potential as a role of insecticide globally. Presently PCI is selling its formulation to well-known pesticide companies like Reckitt & Colman India and market as a brand 'Roban' in the form of bait in India. At present there are very few types rodenticides marketed by other companies in India for use in agricultural and allied areas . the company plans to enter in this field in future to capture vast market potential of agricultural rodenticides.

Considering the demand for proposed new products and demand for existing products, the company has projected a turnover of Rs. 11-15 crores for year ending 31.03.2017.

Demand supply gap:

International as well as Domestic demand of the various products proposed to be manufactured by the company & the proposed installed capacity is as under

Sr No	**Name of Products**	**Proposed Installed Capacity**	**International Demand of formulation**	**Domestic Demand of formulation**
1.	Bromadiolone	200 kg/ month	2100	800

Imports vs. Indigenous Product:

The bromadiolone was being imported from France previously and formulated by PCI. PCI started its manufacturing at R & D level since last year because of the high import prices and demand supply gap of the bromadiolone technical from Europe.

Export possibility:

Expected Sales out of the above products-

The estimated sales out of the above product is given hereunder: (Rs. In crs)

Bromadiolone technical	11.00
Total	**11.00**

Employment generation:

The proposed expansion will generate employment in skilled as well as non-skilled labour in technical and other fields.

3. Project Description

(III) The Proposed Expansion is in the already existing plant so no alternate site is considered.

(IV) Size or Magnitude of Operation:

	Product	**Existing, MT/month**	**Proposed, MT/month**	**Total, MT/month**
	Consent no: RONM/NNB/TALOJA/RED/O/CC/C-MPCB/15/52284, dt. 01/05/2015 (Production of R and D product)			
1.	Bromadiolone (R and D)	0.025	0.175	0.2
	Consent no: RONM/NNB/TALOJA/RED/O/CC/C-MPCB/14/10724, dt. 19/11/2014 (Formulation)			
1.	Methyl bromide	4	--	4
2.	Pyrethrum Lindane Formulations	15	--	15
3.	Monocrotophos Formulations	15	--	15
4.	DDVP Formulations	15	--	15
5.	Cypermethrin Formulations	15	--	15
6.	Bromadiolone Formulations	15	--	15
7.	Fenvalerate Formulations	15	--	15
8.	Deltamethrin+ Allethrin Formulations	15	--	15
9.	Endosulfan Formulations	15	--	15
10.	Fipronil Formulations	15	--	15

11.	Propoxure Formulations	15	--	15
12.	Etoxide C	10.67	--	10.67
13.	Ethylene Oxide- Pure	3.63	--	3.63
14.	Imidacloprid Formulations	15	--	15
15.	Malathion Formulations	15	--	15
16.	Chlorpyriphos Formulations	15	--	15
17.	Pyrethrum- Malathion Formulation	15	--	15
18.	Deltamethrin Formulations	15	--	15
	All above 18 products by mixing and blending process only			

(V) Detailed of Processes with flow charts:

Please refer annexure 6 for manufacturing process details.

(VI) List of the Raw Material with Quantity:

Please refer annexure 4 for manufacturing process details.

(VII) Resource optimization/recycling and reused envisaged in the project, if, should be briefly outlined.

(VIII) Water Requirement-Source: MIDC

- Existing Water Requirement: 40.5 CMD
- Proposed Water Requirement: 27 CMD

- **Water Budget: refer annexure 5**

❖ **Power Requirement-Source: MSEDCL.**

- Connected Load: 112 KW
- Existing Power Demand + Proposed Power Demand: 150 KVA
- Alternate Source for Power: DG SET
    1. Capacity: 1* 82.5 KW

2. Fuel Type: LDO/ FO, Diesel
3. Consumption: 100 L/D , Diesel : 12 L/Hr (D.G. Set will only be operational during power failure)

(IX) Quantity of Waste Water Generated:

- Total Quantity of Effluent Generated:

1. Existing Quantity of Effluent Generated:
2. Proposed Quantity of Effluent Generated:

Sr. No.	Activity	Existing Quantity of Effluent Generated in CMD	Proposed Quantity of Effluent Generated in CMD
1.	Domestic	2.0	1.8
2.	Processes	21.2	9.2
	Total	**23.2**	**11.0**

Note – Treated Effluent of ETP outlet is connected to CETP, Taloja.

3. **Characteristics of the effluent**

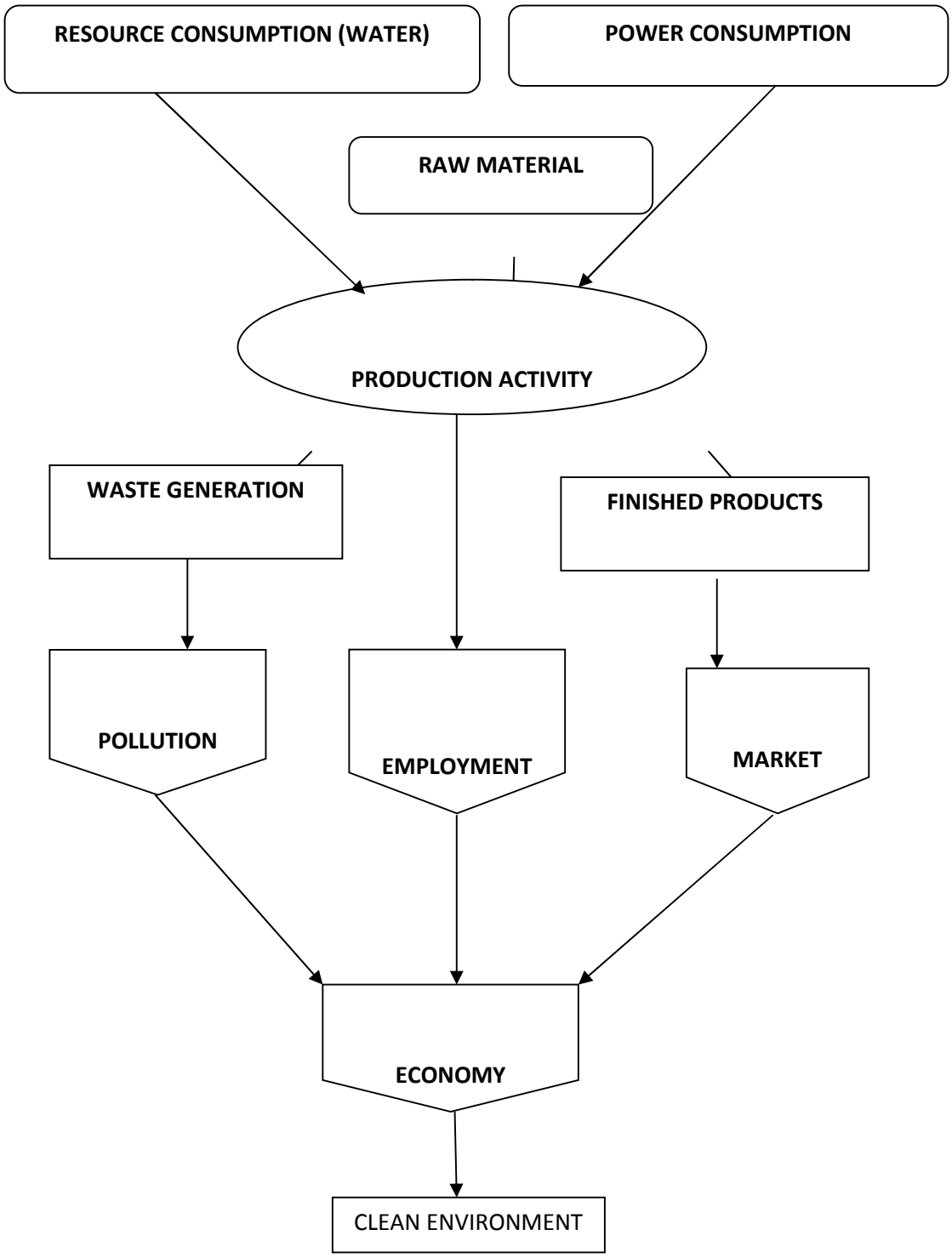
Sr. No.	Parameter	Characteristics		MPCB Limit
		Before Treatment	**After Treatment**	
1.	pH	5.5-6.5	6.5 – 7.5	5.5 – 9.0
2.	BOD	1000 - 1200	80 – 90	Not to exceed 100
3.	COD	1000-2000	150 – 240	Not to exceed 250
4.	Suspended solid	200-300	70 - 85	Not to exceed 100

Note: All the parameters are expressed in mg/L except pH.

Design of the Effluent Treatment Plant

Sr. No	Unit	Quantity	MOC	Size/ Capacity (CMD)
1.	Collection tank	01	Civil masonry	12
2.	Neutralization tank	02	Civil masonry	5
3.	Oil and grease separator	02	Civil masonry	3
4.	Aeration and clarifier	01	Civil masonry	20
5.	Separation tank	01	Civil masonry	3
6.	Sludge drying bed	04	Civil masonry	8

(X) Schematic Representation of the Feasibility Drawing of EIA



4. Site Analysis:

This industry is located in Taloja MIDC.

Figure: Location of PCIL at Taloja MIDC area, Navi Mumbai.

I. Connectivity: Distance from Industrial Area

- Nearest railway station : Navade road 1.8 Km away.
- Nearest Airport: 41 km. Chhatrapati Shivaji International Air Port, Mumbai.

Location and Access

The industrial area is centrally located and easily accessible through all modes of transport

- **Road:** The entire industrial area is well connected by internal roads Available Road Network: State Highway running 1.0 km away from the site.
- **Railway:** Navde road and Panvel Railway Stations are in close proximity, situated about 1.8 and 23 Km. away from area respectively.
- **Air:** Mumbai Air Port is located, around 41 Km away from the site.

II. Land Form, Land use and Land Ownership: The Project location is in the notified industrial zone i.e. Taloja MIDC.

- **Topography:** The proposed site is located at Plot no 38 & 39, MIDC Industrial Area, Taloja, District-Raigad, State-Maharashtra. **Taloja** is a part of Navi Mumbai Metropolitan Region (NMMR). Taloja lies on Thane to Panvel road route. The Taloja MIDC is well connected to Panvel, Thane, Kalyan by road and railways for proper road accessibility.

Geological features and Geo-hydrological status of the study area

- The entire district is covered by basaltic lava flows known as "Deccan Traps". These Deccan Traps are capped by latterites. The Recent, Sub-Recent and Pleistocene latterites are observed within the study area. Geologically Konkan lowland is a platform of marine denuation raised to form a narrow plain.

- The steep scarps facing the coast and some what gentle slopes towards the east believed to be due to extensive faulting of the ghat region. the geology of entire study area is consist of dark basalt and latterite. These are spread out in the form of horizontal sheets and beds and have innumerable spurs, hills, ridges, peaks and plateau.

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- The district is drained by short westwards flowing parallel streams, which originate in the Sahyadri Mountains in the east and flow into the Arabian Sea. Ulhas, Patalganga, Amba, Kundlika, Savitri, Kal, Gandhari and Ghod are the major rivers in the district. The district has experienced hot and humid climate.

- Geo -hydrological status of study area

  The peculiarities of the drainage system of the district are that all rivers are Westerly flowing. A small river (Kasardi River), which is non-perennial in nature, flow along the Taloja Industrial Area and finally drains into the Arabian Sea. It is neither used for drinking purpose nor as irrigation source. The Kundalika river is passing through close to Roha MIDC the location of proposed site is 970mtr. away from the river. The water is used for irrigation purpose by local villagers.

- Hydrogeology : Deccan Trap Basalt of upper Cretaceous to lower Eocene is the major rock

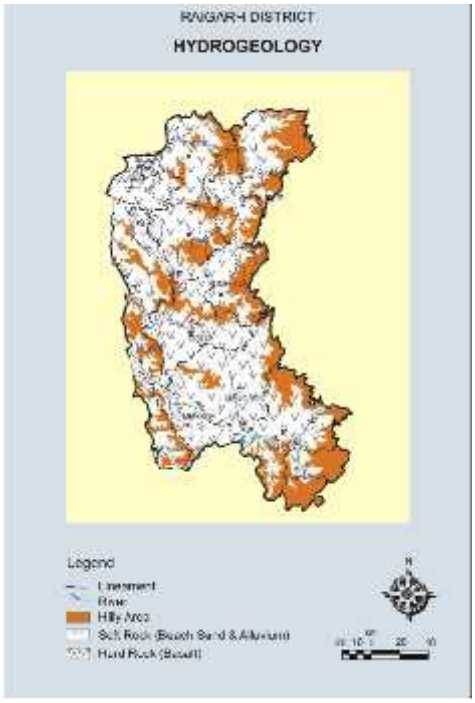
formation and intruded by a number of dykes. The western part of the district consisting Basalt flows are altered to Laterite. Recent deposits comprising Beach Sand and Alluvium occur along the coast and in the river mouth, however they do not form potential aquifer.

- Deccan Trap Basalt Ground water in Deccan Trap Basalt occurs mostly in the upper weathered and fractured parts down to 10 – 15 m BGL under unconfined condition. The water bearing strata at deeper depth exists under semi confined to confined conditions. The dug wells in these areas show rapid decline in water level during post monsoon period and practically go dry in peak summer. In foot hill zones the water table is relatively shallower near water course. The yield of dugwells tapping upper phreatic aquifer ranges between 45 to 60 m3 /day, whereas that of borewells varies form 0.50 to > 20 m3 /hr. depending upon the local hydrogeological conditions, however in most of the borewells it is up to 5 m3 /hr.

- Beach Sand/Alluvium : The Alluvial deposits are found along the coastal areas in few isolated patches having limited areal extent as Beach Sand and along the course of major rivers. In the alluvial deposits, primary porosity is due to the inter-granular pore spaces making sands and gravels good water bearing formations. The ground water occurs under phreatic/unconfined aquifer at relatively shallow depths of 3-5 m and their yield ranges from about 18 to 43 m3 /hr.

Water Level Scenario:

Central Ground Water Board periodically monitors 28 National Hydrograph Network Stations (NHNS) in Raigarh district, four times a year i.e. January, May, August and November. Depth to Water Level – Premonsoon (May 2007) : The depth to water levels in the district during May 2007 ranges between 0.55 m bgl (Nagothane) and 8.60 m bgl (Chinch wad). Depth to water levels during premonsoon (May 2007) is Shallow water levels i.e., less than 2 m bgl are seen in the central part of the district. The water levels 5 to 10 m bgl are seen in the southern part of the district i.e. around Poladpur and Mahad and also as scattered patches across the district. In the major part of the district water level ranges from 2 to 5 m below ground level (BGL).



5. Planning Brief

Pest Control (India) Pvt. Ltd. is located in the MIDC. The Total Plot area is 5500 sq. m. The green belt area will be 912.0 sq. m. The existing infrastructure will be used for expansion. The infrastructure is sufficient to provide the safe transportation of raw material in closed system. The industry premise is having a storage area for the Hazardous waste, raw material storage area and finished product storage area. The industry is having canteen, lavatory, and assembly hall, garden etc.

The workers work in shifts. In the industry all necessary safety equipment, first aid box is available.

Greenbelt Development

Based on this survey and the CPCB guidelines native plant species have been proposed for the green belt development plan. The green belt is proposed to be developed within the project site (approx. 33% of the total plant area). The general considerations involved while proposing the green belt plan are:

- Local/ Native fast growing trees & shrubs will be used for plantation
- They should have large leaf area index

- They should have higher Air Pollution Tolerance Indices
- They should not have any noticeable effect on the plant yield due to gaseous pollutants

6. Proposed Infrastructure

(I) Industrial Area: Taloja MIDC, District Raigad, Maharashtra state.

(II) Residential Area: Not applicable.

(III) Green Belt: About **912 sq .m** area will be under developing green belt.

(IV) Social Infrastructure and (V) Connectivity

- **Road:** MIDC has provided asphalt roads with widths varying from 3.75 to 10 m; these are mainly two lane roads with a central verge of bougainvillea and raised footpaths on either side of the roads.
- **Water:** The Scheme is sourced by the MIDC water supply.
- **Electricity: C**onnected load -112 KW & Working load – 90 KVA.
- **Common Facility Centre:** A common facility centre for labours is under development by MIDC, Taloja.
- **Streetlights:** MIDC has provided street lighting facility in the area; street lights have been erected 30 m apart on the central verge. A total of 500-700 lights illuminate the industrial area at night.
- **Telecommunication Facility / Connectivity:** Fax, telex, email and Internet facilities are available. A telephone exchange is located in the area.
- **Fire Station:** A fire station was deemed necessary keeping in mind the planned development of the Taloja Industrial Area. MIDC has constructed a fire station in an area of around 5000 sq m and which has the following units. i) Engine room with a fire station office and officers quarters. ii) Fireman quarters. iii) Smoke room tower. iv) Service pit and suction tank.

- **Common Effluent Disposal Facility**: MIDC has constructed a common effluent treatment plant of capacity 22.5 MLD on Plot No. P-24 , Taloja MIDC, Navi Mumbai, District, Raigad. 410208

(VI) Source of the Water will be MIDC. The daily water requirement will be 67.5 CMD.

(VII) Domestic Waste water will be treated in the existing ETP. Septic tank overflow line is connected to aeration tank of Effluent Treatment Plant.

(VIII) The Industrial Waste will be disposed off to CHWTSDF.

(IX) The Solid Waste generated like empty drums (20 unit /Month) and paper bags (25 kg/Month.) will be sold to authorized dealer.

(X) The Power Requirement will be 90 KVA which will be supplied by MSEDCL.

7. Rehabilitation & Resettlement (R & R) Plan: Not Applicable

8. Project Schedule & Cost Estimates

1. The proposed schedule for approval and implementation.

Sr. No.	**Description**	**Time**	**Cost in %**
1.	Obtaining all statutory permission with respect to industry	7 Months	10%
2.	Design and Engineering Plan	3 Months	10%
3.	Factory Set Up	8 Months	70%
4.	Testing and Commissioning	1 Months	5%
5.	Actual Starting	1 Months	5%

Estimated project cost along with analysis of economic viability of the project.

Please find attached copy of CA Certificate. (Refer Annexure - 7).

The infrastructure already exists but for implementation of the new project the minor Construction will be required.

9. Analysis of proposal (Final Recommendations)

The project will provide employment opportunities to local people and it will increase the living standard. As the industry has the export market it will add to the net foreign exchange earning of the country. The industry takes pride in maintaining healthy relationship with the environment by further improvised technology of effluent treatment plant. The industry is committed to manufacture and supply of finished products to achieve enhance customer satisfaction by establishing and maintaining quality management system .Industry earned ISO 9001-2008, Recognition. Industry trust on employee's strength so management of the industry always promotes and maintains the safety conditions in and around the workers. The regular medical checkups, safety training programs, mock drill are being conducted in the industry.

In view of the above points it is concluded that the project proposal will not have any negative impact on the environment and people on the other hand will have positive impact by improving the socio economic aspects with employment generation.