



### **From the Chairman's Desk**

It gives me immense pleasure to present the Annual Report of the Goa State Pollution Control Board, for the Year 2011-2012. The activities and achievements during the year are presented in detail in the report.

**(Jose Manuel Noronha)**  
**Chairman**

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# CHAPTER 1

## INTRODUCTION

### 1.1 GENERAL INTRODUCTION

The Goa State Pollution Control Board is an autonomous statutory organization constituted on 1<sup>st</sup> July, 1988 under the Water (Prevention & Control of Pollution) Act, 1974. Prior to that, when Goa formed part of the erstwhile Union Territory of Goa, Daman and Diu, the Central Board for the Prevention and Control of Water Pollution was performing the functions of the State Board in Goa. The Central Pollution Control Board at Ponda-Goa had established a Section Office for the purpose. The same arrangement continued till the constitution of the State Board. In the meanwhile, the Section Office was re-constituted as West Zonal Office and shifted to Baroda on 4<sup>th</sup> April, 1988. All the relevant records pertaining to Goa were transferred to the Goa State Pollution Control Board on 12<sup>th</sup> September, 1988.

The Goa State Pollution Control Board, after its constitution, established its office in the Goa Medical College Complex at Bambolim. In June 1991, the Government of Goa allotted independent premises for the Board at Patto- Panaji, where the Board shifted its office in September 1991.

On 15<sup>th</sup> August, 2002 the Board acquired new premises on the 1<sup>st</sup> floor in Dempo Tower at Patto Plaza, Panaji and shifted its full set-up to this new premise. Subsequently, on 15<sup>th</sup> August, 2005, the Board acquired additional premises measuring 311.86 Sq. mt. on the 4<sup>th</sup> floor of the same building. The Physical and Analytical Laboratory-I was set up on the 1<sup>st</sup> Floor and the Physical and Analytical Laboratory-II and the Microbiology Laboratory were set up on the 4<sup>th</sup> Floor.

### 1.2 CONSTITUTION OF THE BOARD INCLUDING CHANGES THEREIN

The present Board was constituted under the chairmanship of Dr.Simon de Sousa. This Board was constituted vide Order No. 5/20/87-STE/(Part II)/239 dated 8<sup>th</sup> June, 2009 and the composition is as given below:-

#### Chairman

1. Dr. Simon N. de Sousa, Ex Dy. Director / Scientist 'F', National Institute of Oceanography, Dona Paula

#### Members

2. Chief Conservator of Forests, Forest Department, Panaji
3. Chief Engineer, Water Resources Department, Panaji
4. Director, Directorate of Industries, Trade & Commerce, Panaji
5. Director, Directorate of Mines & Geology, Panaji
6. Director, Directorate of Technical Education, Porvorim
7. Shri. Gurunath Laad, Councilor, Margao Municipal Council, Margao
8. Smt. Radha Kavlekar, Councillor, Margao Municipal Council, Margao
9. Shri. Saifullah B. Khan, Councillor, Mormugao Municipal Council, Mormugao
10. Shri. Basilio Fernandes, Member, Village Panchayat of Camurlim, Salcete
11. Shri. Ramkrishna Kerkar, Member, Village Panchayat of Candolim, Bardez.
12. Shri. Caesar Menezes, President, Goa Chamber of Commerce & Industries, Panaji
13. Shri. Atul Naik, President, Goa Small Industries Association, Panaji
14. Shri. Jose Manuel Noronha, Bhagbhat, Raia, Salcete
15. Managing Director, Goa Industrial Development Corporation, Panaji
16. Managing Director, Goa State Infrastructure Development Corporation, Panaji

### **Member Secretary**

17. Shri Srinet Kothwale, Goa Civil Services

## **1.3 CONSTITUTION OF THE TECHNICAL ADVISORY COMMITTEE**

The Technical Advisory Committee re-constituted by the Chairmanship of Dr. Simon N. de Sousa vide Order dated 08/07/2009 continued to be in force for the year under report. The Committee comprises of following members:

1. Shri. Srinet Kothwale, Member Secretary, Goa State Pollution Control Board.
2. Dr. Mohan Girap, Project Scientist, (Geology), Goa State Committee on Science and Technology
3. Shri Anil Kher, B.Tech (Chemical) 464, Landscape Pinto Park, Campal, Panaji Goa.
4. Shri Pascoal Noronha, B.Sc B.E (Civil), House no. 206, St. Joaquim Road, Borda, Fatorda, Margao Goa.
5. Shri Sridhar Kamat, B.E (Civil), M-50- Housing Board Colony, Gogol, Margao Goa.
6. Dr. Savita Kerkar, Reader, Dept. of Marine Bio-Technology, Goa University, Bambolim
7. Mrs. A.A. Barretto, Head of Dept. (Food Technology), Govt. Polytechnic, Panaji
8. Dr. Xivanand Verlekar, Retd. Scientist – (Biologist) N.I.O, 606, Pinto Vaddo, Candolim, Bardez Goa
9. Prof. Suraj Rane, Padre Conceicao College of Engineering, Verna, Salcete Goa. – B.E (Mechanical ) M.E (Industrial Engg), Pursuing Ph.D.

Shri Sanjeev Joglekar, Assistant Env. Engineer of Goa State Pollution Control Board was appointed as Convenor/Facilitator for the Technical Advisory Committee. It was decided that five members will form the quorum for the meeting.

The Committee held weekly meetings on every Monday at 4.00 pm in the Conference hall of the Board to scrutinize and make recommendations / comments / suggestions on the applications from industrial units received by the Board for Consent to Establish / Operate / Renewal of Consents under the Water and Air Acts, Authorizations under the Hazardous Waste Rules, Bio-medical Waste Rules, etc. (except those of Green category industries). The applications from green category industries were scrutinized by the technical and scientific sections of the Board and approved by the Chairman on recommendation by the Member Secretary for grant of Consents.

The recommendations of the Technical Advisory Committee meetings, in the form of Minutes, were placed before the Chairman for approval and on approval by Chairman; Consent Orders were issued by the Member Secretary.

## **1.4.1 CONSTITUTION OF THE DEPARTMENTAL SELECTION COMMITTEE / DEPARTMENTAL PROMOTION COMMITTEE FOR GROUP 'A', 'B', 'C' AND 'D' POSTS**

**1.4.2** The Board vide Order no.1/5/10-PCB/Vol.VIII/2994 dated 07/09/2011 re-constituted a Departmental Promotion Committee and Departmental Selection Committee in respect of Group 'A' and 'B' posts in the Goa State Pollution Control Board. The committee comprises of the following members:

- |    |   |                           |
|----|---|---------------------------|
| 1. | Chairman of the Board   | Chairman of the Committee |
| 2. | Director, Dept. of Science, Technology & Environment, Govt. of Goa, or his representative | Member                    |
| 3. | Ms. Analia Mesquita, Scientist 'F', National Institute of Oceanography, Dona Paula        | Member                    |
| 4. | Shri Jose Manuel Noronha, Member of the GSPCB   | Member                    |
| 5. | Environmental Engineer, Goa State Pollution Control Board                                 | Member                    |
| 6. | Member Secretary, Goa State Pollution Control Board                                       | Member                    |

The terms of reference of the aforementioned Committee were as follows:

1. Screening / Selection / Recommendations / Making of appointments / Promotions / Probation clearance / Confirmation / Grant of claims under the Modified Assured Career Progression Scheme, etc. to Group 'A' and 'B' staff of the Goa State Pollution Control Board.
2. Any other related task allotted by the Chairman of the Board from time to time.

**1.4.3** The Board vide Order no.1/5/10-PCB/Vol.VIII/2995 dated 07/09/2011 re-constituted a Departmental Promotion Committee and Departmental Selection Committee in respect of Group 'C' and 'D' posts in the Goa State Pollution Control Board. The committee comprises of the following members:

- |    |   |                           |
|----|---|---------------------------|
| 1. | Chairman of the Board   | Chairman of the Committee |
| 2. | Director, Dept. of Science, Technology & Environment, Govt. of Goa, or his representative | Member                    |
| 3. | Environmental Engineer, Goa State Pollution Control Board                                 | Member                    |
| 4. | Member Secretary, Goa State Pollution Control Board                                       | Member                    |

The terms of reference of the Committee were as follows:

1. Screening / Selection / Recommendations / Making of appointments / Promotions / Probation clearance / Confirmation / Grant of claims under the Modified Assured Career Progression Scheme, etc. to Group 'C' and 'D' staff of the Goa State Pollution Control Board.
2. Any other related task allotted by the Chairman of the Board from time to time.

## **CHAPTER 2**

### **THE ESTABLISHMENT**

#### **2.1 STAFF OF GOA STATE POLLUTION CONTROL BOARD**

The Goa State Pollution Control Board has recruited staff under the Technical, Scientific, Administrative and Accounts sections. The details of the staff are provided in the Organization Chart at Annexure I.

#### **2.2 INFRASTRUCTURE FACILITIES**

##### **2.2.1 LABORATORY FACILITIES**

The Board has two full fledged laboratories, one on the 1<sup>st</sup> floor and the other on the 4<sup>th</sup> floor. These laboratories are well equipped with instruments and equipments needed for carrying out analysis of water, air and soil samples for chemical, physical and bacteriological parameters including trace and toxic metals, pesticides and organic components. The Board has sophisticated instruments like Atomic Absorption Spectrophotometer with Flame and Graphite Furnace Modules, Gas Chromatograph, Total Organic Carbon Analyzer, etc. Recently, the Board has procured Carbon Monoxide (CO) Analyzer, Gas Chromatograph – Mass Spectrophotometer (GC-MS) and Toxicity Characteristic Leachate Procedure (TCLP) Kit through funds provided by the Ministry of Environment & Forests.

The Boards proposal to the Central Pollution Control Board for setting up of 7 additional ambient air quality monitoring stations in mining areas was approved and the monitoring work at these additional new locations was commenced from the month of November 2011 by outsourcing to MOEF recognized laboratories by inviting tenders.

#### **2.3 FRONT OFFICE**

The front office of the Board located on the 1<sup>st</sup> floor is occupied by the Chairman's cabin, the Member Secretary's cabin, cabin of PA to Chairman, Visitor's lounge, Security and Inward Section. The Administrative, Technical, Legal and Accounts Sections are also located on the 1<sup>st</sup> Floor adjacent to the Front Office.

#### **2.4 LIBRARY FACILITIES**

The Board has a spacious library of its own on the 4<sup>th</sup> Floor. It has varied publications from different departments/institutions, such as MOEF, CPCB, other State Boards' Annual Reports, etc. Legal, accounts and technical books, ISI Specifications, etc. are also available in the Boards library.

#### **2.5 CONFERENCE ROOM**

The Board has a spacious Conference Room on the 1<sup>st</sup> floor with a seating capacity for 60 people. It is fully air conditioned and has facilities like whiteboard, TV and Video. All Board Meetings and some other important meetings are held in the Conference Room.

## **CHAPTER 3**

### **ACTIVITIES OF THE BOARD**

#### **3.1 MEETINGS OF THE BOARD**

During the year under report, the Goa State Pollution Control Board held four Board Meetings under the reconstituted Board. The details of the meetings held during the year are presented in the Table below:-

<b>Sr. No.</b>	<b>Sr. No. of Meeting</b>	<b>Date of meeting</b>	<b>Venue</b>	<b>No. of members who attended the meeting</b>
1.	101 <sup>th</sup>	08/07/2011	Board's Conference Hall	12
2.	102 <sup>th</sup>	09/12/2011	Board's Conference Hall	10

#### **3.2 MAJOR DECISIONS TAKEN BY THE BOARD**

##### **101th MEETING OF THE BOARD**

- With regard to the matter of Mormugao Port Trust (MPT) the Board members were appraised of the meeting called by the Chief Secretary with the concerned Govt. officials and officials of MPT, wherein MPT was required to send a Special Officer to GSPCB in order to sort out all issues raised by GSPCB during the course of the said meeting so as to enable GSPCB to assist the MPT in completion of all documentation / formalities required by GSPCB for granting clearances to the various projects undertaken by MPT.

The members were also informed that the Board has been conducting ambient air quality monitoring at Vasco da Gama from the month of December and the report for the month of December indicated that at most of the locations the values of PM<sub>2.5</sub> and PM<sub>10</sub> are exceeding the prescribed limits, only on few occasions they are within limits. In this regard the members decided to issue necessary directions to MPT.

Chairman further informed the members that during the inspection of MPT by the Board officials, it was noticed that MPT is carrying out construction activities without obtaining the required permissions of the Board, in spite of the various directions issued by the Board. The members then decided that the officials of the Board should conduct a fresh site inspection to ascertain whether construction activities are still being carried out at the Port in violation of directions issued by the Board and accordingly file an F.I.R in this regard.

Chairman also brought to the notice of the members that he has received a communication from the Director of Industries Trade and Commerce, as regards to the allegations made against him by the then Chairman of the MPT, wherein the Director, Industries, Trade and Commerce has been accused of influencing the Board in connivance with the State Government, to stall the projects of MPT. The Director, Industries, Trade and Commerce stated that he has expressed his views in the Board meeting as a Member of the Board in the capacity of the Director of Industries, Trade and Commerce and the industry in general, and the views expressed by him are the views of the Department he is representing and not his personal views.

The members took a serious note of the allegations made against the Director of Industries Trade and Commerce and decided that Legal advice be obtained from the Counsel of the Board, for serving a legal notice on the former Chairman of MPT. It was also decided to forward a copy of the said legal notice to his Appointing Cadre.

- Application of M/s Berger Becker Coatings Pvt. Ltd. – Plot no. 114, Pilerne Industrial Estate, Pilerne, Bardez Goa, for issue of Consent to Establish in respect of its expansion proposal for installation of additional D.G set, solvent distillation equipment and Sewage Treatment Plant.

The Chairman informed the members that the HPCC approval has not been obtained by M/s Berger Becker Coatings Pvt. Ltd. However the Director of Industries Trade and Commerce informed the members that HPCC has not received an application from M/s Berger Becker Coatings Pvt. Ltd. Shri Ramkrishna Kerkar stated that the Board is conducting EIA in Pilerne Industrial Estate and a new project of solvent distillation should not be considered at this stage. The Chief Engineer, Water Resource Dept. stated that all the Industrial Estates are declared as scheduled areas under the Goa Ground Water Regulation Act, 2002 and it is necessary to take permission from the Ground water Officers appointed under the Act for construction of bore wells or utilization of the ground water in the Industrial Estates or the surrounding villages. He further stated that permission will be accorded based on site conditions and ground water availability.

The members suggested that the unit should be directed to submit their plans for rain water harvesting and re-charge of wells along with the designs, to the Goa State Pollution Control Board / Directorate of Industries, Trade and Commerce, to forward the same to the Water Resource Department for scrutiny.

The members approved the proposal of M/s Berger Becker Coatings Pvt. Ltd. for issue of Consent to Establish in respect of its expansion proposal for installation of additional D.G set, and Sewage Treatment Plant subject to the implementation of rain water harvesting and ground water recharge measures, **however, the members decided that the application for installation of solvent distillation unit should be granted only upon the receipt of HPCC clearance and approval of the EIA Report for Pilerne Industrial Estate.**

- Application of M/s Siemens Limited – Plot no. C-21, C-23, C-25 and C-26, Phase I-A, Verna Industrial Estate, for issue of Consent to Establish (expansion).

The Chairman informed the members that the HPCC has cleared the proposal of M/s Siemens Limited in principle. The HPCC has cleared the above proposal in its meetings, but with a condition that the unit shall make provisions for rain water harvesting and re-charging of wells, within their unit, so as to recharge the ground water aquifer, which has been depleted. The Chief Engineer, Water Resource Dept. stated that all the Industrial Estates are declared as scheduled areas under the Goa Ground Water Regulation Act, 2002 and it is necessary to take permission from the Ground water Officers appointed under the Act for construction of bore wells or utilization of the ground water in the Industrial Estates or the surrounding villages. He further stated that no permission will be given for new borewells to be drilled in the Industrial Estate at Verna, unless the detailed study of the aquifer regulated and its parameter is completed.

The members suggested that the unit submit their plans for rain water harvesting and re-charge of wells along with designs to the Goa State Pollution Control Board / Directorate of Industries, Trade and Commerce, to forward the same to the Water Resource Department for scrutiny. The members approved the proposal of M/s Siemens Limited for issue of Consent to Establish (expansion) subject to the implementation of rain water harvesting and ground water recharge measures.

- (i) Application of M/s Nestle India Limited – Survey nos. 3/4, 1,7, 11, 12, 13, 34 & 136/1, Maulinguem, Bicholim, Goa, for Consent to Establish, for expansion in the production capacities of noodles.
- (ii) Application of M/s Glenmark Generics Ltd. (Unit – II), Plot no. S-7, Colvale Industrial Estate, Colvale, Bardez Goa for issue of Consent to Establish (expansion) in their manufacturing capacities of its pharmaceutical products.
- (iii) Application of M/s Cipla Limited – Plot no. 147/4, Verna Industrial Estate, Verna Salcete Goa, for Consent to Establish for the manufacture of bio-chemical Pharmaceutical formulations.
- (iv) Application of M/s Teracom Limited – Plot no. 250A and 250B, Kundaim Industrial Estate, Kundaim Goa, for Consent to Establish for the expansion activities.
- (v) Application of M/s Tulip Diagnostics (P) Ltd., Utility Plot no. VIII-B, Phase –III-B, Verna Industrial Estate, Verna, Salcete Goa, for Consent to Operate under the Water Act for the expansion of the unit for manufacture of Diagnostic reagents and kits (cultures and micro-organism)
- (vi) Application of M/s John Distilleries Ltd., Plot no. M-21, M-21A, Cuncolim Industrial Estate, for Consent to Operate under the Water Act and the Air Act (expansion) for the manufacture of Malt spirit.

- (vii) Application of M/s Unichem Laboratories Limited, Plot no. L-17 & 18, Pilerne Industrial Estate, for issue of Consent to Establish (NOC) for expansion of the unit for manufacture of pharmaceutical formulations, R & D facilities and enhancement in the manufacturing capacity.
- (viii) Application of M/s Nestle India Limited, Survey nos. 294/1, 2, 3 & 4 and 297/0, Usgao, Ponda Goa, for issue of Consent to Operate under the Water Act and the Air Act for expansion of the unit for enhancement in the manufacturing capacities of waffles and wafers, chocolates and confectionery products.
- (ix) Application of M/s Glenmark Generics Ltd. (Unit – II), Plot no. S-7, Colvale Industrial Estate, Colvale, Bardez Goa for issue of Consent to Operate under the Water and Air Act (expansion) in their manufacturing capacities of its pharmaceutical products.

The Chairman informed the members that the HPCC has cleared the proposal of all the nine units in principle in its meetings, but with a condition that the units shall make provisions for rain water harvesting and re-charging of wells, within their unit, so as to recharge the ground water aquifer, which has been depleted. The Chief Engineer, Water Resource Dept. stated that all the Industrial Estates are declared as scheduled areas under the Goa Ground Water Regulation Act, 2002 and it is necessary to take permission from the Ground water Officers appointed under the Act for construction of bore wells or utilization of the ground water in the Industrial Estates or the surrounding villages. He further stated that permission will be accorded based on site conditions and ground water availability.

The members suggested that the units submit their plans for rain water harvesting and re-charge of wells along with designs to the Goa State Pollution Control Board / Directorate of Industries, Trade and Commerce, to forward the same to the Water Resource Department for scrutiny. The members approved the proposals, subject to the implementation of rain water harvesting and ground water recharge measures.

- Application of M/s Goa Shipyard Ltd., Vasco, for Consent to Establish – upgradation / expansion and modernization in the existing ship building and ship repairs activities. The members perused the item wherein M/s Goa Shipyard Ltd intends to modernize the ship building and ship repairs activities. Since the unit falls in the category of large scale enterprise, the members were of the opinion that the unit should first obtain approval from the State High Powered Coordination Committee, and only thereafter Consent to establish to be granted.
- Revised Estimate for the year 2010-2011 and Budget Estimate for the year 2011-2012:- The members perused and approved the Revised Estimate for the financial year 2010-2011 and Budget Estimate for the year 2011-2012, prepared in Form VI and VII, so as to forward the same to the State Government.
- Status Report of the Bio-medical Waste (Management and Handling) Rules, 2000 and the Plastic (Manufacture, Usage and Storage) Rules, 2000.  
The Chairman informed the member that the Sub Committee of the Board headed by the Director of Industries Trade and Commerce has conducted 5 meetings with the stake holders and approved the reports on Status Report of the Bio-medical Waste (Management and Handling) Rules, 2000 and the Plastic (Manufacture, Usage and Storage) Rules, 2000 submitted by M/s Padmaja Aerobiologicals Pvt. Ltd after suggesting adequate modifications, recommendations. The Chairman appreciated the efforts made by the Director of Industries Trade and Commerce and the members of the Sub Committee in scrutinizing the above reports.  
The members perused the minutes of the Sub Committee and the recommendations made by the Sub Committee and approved the Status Report of the Bio-medical Waste (Management and Handling) Rules, 2000 and the Plastic (Manufacture, Usage and Storage) Rules, 2000 prepared M/s Padmaja Aerobiologicals Pvt. Ltd., so as to forward the same to the Central Pollution Control Board and recommend the same to the State Government for implementation.
- **Submission of Water Cess Returns under the Water (Cess) Act, 1977:-** Chairman informed the members that as per section 5 of the Water (Cess) Act, 1977, every person carrying out an industry is liable to pay the Water Cess under section 3 of the Water (Cess) Act, to the prescribed Officer or Authority. Rule 4 of Water (Prevention

and Control of Pollution) Cess Rules, 1978, every consumer shall furnish returns on or before 5<sup>th</sup> of every calendar month to the Assessing Authority in Form – I showing the quantity of water consumed in the previous month.

The amount of monthly assessment of Water Cess is meager, sometimes ranging from (Rs. 5/- to Rs. 400/- per month in most of the cases), a Water Cess Assessment order is prepared on yearly basis and forwarded to the industries.

As GSPCB has implemented the XGN software for on-line processing of applications for Consent and Authorizations, the members decided that the Board accepts yearly submission of Water Cess returns and prepare yearly Water Cess Orders, so as to reduce the correspondence and simplify the procedure. The Chairman informed the members that the Central Pollution Control Board has sought the opinion of all the Boards regarding filing yearly returns in lieu of the present system of filing monthly returns and assessment.

The members decided to communicate to the Central Pollution Control Board that the Industries should be asked to furnish yearly Water Cess Returns in Form – I (compilation of monthly Water Cess Returns in Form – I) on or before 5<sup>th</sup> April, for the preceding financial year and also issue yearly assessment orders. The members approved accepting the Water Cess returns online.

- Applications of Mines for Renewal of Consent to Operate under the Air Act and the Water Act pending with the Board for submission of clearance from the Chief Wild Life Warden and clearance under the Forest (Conservation) Act.

Chairman informed the members that there are total 105 mines that are granted Consent to Operate by the Board under the Air Act and the Water Act, and at present 41 cases are pending for Renewal under the Air Act and Water Act. On scrutiny of the applications it was noticed that some mines do not possess the required documents. The same have been classified as under:

- a. Mines which had obtained CWW permission, however, the validity has expired and valid approvals have not been submitted.
- b. Mines which have submitted applications for CWW approval but have not been granted the same by the Forest Dept.
- c. Mines that have submitted applications for clearance under the FCA, as specified in the E.C but have not been granted clearance by the Forest Dept.

It was also informed to the members that the Board had issued show cause notices and personal hearings have been conducted in respect of such mines. The Chairman further informed the members that during the hearing the mining companies have represented that the Board issues Consent under the Water Act and Air Act and should continue to issues Consent subject to obtaining all necessary permissions prescribed under the Law and Acts in force. The Mining Companies have also represented that they should be allowed to operate in the non forest area of the lease in view of the orders passed by the Hon High Court in W.P. No 722 of 2008 and 136 of 2008.

The members perused the legal opinion sought from the Board's Counsel, Adv. A.N. S. Nadkarni in the matter.

The members expressed that the official representing the Forest Department should express the view of the Forest Department. Shri Cedric D'Souza, Deputy Conservator of Forests (Monitoring and Evaluation), Panaji representing the Forest Department clarified that there is no bar on issuing of Chief Wild Life Permission for the mines operating at a distance of 1 kms to 10 kms from the Wild Life Sanctuary and hence the Forest Department has started issuing such permission to the mining leases on case to case basis after verifying all the details and evaluating the impacts on wild life. The Deputy Conservator of Forests (Monitoring and Evaluation), Panaji, further clarified that in case of mining leases comprising partly of private land and partly of forest areas and who have not obtained clearance under the Forest Conservation Act, such mines could be allowed to operate only in the non forest areas provided they maintain a buffer of 7.5 meters from the Forest land in view of the orders passed by the Hon High Court in W.P. No 722 of 2008 and 136 of 2008. He further stated that the mining units should clearly demarcate the forest area and non forest areas, if any in their lease.

The members were of the opinion that stringent measures should be adopted while deciding applications for Consents to the Mining units and a regulatory mechanism should be devised to monitor the conditions stipulated in the Environmental Clearance issued by the Ministry of Environment and Forest, Govt. of India and the Consent issued by the Board. Shri Nadkarni, Chief Engineer, WRD stated that most of the reject dumps are close to the nallahs and rivers and hence complete violation of the Irrigation Act. Further, the Chief Engineer, WRD also expressed his reservations on mining activities being carried out close to the Selaulim Reservoir. He further stated that mining activities are being carried out much below the water table and in some cases even below the Mean Sea Level thereby depleting the ground water in the wells in the surrounding areas and that a detailed regulation and observation of pollution of water (surface water as well as ground water) is also a necessity. The members after detailed deliberation suggested that real time ambient air quality monitoring should be carried out in the mining areas to monitor the pollution levels. The members thereafter decided that a special meeting should be called with the Representatives from the Goa Mineral Ore Exporters Association, Goa Mining Association, Goa Chamber of Commerce and Industries, Goa State Industries Association, Director, Dept. of Science, Technology and Environment and members of the Technical Advisory Committee of the Board to deliberate on the issue of installing of on-line ambient air quality monitoring stations in the mining areas and funding for the installation and maintenance of the same.

After detailed deliberations and taking note of the fact that the Forest Department had commenced processing the applications from the mining companies, as informed by them during the meeting, the members decided as follows:

- Application of M/s Panduranga Timblo Industries (Borga iron ore mine), T.C. no. 29/1952 and 34/1950), Rivona Village, Sanguem Taluka, for Consent to Operate under the Water Act and the Air Act. The members deliberated and observed that the proposal is for Consent to Operate (New) and decided to defer the application until the States Mineral Policy is approved by the State Government. The members further decided to communicate the decision of the Board to the applicant.
- EIA report of Pilerne Industrial Estate region  
Chairman informed the members that office was receiving numerous complaints from the Saipem Village Anti Pollution Front regarding the waste water discharge and the emissions generated from the industries operating in the Pilerne Industrial Estate. The Front had sought for study to assess the contamination of the ground water resources in the neighbouring villages. The said complaints and demands were placed at the 84<sup>th</sup> meeting of the Board held on 31/12/2007 and it was decided to conduct an EIA study for the Pilerne Industrial Estate, by call of tenders from the laboratories recognized by the Ministry of Environment and Forests, Govt. of India. Accordingly tenders were invited from the laboratories recognized by the MoEF and the lowest quotation of M/s Sadekar Enviro Engineers Pvt. Ltd., Panaji, was accepted and the said laboratory was issued a work order to conduct a EIA study of Pilerne Industrial Estate and the areas around it.

M/s Sadekar Enviro Engineers Pvt., Panaji has now conducted the study and submitted the report. The report was placed before the TAC of the Board, wherein some changes were suggested by the TAC members.

Shri Ramkrishna Kerkar, Member of the Board and Member of the Saipem Village Anti Pollution Front informed the Board that M/s Sadekar Enviro Engineers Pvt., Panaji is a Consultant for the unit of M/s Berger Berker Coatings, Pilerne Industrial Estate and the report submitted by M/s Sadekar will be in favour of the Industry and as such the Saipem Village Anti Pollution Front will not accept the findings of the report. Shri Ramchandra Kerkar stressed that the EIA report should be carried out through reputed institutions and laboratories of the Government.

After deliberations the members opined that M/s Sadekar Enviro Engineers has committed a breach of trust and the members have requested to investigate and if need be terminate the contract with M/s Sadekar Enviro Engineer immediately after issuing a show cause notice and hearing them. The members also decided that in case M/s Sadekar Environ Engineers have committed a breach of trust the matter should be brought to notice of

Ministry of Environment and Forests to de-panel him as a laboratory recognized by the Ministry of Env. and Forests, Govt. of India. The members decided that in case it is confirmed that M/s Sadekar Enviro Engineers has committed a breach of trust, the EIA work for Pilerne Industrial Estate should be retendered.

- The members perused and approved the draft of the Annual Report of the Board for the year 2009-2010, so as to place the same before the State Legislative Assembly.
- Re-structuring of staffing pattern of the Goa State Pollution Control Board.  
Chairman informed the members that the present staff strength of GSPCB is only 56 nos. which includes deputation staff, contract staff and regular staff, which is very less and insufficient compared to the functioning and role of SPCB is concerned, taking into account the no. of Industries/Enterprises, Mines, Hotels, Local bodies, Bio-medical facilities, etc.

The members sought to know from the Chairman the present income of the Board through fees and fixed deposits and the mode of funding the salaries of the new staff. The Chairman informed the members that presently the Board earns an interest of approximately Rs. 2 crores on the fixed deposits and also generates fund through fees. Further Chairman clarified that the salaries of present staff are about 1.2 crores which are met through the interest on fixed deposits. The Chairman then stated that the salaries of the proposed new staff could be met through the interest on fixed deposits.

The members approved creation of 52 additional posts as suggested in the restructuring pattern along with the agenda item and also approved the recruitment rules for the staff with changes in the qualifying years for promotion to maintain consistency and to re-modify the Recruitment rules in line with the State Government guidelines and earlier Recruitment Rules approved and notified. The members also authorized Chairman to submit a proposal to the Government for approval / notification in consultation with the Director, Department of Science, and Technology & Environment.

- a. The members perused the enclosed database of applications cleared in the Technical Advisory Committee meetings held from 16/08/2010 to 14/02/2011 and noted the same.
- b. The members perused the enclosed database wherein the list of files were cleared with the approval of the Chairman (Green category files) from 11/08/2010 to 15/02/2011, and noted the same.
- To discuss and decide on the adoption of Audit of the Board by circulation:- Chairman informed the members that the Govt. has appointed a single Auditor for auditing the accounts of the Board for carrying out five audits i.e from the years 2006-2007 to 2010-2011. Further, as there is a back log of the accounts to be audited and that the Board meetings are convened after a gap of around three months or more, to avoid further delay, it was proposed to circulate the audited statement of each financial year (as and when it is put up by the auditors to this office) at their respective Office / residential addresses of the respective members so as to get individual approval by circulation, and once all the five audits are completed, simultaneously place them before the next Board meeting for obtaining concurrence. The members approved the same.

#### **102th Meeting of the Board**

- The members perused the directions issued by the Board, the minutes of the Technical Advisory Committee and the inspection reports of the following three mining companies in light of the P.I.L. W.P. filed in the Hon. High Court by the Sirigao Nagrik Sangatnam.
  - a. M/s Rajaram Bandekar (Sirigao) Mines
  - b. M/s Chowgule and Co. Pvt. Ltd.
  - c. M/s Dempo Mining Corporation Pvt. Ltd.

Chairman informed the members that as regards to the following direction:

- a. 'construction of recharge trenches to control seepage of water into the mining pits', it is decided that the 3 mine units be granted further time of 6 months to comply with the said direction by either obtaining permission of

the surface rights holders to carry out the said direction in the areas specified, or alternately, the 3 mine units should approach the WRD to suggest alternate sites for implementing the said direction.

b. The 3 mining units have complied with the direction for 'carrying out of proper slope stabilization in the mining areas to minimize run off from the overburden dump material'.

c. The 3 mining units have been granted an additional time period of 4 months i.e. till October 15<sup>th</sup> 2011, to comply with the direction re: 'Implementation of Remediation technique, adopted for the Bio- remediation of silted soils' as the final successful compliance of the said direction can be assessed only on conclusion of the monsoon.

In view of the above facts, the members confirmed the orders passed by the Chairman, GSPCB granting six months time for construction of re-charge trenches and four months time for implementation of bio-remediation of silted soils.

The Sr. Hydrogeologist of the Water Resource Dept. stated that there are some other measures suggested by him in the Interim report to comply with other recommendations made by NEERI, which are not being monitored. The Member Secretary, GSPCB informed the Sr. Hydrogeologist that the Board is pursuing the compliance of the recommendations made by the Sr. Hydrogeologist in his letter dated 29/09/2010. The Member Secretary further clarified that the Board would peruse the Interim report and issue necessary directions to the mining companies for compliance of the recommendations made in the Interim report by the Sr. Hydrogeologist.

After deliberations, the members also suggested that Sr. Hydrogeologist, Water Resource Department be requested to inspect and monitor the work of construction of recharge trenches and other measures suggested in the letter dated 29/09/2010 and the Interim report of the Sr. Hydrogeologist. The members further suggested that the Board should request the Agriculture Dept. to monitor the progress made in respect of compliance to the directions for implementation of remediation technique adopted for the bio- remediation of silted soils.

The members thereafter authorised the Chairman to decide on the applications of the three mining companies for grant of Consents under the Water Act and the Air Act based on their compliance.

- The Chairman informed the members that Board does not have sufficient space to carry out its activities. He also informed the members that the Government is in the process of considering the request made by the Board for creation of additional posts for recruitment. The present space available would not be sufficient to accommodate the present staff and the additional staff proposed to be recruited in the near future. The Board had requested the Collector of North Goa District and the North Goa Planning and Development Authority to identify a suitable plot in Panaji or surrounding areas, but both the authorities have replied that no vacant Government land is available. After deliberations the members decided that since no land is found to be available for construction of independent building it is proposed to forward a proposal to the Goa State Infrastructure Development Corporation to procure about 2000 sq. mtrs. carpet area in the vicinity of Patto Plaza for housing the Goa State Pollution Control Board office and laboratory or the Board should issue an expression of interest for the same. The members further decided to sell the existing premises upon eventual shifting to the new premises.

The members were also informed that the funds towards the purchase of office cum laboratory building will be met through the funds of the Board and funds will also be sought from the Central Pollution Control Board, Ministry of Environment and Forests and the Government of Goa.

- The members perused the minutes of the meetings held by the Board officials with officials of Mormugao Port Trust. The members noted that the ambient air monitoring report indicate that the levels of PM<sub>10</sub> and PM<sub>2.5</sub> exceed the permissible limits on most of the occasions and MPT has done very little in controlling the dust pollution in the Vasco city due to coal and coke handling activities at the Port, despite various directions being issued by the Board. The members observed that MPT is not working on concrete proposals and only giving assurances in respect of shifting of their berths handling coal and coke. MPT is yet to carry out a comprehensive EIA proposal as requested by the Board, which till date has not been submitted to the Board.

The Chairman informed the members that during the hearing conducted, the officials of MPT have contended that high levels of PM10 and PM2.5 cannot be solely attributed only to handling of coke and coal at berth no. 10 and 11 but could also be due to the local construction activities, traffic congestion and traffic movement and railway operations. He further informed that the officials of MPT expressed that the monitoring stations at Laxmi Temple and Sai Narayan Apts. are in close proximity of berth no. 11. The Chairman further explained that the MPT officials have committed that berth no. 10 will not be utilised for handling coal and coke in future as the said berth is the only multi cargo berth available to MPT. The Chairman then stated that MPT has still not complied with the directions of the Board for installation of a continuous ambient air quality monitoring station at MPT Institute. However, the officials of MPT during the hearing stated that they would confirm regarding installation of CAAQMS at MPT Institute by October, 2011

After deliberations the members were of the opinion that the Board should not process the renewal of Consents under the Water Act and the Air Act, as requested by MPT, until the following are complied by MPT.

- a. MPT installs a CAAQMS at MPT Institute.
- b. The berth no. 11 is de-commissioned for construction of a closed shed and berth no. 7 is commissioned for handling coal and coke.

The members also decided that the AAQM at the six locations should be re-started from October, 2011 and upon receipt of the results of the monitoring, appropriate action should be initiated by the Board.

- The members were informed that the applications of the mining units are being processed on case to case basis in light of the decision taken by the Board in its 100th meeting of the Board held on 04/03/2011. Further it was explained by the Chairman and Member Secretary that the applications of those mining units who have failed to produce the necessary permissions / approvals / clarifications have to be decided, as the time period granted for submission of the same (60 days) has expired.

The members deliberated and decided as follows:

- a. Applications for Renewal of Consent to operate as submitted by the mining units under the Water Act and the Air Act can be considered and granted by the Board, subject to compliance to the pollution control norms. A condition should be incorporated in the Consent as follows:-

*'The mining company should comply with all the conditions laid down in the Environment Clearance issued by the Ministry of Environment and Forests, Government of India. The mining company should obtain approval from the Chief Wild Life Warden and clearance under the Forest Conservation Act, wherever required by the Environmental Clearance of the respective mining units, and submit copies of the same to the Board for records.*

- b. It is further resolved to issue notice of suspension of mining operations to all mining units who have failed to produce the NOC/ approval from Chief Wild Life Warden and / or permission under Forest Conservation Act, 1980, as the case may be, till such time, as the required documents are produced before the Board.

- The members were informed that a Personal hearing was conducted on 07/07/2011, in respect of conflict of interest in preparation of Environmental Impact Assessment of the Pileme Industrial Estate for the Goa State Pollution Control Board by M/s Sadekar Enviro Engineers. The members were informed that Mr. Ramkrishna Kerkar has sought time for submission of documents and has been granted 30 days time to furnish any documents in his possession supporting his claims in respect of conflict of interest by M/s Sadekar Enviro Engineers while preparing the EIA report. The members were informed that further appropriate action in the matter will be taken on receipt of the documents from Mr. Ramkrishna Kerkar.

It was therefore decided that the application of M/s Berger Becker Coatings Pvt. Ltd. for installation of solvent distillation unit be considered only after receipt of HPCC approval and on acceptance of EIA report of Pileme Industrial Estate.

- Adoption of the Audit Report for the financial year 2006-2007.

The members perused the audit report for the financial year 2006-2007 and have stated that the paras as referred by the Auditors in their report should henceforth be submitted to the Board along with detailed clarifications, so

that the members are aware of the factual position and not as reflected by the Auditors in their report, while placing the report before the Board.

The members perused the Audit Report for the financial year 2006-2007 submitted by Govt. appointed auditor M/s Naik Gaunekar & Co., Chartered Accountants and thereafter passed the following resolution unanimously:

“RESOLVED THAT Receipts and Payments, Income and Expenditure Account and the Balance sheet together with notes thereon for the financial year ended on 31<sup>st</sup> March, 2007 be and are hereby approved.

RESOLVED FURTHER THAT the Chairman, the Member Secretary, the Accounts cum Administrative Officer and Accountant are hereby authorised to sign the Audited Annual Accounts of the Goa State Pollution Control Board jointly.”

- **Revision of Statutory Auditors Fees**

The members perused the request made by M/s Naik Gaunekar & Company, Chartered Accountants, who have been appointed Statutory Auditors for the Board to audit the accounts of the Board for the financial years 2006-2007 to 2009-2010 for enhancement in the audit fees.

After analyzing the quantum of work of audit, expert opinion of the Chartered Accountant, staff deployed by the Chartered Accountant, man hours required to carry out the audit etc. the members agreed for a consolidated audit fee of Rs. 50,000/- + service tax (as applicable) to be paid per year audit report with effect from the financial year 2006-2007.

- **Applicability of Consent under the Air (Prevention and Control of Pollution) Act, 1981 for hotel / lodging units which are not having any Restaurant, diesel generator sets and boiler.**

Chairman informed the members that the Board has received representation from various hotel / lodging units stating that they are not generating any air emissions including noise as they do not have any restaurant, D.G set and boiler. Further the said hotels / lodging units have requested that in these circumstances, their hotels / lodging should be exempted from obtaining Consent under the Air Act. Most of the hotel units have obtained Consent under the Water Act. The units have further stated in their representation that the Department of Tourism is not renewing their Tourism licence, until the hotels produce valid Consents under the Water Act and the Air Act from the Board.

The members deliberated and decided that those hotels who do not have (a) Restaurant and / or, (b) Diesel generator set and / or (c) Boiler (d) Discotheque and or party hall / auditorium etc. and / or do not generate noise, should be exempted from obtaining Consent under the Air Act from the Board, subject to the condition that an undertaking / Affidavit is submitted in this regard.

The members also decided to forward this Resolution to the Dept of Tourism for information & necessary action.

- (i) Application of M/s Meta Copper & Alloys Ltd. – Zuarinagar, for Consent to Operate under the Water Act and Air Act (for expansion of the unit).
- (ii) Application for Consent to operate under the Water Act and the Air Act (expansion) of M/s Essel Propack Limited, Plot no. 113 and 114, Kundaim Industrial Estate, Kundaim Goa.
- (iii) Application for Consent to Operate under the Water Act and the Air Act of M/s Berger Paints India Ltd., Plot no. 316 & 317, Kundaim Industrial Estate, Kundaim Goa.
- (iv) Application for Consent to Establish under the Air Act and the Water Act of M/s Marck Biosciences Ltd., Survey no. 85, plot nos. 10 & 11, Pilerne Industrial Estate .
- (v) Application for Consent to Establish and Consent to Operate under the Air Act and the Water Act of M/s Swansons Plastics (India) Private Limited, Plot no. 2, Honda Industrial Estate, Honda Goa.
- (vi) Application for Consent to establish under the Air Act and the Water Act (expansion) of M/s Siemens Ltd., Plot no. L-6, Verna Industrial Estate, Salcete Goa.
- (vii) Application for Consent to Operate under Air Act and Water Act (expansion) of M/s IFB Industries Ltd. Plot no. L-1, Verna Industrial Estate, Salcete Goa.
- (viii) Application for Consent to Operate under Air act and Water Act (expansion ) of M/s Teracom Limited, Plot no. 250-A & 250-B, Kundaim Industrial Estate, Kundaim Goa.

The Chairman informed the members that the HPCC has cleared the proposal of 9 units in principle in its meetings, but with a condition that the units shall make provisions for rain water harvesting and re-charging of wells, within their unit, so as to recharge the ground water aquifer, which has been depleted. The members observed that all the Industrial Estates are declared as scheduled areas under the Goa Ground Water Regulation Act, 2002 and it is necessary to take permission from the Ground water Officers appointed under the Act for construction of bore wells or utilization of the ground water in the Industrial Estates or the surrounding villages.

The members suggested that the units should submit their plans for rain water harvesting and re-charge of wells along with designs to the Water Resource Department for scrutiny and approval. The members approved the proposals, subject to the implementation of rain water harvesting and ground water recharge measures.

- To discuss and decide regarding payment of Employees Provident Fund Contribution to the staff of the Goa State Pollution Control Board in respect of Sixth Pay arrears paid to its employees.

Chairman informed the members that since the date of enrolment with the EPFO, the Board is contributing 12% of its monthly share and employees are contributing a matching share of 12% on Basic Pay + Dearness Allowance without any ceiling on the Basic + D.A. However Clause 26-A of the EPF scheme provides that where the monthly pay of the member exceeds Rs. 6500/-, the contribution payable by them and the employee shall be limited to the amounts payable on monthly pay of Rs. 6500/-. The clause also provides that on the joint request in writing of any employee and his / her employer can contribute more than Rs. 6500/- per month and further provides that the employer can give an undertaking in writing that he / she shall pay the administrative charges payable and shall comply with all the statutory provisions in respect of the employee.

Chairman further informed the members that the Board will shortly initiate a process of appointment of regular staff after the approval of Government is received. Hence, the present practice of contributing 12% of its share on Basic + D.A, without restricting on upper ceiling will put excessive financial burden on the Board, since it is fully relying on the various fees collected by it for payment of salary and other remuneration to its employees. Considering the fact that the maximum quantum of Basic + D.A in respect of certain staff is high as Rs. 25,000, the members decided as follows:

- (a) The Board shall pay its contribution of 12% of the Sixth pay arrears component along with the equal contribution recovered from the employees in respect of the period during which Sixth pay arrears has been paid. The corresponding Board's share works out to be around Rs. 2, 40,128/-.
  - (b) Payment of contribution of 12% above Rs. 6500/- (i.e Basic + D.A) shall be restricted only upto maximum Rs. 15,000/- with the concurrence of the EPFO.
  - (c) In case EPFO does not agree for (b) above, to follow the existing practice being followed i.e contribution of 12% of Basic + D.A irrespective of the quantum of Basic + D.A in respect of the present regular staff of the Board.
- (i) The members perused the enclosed database of applications cleared in the Technical Advisory Committee meetings held from 21/02/2011 to 27/06/2011 and noted the same.
  - (ii) The members perused the files cleared with approval of Chairman (Green category) and noted the same.
  - (iii) The members perused the files cleared through XGN software by the TAC and the Chairman and noted the same.
  - Follow up action on the decision taken at the 98<sup>th</sup> meeting of the Goa State Pollution Control Board.  
The members perused and noted the approval accorded by the State Government for condemnation of the Tempo Traveller vehicle bearing no. GA-01-T-3832 and approval for purchase of new vehicle, preferably Tata Sumo or Mahindra Bolero in lieu of the above vehicle from an authorised dealer under the DGS& D rate contract. The Board thereafter authorised the Chairman of the Board to select the model / make of the vehicle to be purchased.

- The Director of Industries, Trade and Commerce informed the members that M/s GAIL India Ltd. is laying a gas pipe line in the State and that most of the major industries are required to avail the benefit of the same, especially the large scale units and the sponge iron units, as gas is a cleaner fuel compared to coal and furnace oil, which is presently being used by the industries. He stated that non co-operation of the large scale units is creating a delay in laying the pipe line. He requested the Board to instruct the industries to avail the said facilities. Shri Mangurish Raikar, President of Goa Chamber of Commerce and Industries, stated that he would co-ordinate with the industries concerned through the Goa Chamber of Commerce and Industries and ensure that the industries opt for gas as and when it is available in the State. The Director, Industries, Trade and Commerce clarified that the agreement with GAIL has to be signed in advance for laying subsidiary gas pipe lines for the intended industrial users

The members deliberated and expressed that gas being a cleaner fuel compared to furnace oil and coal, the Board should issue necessary directives to the industries who are major consumers of coal and furnace oil to shift to gas once the gas is available in the State and those industries who are planning to replace / add equipments using furnace oil / coal as fuel henceforth should be asked to make provisions for gas as an alternate fuel in the equipment.

### **3.3. VARIOUS FUNCTIONS PERFORMED BY THE BOARD DURING THE YEAR UNDER REPORT**

#### **3.3.1 INSPECTIONS AND MONITORING PROGRAMMES**

##### **3.3.1.1 REGULAR INSPECTIONS**

The Goa State Pollution Control Board conducts inspections of the Industrial Units on regular basis, as required under the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981. The inspections are carried out as follows:

- Before the plant is commissioned / established, Consent to Establish (NOC) is issued for construction/establishment of the plant and the machinery. After commissioning, the unit is inspected and Consent to Operate under Water Act or Air Act is granted, accordingly.
- Once the plant is in operation, the consents to operate under Water/Air Act have to be renewed periodically. At this stage the unit is inspected and samples are collected and analyzed in the Boards' laboratory to check the compliance of the consent conditions. Consent renewal orders are issued to the complying units. During the year under report, a total of 744 regular inspections were carried out. The details of the same are given in Annexure II.

##### **3.3.1.2 SURPRISE INSPECTIONS**

Besides the above regular inspections, surprise inspections are also being conducted to check the compliance by the units. To achieve this, industrial monitoring programmes are held at regular intervals, wherein the units are inspected at random with respect to the consent conditions. Samples of waste water, ambient air and stack emissions are collected and analyzed in the Board laboratory.

##### **3.3.1.3 OTHER INSPECTIONS**

Inspections in response to public complaints regarding Air / Water pollution, Hazardous Waste, Municipal Solid Waste, Biomedical Waste and Noise Pollution are also attended to by the Boards' officials as and when such complaints are received by the Board. The complaints are monitored by conducting inspections and collection and analysis of samples where ever required. Consequent to the inspections, legal notices are issued to the non-complying cases, where upon, the industrial units have to take up necessary remedial measures to close the non-compliances. Subsequently, these cases are re-inspected to monitor the non-compliances.

#### **3.3.2 SAMPLING AND ANALYSIS OF WATER AND WASTE WATER**

The Board has established its own laboratories on the 1<sup>st</sup> and 4<sup>th</sup> floor of Dempo Tower with the funds from MoEF and CPCB, New Delhi. The laboratories are well equipped with modern instruments to carry out

water, air analyses for physical, chemical and microbiological parameters. During the period from April 2011 to March 2012 the Board collected 597 samples from various sources such as ETP, STP, discharge from mines (settling pond, mining pit, etc.), river water, well water, canal water, etc. and analyzed the same for the following parameters: pH, Biochemical Oxygen Demand, Chemical Oxygen Demand, Suspended solids and Oil and Grease, trace and heavy metals, etc.

### **3.3.3 SPONSORED PROJECTS**

Apart from its regular activities, the Board has been implementing the following sponsored projects.

#### **3.3.3.1 National Water Quality Monitoring Programme (NWMP)**

The GSPCB monitors 29 water bodies throughout Goa under the NWMP project of the Central Pollution Control Board. These water bodies cover rivers, wells, canals, lake, reservoir and creek. The rivers include the two major rivers i.e., River Mandovi and River Zuari which are estuarine water bodies. In addition, water intake points for water treatment plants for public water supply, i.e., sweet water points in various rivers are also covered. Ground water sources (well water) located within the industrial estates are monitored. These locations were selected to check the ground water quality in and around the industrial estates.

The 29 locations covered under this programme are distributed throughout Goa such that 15 stations are located in the North District and 14 are located in the South District

The following monitoring locations are in the North District:

1. River Mandovi at Panaji
2. River Mandovi at Tonca-Marcela
3. River Khandepar at Opa, Ponda
4. River Madei at Dabose, Valpoi
5. River Valvanti at Sanquelim
6. River Assanora at Assanora
7. River Kalna at Chandel, Pernem
8. Cumbarjua Canal, Corlim (Discharge point of Syngenta Ltd.)
9. River Mapusa on culvert on Mapusa-Panaji Highway
10. River Chapora near Alorna Fort, Pernem
11. River Bicholim, Barazan Nagar, Bicholim
12. Kundaim Industrial Estate (well of M/s Cadilla Health Care Ltd.)
13. Mayem Lake, Bicholim
14. Corlim Industrial Estate (well)
15. Pilerne Industrial Estate (well of M/s Unichem)

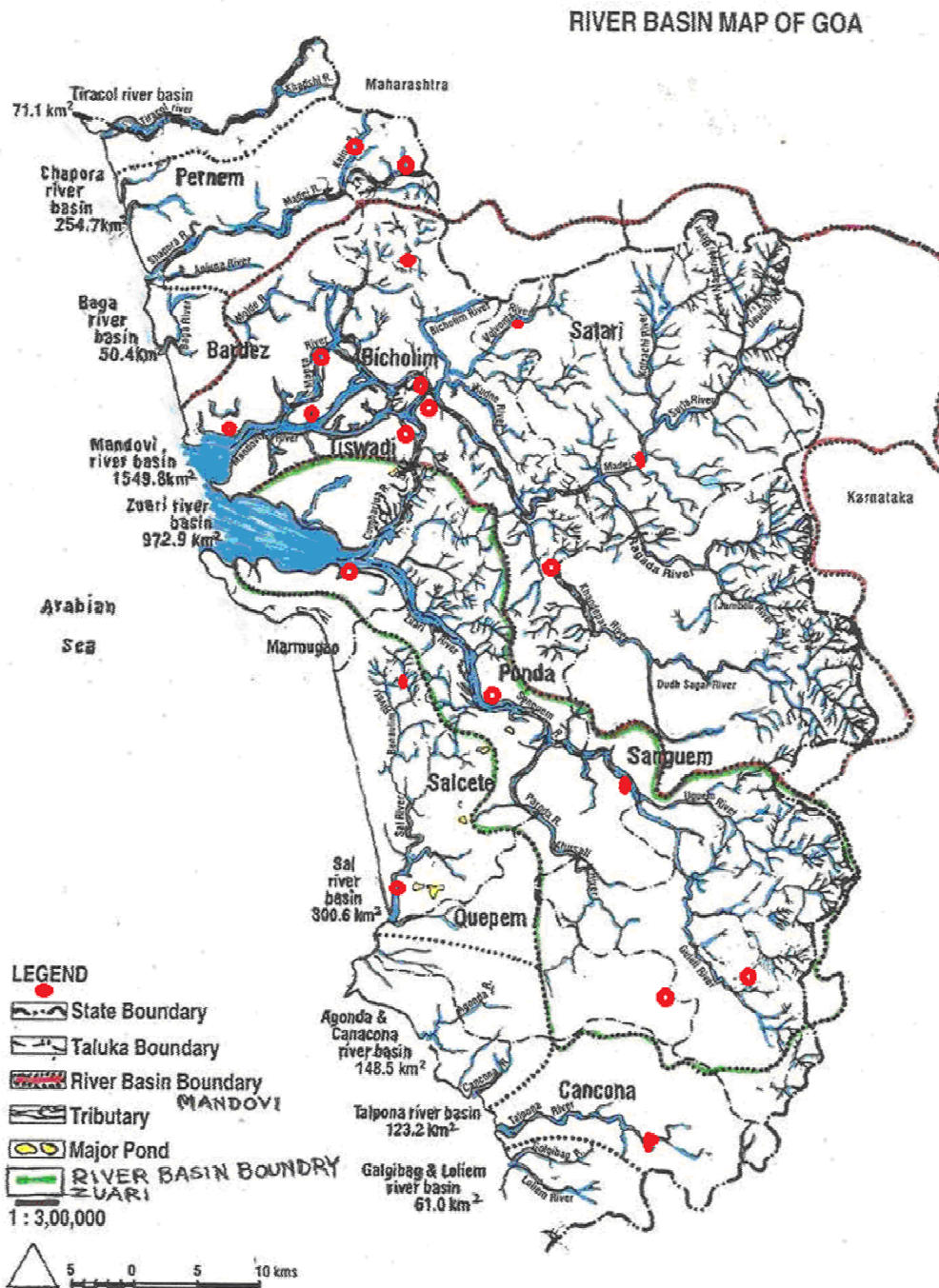
The following monitoring locations are in the South District:

1. River Zuari at Cortalim
2. River Zuari at Panchwadi
3. River Talpona at Canacona
4. River Khandepar at Codli near bridge, u/s Opa water works, Sanguem
5. River Sal, Pazorkhoni, Cuncolim (nr culvert, Margao-Canacona National Highway)
6. River Kushawati nr bundh at Kevona, Rivona, Sanguem
7. River Sal nr Hotel Leela, Mobor, Cavelossim
8. Salaulim Reservoir at Salaulim, Sanguem
9. Creek at Dando Mollo Velsao, Mormugao
10. Agricultural Canal u/s of Cuncolim Industrial Estate (1Km from M/s Nicomet Industries Ltd.)
11. Agricultural Canal d/s of Cuncolim Industrial Estate (near railway bridge)
12. Verna Industrial Estate (well of M/s Cipla Ltd.)
13. Sancoale Industrial Estate (well)

#### 14. M/s Zuari Industries Ltd., Zuari Nagar (well)

The total 29 locations are divided into three groups i.e., (i) 12 locations are being monitored monthly, (ii) 11 locations are monitored quarterly and (iii) 6 locations are monitored half yearly.

Two Hundred and Thirty Six samples were collected from all these water bodies and analyzed during the year (Hundred and twenty Nine samples for 115 parameters during the regular monitoring and Hundred and seven samples for 96 parameters during annual monitoring). The analytical results indicate that except for a few parameters the monitoring of the parameters indicates that the quality of the river is fairly good. The water quality data for the rivers observed during the year are given in Annexure II. Figure 1 below is a map of Goa showing the water quality monitoring locations under National Water Monitoring Programme; MINARS. The monitoring locations are indicated in red.



**Figure 1: Map of Goa showing the Water Quality Monitoring locations under the National Water Monitoring Programme; MINARS**

Apart from the monitoring of the above 29 locations, the Board also monitored the water quality of River Sal at the following six locations on quarterly basis:

- (i) River Sal at Kharebhand
- (ii) River Sal at Jackni Bhand
- (iii) River Sal at Pul Waddo
- (iv) River Sal at Orlim
- (v) River Sal at Rumdar
- (vi) River Sal at Mungul

A total of 19 samples from the above six locations were analyzed during the year for 9 parameters. The water quality data for these rivers observed during the year is given in Annexure IV.

### 3.3.3.2 NAMP

#### (National Air Monitoring Programme)

This is an ongoing activity funded by the Central Pollution Control Board, New Delhi under the National Air Monitoring Programme (NAMP). Under this programme the Board continued to monitor the ambient air quality at Vasco, MPT at Mormugao, Panaji, Codli, Honda Junction, Usgao-Pale, Amona, Assanora, Bicholim and Curchorem. In addition the following new locations were proposed to CPCB by GSPCB – Mapusa, Margao, Ponda, Tilamol- Quepem, Sanguem, Tuem Industrial Estate, Cuncolim Industrial Estate and Kundaim Industrial Estate. The above proposal was accepted by CPCB. The Ambient Air Quality monitoring at the new locations was started in November 2011 for monitoring of NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>.

The Ambient Air samples were collected at each station twice a week, as per the standard norms for ambient air quality monitoring, and normal parameters like RSPM, SPM, SO<sub>2</sub> and NO<sub>x</sub> were analyzed. The ambient air quality data for these stations observed during the year are given in Annexure V. The analytical results show that SO<sub>2</sub> and NO<sub>x</sub> are within the limits prescribed for ambient air quality for all the stations, however, there is an increase in the level of respirable particulate matter (PM<sub>10</sub>) at Panaji, Vasco and MPT and PM<sub>10</sub> & PM<sub>2.5</sub> at all the other stations on some days. Nevertheless, the monthly averages indicate that the concentration of PM<sub>10</sub> and PM<sub>2.5</sub> are within limits.

Views of the 5 new monitoring locations established under this project are shown in the following pictures.



**Plate – 3 a: View of the PM<sub>10</sub> and PM<sub>2.5</sub> Samplers placed at the NAMP Monitoring Station at Tilamol Quepem, Goa.**



**Plate – 3 b: View of the PM10 and PM2.5 Samplers placed at the NAMP Monitoring Station at Sanguem, Goa.**



**Plate – 3 c: View of the PM10 and PM2.5 Samplers placed at the NAMP Monitoring Station at Mapusa, Goa**



**Plate – 3 d: View of the PM10 and PM2.5 Samplers placed at the NAMP Monitoring Station at Margao, Goa**



**Plate – 3 e: View of the PM10 and PM2.5 Samplers placed at the NAMP Monitoring Station at Ponda, Goa**

Figure 2 below is a map of Goa showing the existing and the new ambient air quality monitoring locations under National Air Monitoring Programme; NAAQM. The existing monitoring locations are indicated in green and the new locations are indicated in red.

[illegible]

The Hazardous Waste (Management & Handling) Rules were notified by the Ministry of Environment & Forests in the year 1989 under the provisions of the Environment Protection Act, 1986. Later the Rules were amended in the years 2000 and 2003 and subsequently, they were modified as the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules in the year 2008.

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waste in Goa and authorizations have been granted to all 541 industries (since the inception of the Rules). During the year under report, 160 units have been granted authorization (new / renewals) under the Hazardous Waste (Management & Handling) Rules, 2008. The details such as location of the unit, category of hazardous waste, quantity generated and mode of disposal are given in Annexure VI.

### **3.3.5 IMPLEMENTATION OF BIO-MEDICAL WASTE (MANAGEMENT & HANDLING) RULES, 1998**

For the purpose of implementation of the Bio-Medical Waste (Management and Handling) Rules 1998, Hospitals have been classified as per their bedded capacity.

1. Category 1: With 500 beds and above	1 No.
2. Category 2: With 200 beds and above, but less than 500	1 Nos.
3. Category 3: With 50 beds and above, but less than 200	13 Nos.
4. Category 4: With beds less than 50 including Clinics & Patho Labs.	216 Nos.
5. All other institutions generating bio-medical waste (not included above)	3 Nos.

Till 31/03/2011, 234 Health Care Units were granted authorizations under the Bio-Medical Waste (Management & Handling) Rules, 1998. The status of the Bio Medical waste generated by these units during the year is given as in Annexure VI.

### **3.3.6 NOISE POLLUTION (REGULATION & CONTROL) RULES, 2000**

The Board conducts monitoring of noise levels whenever any specific complaints of noise pollution are received and action is taken accordingly. In pursuance of clause (c) of rule 2 of the Noise Pollution Regulation & Control Rules, 2000, the Government of Goa vide Notification No. 2/51/2000 –II D (G) Vol I has designated (1) District Magistrates (2) Director General of Police (3) Deputy Collector and Sub-Divisional Magistrates (4) Superintendent of Police and Sub-Divisional Police Officers as ‘authority’ for the maintenance of ambient air quality standards in respect of noise under the said rules, with effect from 21.09.2000. In view of this, the Board forwards to the Competent Authority all the reports of Noise Level Monitoring conducted by the Board for necessary action.

### **3.3.7 IMPLEMENTATION OF MUNICIPAL SOLID WASTES (MANAGEMENT & HANDLING) RULES, 2000**

The Board has issued authorization to all the 14 local bodies under the Municipal Solid waste (Management & Handling) Rules. Five Municipal bodies have partly adopted effective composting methods for processing of their wastes.

The Board has amended the (Consent to Operate) CTO orders issued to a number of starred Hotels established, under the Water Act, and has DIRECTED these Hotels to install Organic Waste Converter (OWC) at their establishments in order to treat the Bio-Degradable Waste generated by them. Presently, some of the Hotels have installed the same.

The Board has issued directions, under Section 5 of the Environment Protection Act, 1986 to the Village Panchayat of Taleigao, directing the Village Panchayat to comply with the provisions of the Rural Garbage Scheme, 2000. Compliance of the same is being monitored.

### **3.3.8 LEGAL MATTERS OF THE BOARD**

The status of the major cases filed by the Board and the cases disposed off and the cases pending, in the High Court of Bombay at Goa and in the Supreme Court of India at Delhi is presented in Annexure VII.

The statement showing the details of number of requests received, disposed off, rejected, fees collected, appeals preferred to the first Appellate Authority, outcome of appeals etc. under RTI Act, 2005 for the financial year April 2011 to March 2012 is given in Annexure XI.

### **3.3.9. FINANCE AND ACCOUNTS OF THE BOARD**

#### **3.3.9.1 STATUS OF AUDITING OF ACCOUNTS OF THE BOARD**

As per sub-sections 2 & 3 of section 40 of the Water (Prevention and Control of Pollution) Act, 1974, the accounts of the Board are to be audited by an Auditor duly qualified to act as an Auditor of Companies under section 226 of the Companies Act, 1956. The said Auditor is to be appointed by the State Government on the advice of Comptroller & Auditor General of India (CAG).

Auditing of the Board accounts for the year 2003-2004, 2004-2005, and 2005-2006 has been completed during the financial year 2010-2011. Audit for the Years 2006 – 2007, 2007 – 2008, 2008 – 2009 and 2009 – 2012 have been completed during the financial year 2011 – 2012. Audit for the year 2010 – 2011 is in progress and will be completed by end of November 2012.

#### **3.3.9.2 INCOME AND EXPENDITURE**

The income and expenditure account of the Board for the year ended 31<sup>st</sup> March, 2012 is given in Annexure X.

#### **3.3.10 GRANT – IN – AID RECEIVED BY THE BOARD.**

The Ministry of Environment and forests (MOEF) vide letter dated 03/12/2008, had sanctioned an amount of Rs. 70 Lakhs to the Goa State Pollution Control Board as a Grant -in -Aid for the purchase of laboratory instruments, like TCLP, GCMS and HPLC. The 2<sup>nd</sup> installment of Rs. 26,25,000/- of the above sanction was released during the financial year under reports. The Board procured two instruments namely, TCLP (Toxicity Characteristic Leachate Procedure Kit) and GCMS (Gas Chromatography Mass Spectrograph) costing Rs. 14,40,785/- and Rs. 44,57,025/- respectively, utilizing the above funds.

#### **3.3.11 IMPLEMENTATION OF THE SUPREME COURT GUIDELINES ON PREVENTION OF SEXUAL HARASSMENT OF WOMEN AT WORKPLACE**

Information in this regard, as per the Supreme Court judgment dated 13/08/1997, is that no complaints about sexual harassment at work place were received by the Board during the financial year covered by this report.

## CHAPTER 4

### HUMAN RESOURCES DEVELOPMENT

#### 4.1.1 TRAINING / WORKSHOPS/ SEMINARS, ETC., ATTENDED BY BOARD OFFICIALS

During the year under report, the officials of the Board attended training programmes / workshops / seminars etc., organized by reputed Institutions. The details of the same are as follows:

Sr. no.	Name of the official	Designation	Name of the training programme	From - To	Organized by
1.	Mrs. Francisca Pereira	Scientific Assistant	Measurement Uncertainty in Testing and Calibration	2 <sup>nd</sup> to 3 <sup>rd</sup> June, 2011	ETDC, Bangalore
2.	Mrs. Jocelyn Coelho	Junior Laboratory Assistant			
3.	Mrs. Joshna Mahale	Scientific Assistant	Quality Management System & Internal Audit under ISO IEC 17025 : 2005	14 <sup>th</sup> to 17 <sup>th</sup> November, 2011	ETDC, Bangalore
4.	Mrs. Jocelyn Coelho	Junior Laboratory Assistant			
5.	Mrs. Jenica Sequeira	Scientist 'C'	Workshop on Revised guidelines for recognition of Environmental Laboratories under the Environment (P) Act., 1986	1 <sup>st</sup> and 2 <sup>nd</sup> December, 2011	CPCB Zonal Office, Bangalore
6.	Ms. Connie Fernandes	Scientist 'C'			
7.	Miss Edma Fernandes	Scientific Assistant	Persistent Organic Pollutants – Overview, monitoring and Analysis	19 <sup>th</sup> to 20 <sup>th</sup> January, 2012	India Habitat Centre, New Delhi
8.	Mrs. Avina Pereira	Scientific Assistant	Quality Assurance and Quality Control for sampling and analysis of water	19 <sup>th</sup> to 20 <sup>th</sup> January, 2012	CPCB Zonal Office, Bangalore
9.	Mrs. Joshna Mahale	Scientific Assistant			
10.	Mr. Pravin Faldessai	Jr. Env. Engineer	Compliance Monitoring and Enforcement	1 <sup>st</sup> to 29 <sup>th</sup> February, 2012	CESE, New Delhi
11.	Mr. Manoj Kudalkar	Jr. Env. Engineer			
12.	Ms. Connie Feranndes	Scientist 'C'	Capacity Building for emission measurement in India	8 <sup>th</sup> and 9 <sup>th</sup> February, 2012	CPCB, Delhi
13.	Mrs. Francisca Pereira	Scientist 'B'			
14.	Mr. Krishnanath Pednekar	Scientific Assistant	Appropriate Instruments & Techniques for Ambient Air Monitoring	11 <sup>th</sup> to 18 <sup>th</sup> March, 2012	New Delhi
15.	Mr. Nilesh Surlekar	Senior Laboratory Assistant			
16.	Mrs. Jenica Sequeira	Scientist 'C'	Environmental Management of Mines	12 <sup>th</sup> to 16 <sup>th</sup> March, 2012	CESE, New Delhi
17.	Mrs. Francisca Pereira	Scientist 'B'			
18.	Mr. Keshav Fadke	Junior Env. Engg.			
19.	Mrs. Nandan Prabhudessai	Junior Env. Engg.			

#### 4.1.2 REFRESHER TRAINING PROGRAMME TO THE STAFF

The Environment Protection Training & Research Institute (EPTRI) organized a Refresher Training Programme for the Scientific & Technical Staff of the Goa State Pollution Control Board. The programme was sponsored by GSPCB and it was held from 12<sup>th</sup> to 16<sup>th</sup> December 2011. The following staff of GSPCB attended the training programme.

Sr. no.	Name of the official	Designation
1.	Mrs. Jenica Sequeira	Scientist 'C'
2.	Mrs. Francisca Pereira	Scientist 'B'
3.	Mr. Nilesh Parsekar	Scientific Assistant
4.	Mrs. Anny Dias	Scientific assistant
5.	Mr. Ganpat Naik	Scientific Assistant
6.	Mr. Chaitanya Salgaonkar	Scientific assistant
7.	Mrs. Avina Pereira	Scientific Assistant
8.	Ms. Edma Fernandes	Scientific Assistant
9.	Mrs. Joshna Mahale	Scientific Assistant
10.	Mr. Santosh Haldakar	Senior Lab. Assistant
11.	Mr. Sajid Inamdar	Senior Laboratory Assistant
12.	Mr. Waman Chari	Senior Laboratory Assistant
13.	Mrs. Jocelyn Coelho	Junior Lab. Asst.
14.	Mr. Keshav Fadke	Junior Env. Engg
15.	Mrs. Nandan Prabhudessai	Junior Env. Engg
16.	Mr. Sanjay Kankonkar	Scientific Assistant
17.	Mr. Sunny Pirankar	Junior Lab. Assistant
18.	Mr. Kamlesh Kavlekar	Junior Laboratory Assistant
19.	Mr. Samir Borkar	Junior Laboratory Assistant



Plate 4 – a : View of the Banner indicating the training programme



Plate 4 – b : View of GSPCB staff attending a lecture session



**Plate 4 – c: View of Hazardous Waste Treatment site of M/s. Ramky at Taloja**

## 4.2 RECRUITMENT

During the year under report, the Board carried out a recruitment drive and a total of 96 nos. of new employees were appointed in the Scientific Section (47 persons), Technical Section (19 persons), Administrative Section (27 persons) and Accounts Section (03 persons).

## 4.3 PROMOTIONS

During the year under report, the following officials of the Board were promoted:

Sr. No	Name of the official	Designation	Promoted to the post of
1.	Mrs. Jenica Sequeira	Scientist 'B'	Scientist 'C'
2.	Mrs. Francisca Pereira	Scientific Asistant	Scientist 'B'
3.	Mrs. Natalia Dias	Assistant Law Officer	Senior Law Officer
4.	Mrs. Tulita da Costa e Fernandes	Senior Stenographer	Office Superintendent
5.	Mr. Ganpat Naik	Senior Laboratory Assistant	Scientific Assistant
6.	Mrs. Elmana M. D'Silva	Upper Division Clerk	Head Clerk
7.	Mrs. Swapna Naik	Junior Stenographer	Senior Stenographer
8.	Mr. Sajid Inamdar	Junior Laboratory Assistant	Senior Laboratory Assistant
9.	Mr. Santosh Haldankar	Junior Laboratory Assistant	Senior Laboratory Assistant
10.	Mr. Waman Chari	Junior Laboratory Assistant	Senior Laboratory Assistant
11.	Mrs. Daya Usgaonkar e Godinho	Lower Division Clerk	Upper Division Clerk
12.	Mr. Cedric de Souza	Lower Division Clerk	Upper Division Clerk
13.	Mr. Umesh Kankonkar	Peon	Record Keeper

## 4.4 ABSORPTION IN THE BOARD

Sr. No.	Name of the official	Designation	Parent Department	Absorbed on
1.	Mr. Sanjeev Joglekar	Assistant Environmental Engineer	Public Works Dept..	Absorbed in the Board office on 23/12/2011 as Assistant Environmental Engineer
2.	Mrs. Nandan	Technical	Public Works Dept.	Absorbed in the Board office

	Prabhudessai	Assistant		on 05/10/2011 as Junior Environmental Engineer.
3.	Mr. Keshav Fadke	Technical Assistant	Public Works Dept.	Absorbed in the Board office on 05/10/2011 as Junior Environmental Engineer.

#### 4.5 REPATRIATION

During the year under report, the following Officials were repatriated back to their parent department.

Sr. No.	Name of the official	Designation	Parent department	Repatriated on
1.	Mr. Sadanand Arolkar	Environmental Engineer	Public Works Dept.	16/4/2011
2.	Mr. Ecwin Ribeiro	Junior Environmental Engineer	Accounts Dept.	13/02/2012

#### 4.6 DEPUTATIONS IN THE BOARD

Shri. Manohar Borkar, AAO from Accounts Department was appointed as Assistant Accounts Officer in the Board since 30/07/2009.

## **CHAPTER 5**

### **OBJECTIVES & ACHIEVEMENTS**

#### **5.1 OBJECTIVES SET BY THE BOARD**

The Board has planned to implement certain programmes for infrastructure development in specific areas. Following are some of the programmes wherein studies have been initiated and are at various stages of completion.

**a. Inventorization of Hazardous Waste in the State of Goa**

The work of 'Inventory on Hazardous Wastes' generated in the State of Goa was awarded to M/s Aditya Environmental Services, Mumbai. The consultants examined industrial processes of over 3000 units operating in Goa to get the facts and figures of the quantities of wastes generated under each category.

**b. Environment Impact Assessment Study for Pilerne Industrial Estate**

Following several complaints received from the Saipem Citizens' Action Committee and the public in general regarding the pollution caused by some industries operating in the Pilerne Industrial Estate, the Goa State Pollution Control Board has decided to conduct an Environmental Impact Assessment (EIA) study for Pilerne Industrial Estate and the areas surrounding the industrial estate within a distance of 1Km from the boundary of the industrial estate, through outsourcing. The work was awarded to M/s Sadekar Enviro Engineers Pvt. Ltd., Goa.

M/s Sadekar Enviro Engineers Pvt. Ltd. has submitted the final copy of the 'Work Report of EIA, Pilerne Industrial Area for Post Monsoon season'. The Saipem Villagers Anti Pollution Front had raised an objection regarding awarding the work to M/s Sadekar Enviro Engineers Pvt. Ltd. since the latter is acting as consultant to some industrial units at Pilerne industrial Estate. M/s Sadekar Enviro Engineers Pvt. Ltd. has replied to the objection by stating that the services were given only after the EIA study period was completed. The Saipem Villagers Anti Pollution Front was given one months time to submit any documentary evidence to prove their contention within 30 days.

**c. Programs sponsored by CPCB**

The CPCB has been supporting various programmes carried out by the Board. During the financial year 2009 - 2010, the Board received financial support to the tune of Rs. 2 Lakhs for each of the following studies carried out by the Board through outsourcing.

1. **Preparation of report on 'Strengthening of Goa State Pollution Control Board'.**
2. **Preparation of report on 'Status of Sewage Management in Goa'.**
3. **Preparation of report on 'Status of Municipal Solid Waste Management in Goa'.**
4. **Preparation of report on 'Status of Bio Medical Waste Management in Goa'.**
5. **Preparation of report on 'Status of Plastic Waste Management and Inventorization of Recycling Units in Goa'.**
6. **Preparation of report on 'Status of E-waste generation/ Management in Goa'.**
7. **Preparation of report on 'Status of Batteries ( Waste Handling) in Goa as per Batteries Waste Management Handling Rules'**

The Draft Final Reports were submitted by the Consultants. The status of the studies is as follows:

1. **Preparation of report on 'Documentation on Strengthening of Goa State Pollution Control Board':** was awarded to M/s UPL who has submitted the same. The Report was scrutinized by the committee and approved for implementation.

2. **Preparation of report on; ‘Status of Municipal Solid Waste Management’ and ‘Status of Bio Medical Waste Management’:** These works were awarded to M/s Padmaja Aerobiologicals Pvt. Ltd., Mumbai. M/s Padmaja Aerobiologicals Pvt. Ltd. has submitted the Reports for all the three studies. The Reports are under the scrutiny of the committee.

3. **Preparation of report on ‘Status of Plastic Waste Management and Inventorization of Recycling Units’ and ‘Status of E-waste generation/ Management’:** The work of preparation of these Reports was awarded to M/s Padmaja Aerobiologicals Pvt.Ltd. and m/s UPL respectively. The Reports are under the scrutiny of the committee.

4. **Preparation of report on ‘Status of Batteries (Waste Handling) as per Batteries Waste Management Handling Rules’:** This work was awarded to M/s Aditya Environmental Services Pvt. Ltd. Report is submitted and is under the scrutiny of the Committee.

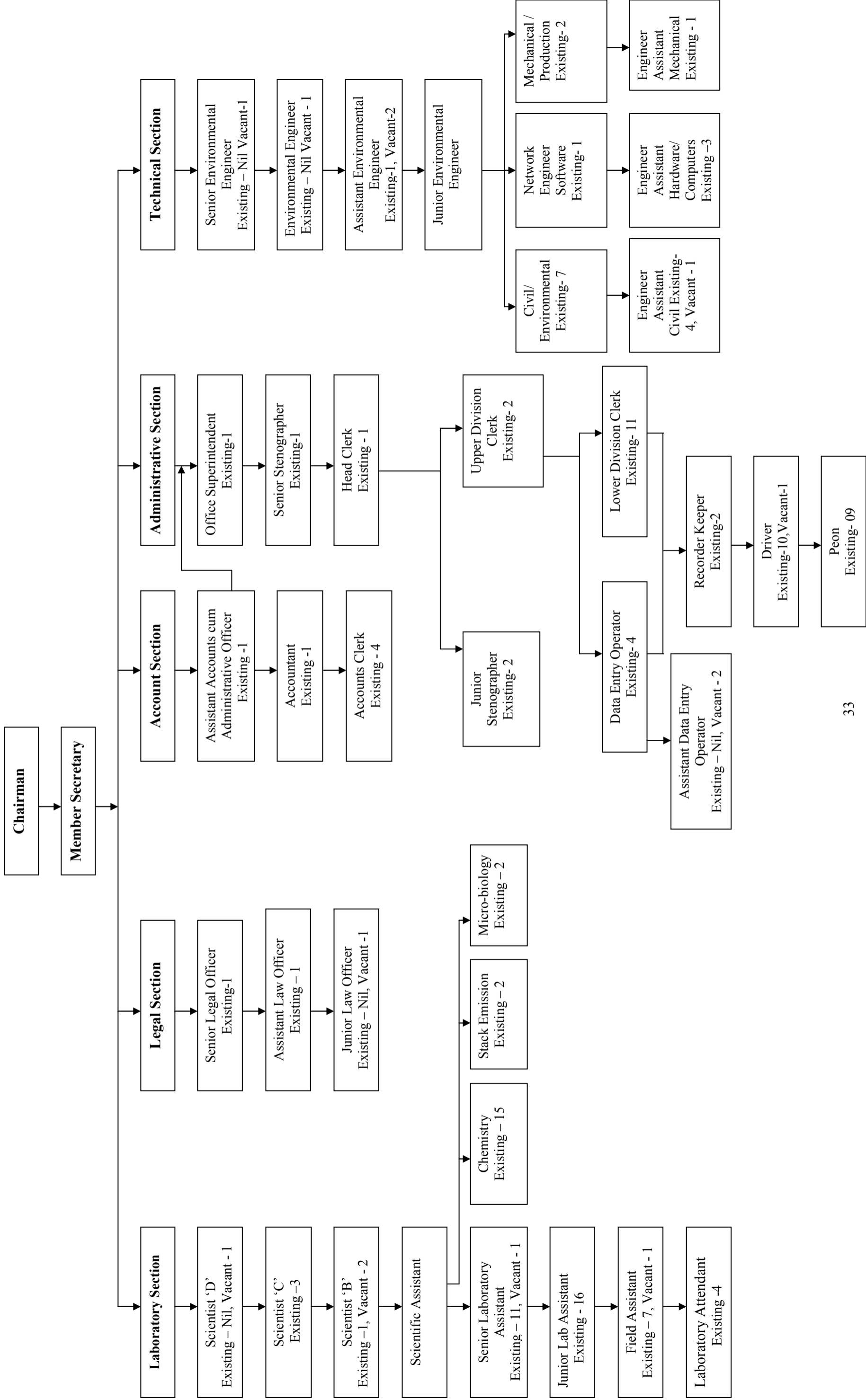
## **5.2 ACHIEVEMENTS MADE BY THE BOARD**

In the recent years, the Goa State Pollution Control Board has made some achievements in the fields of human resource development and environmental pollution control. The achievements are listed below.

- **Recognition of the Board Laboratory by National Accreditation Board for Testing and Calibration Laboratories (NABL)**

Audit of GSPCB Laboratory under National Accreditation Board for Testing and Calibration Laboratories (NABL) was conducted by auditors appointed by NABL. The auditors recommended continuing the validity of NABL accreditation for one more year, i.e., upto September 2011 in the field of Chemical Testing in accordance with ISO/IEC 17025:2005. NABL has also approved four Authorised Signatories for issuing Analysis Test Reports.

# **Annexure I** **ORGANISATION CHART FOR GOA STATE POLLUTION CONTROL BOARD**



## ANNEXURE II

LIST OF APPLICATIONS FOR CONSENTS TO ESTABLISH/OPERATE UNDER WATER (PREVENTION & CONTROL OF POLLUTION) ACT, 1974 AND AIR (PREVENTION & CONTROL OF POLLUTION) ACT, 1981 BIO-MEDICAL WASTE (MANAGEMENT & HANDLING) RULES, 1998 AND HAZARDOUS WASTE (MANAGEMENT & HANDLING) (AMENDMENT) RULES, 2000 PROCESSED AND APPROVED BY THE BOARD DURING THE YEAR 2011-2012.

Sr.No	Name of the Unit & Location	Category/ Scale of Unit	Consents	Application
1	Syngenta India Limited	L	Granted - 20/03/2012	CEE
2	Glenmark Genercis Limited (Plant I)	L	Granted - 07/03/2012	CEE
3	The Indian Hotels Co. Ltd. Unit: Taj Exotica, Goa	L	Granted - 15/02/2012	CEE
4	Nestle India Limited	L	Granted - 10/02/2012	CEE
5	Libox Chem (India) Pvt. Ltd.,	M	Granted - 10/02/2012	CEE
6	Procter & Gamble Hygiene & Health Care Ltd.	L	Granted - 24/01/2012	CEE
7	Abbott India Limited	L	Granted - 24/01/2012	CEE
8	Crompton Greaves Limited., Lt Motor Division : Ind. System	L	Granted - 18/01/2012	CEE
9	Pradeep V Kamat, Prop M/s Praka Engineering	S	Granted - 06/01/2012	CEE
10	Geno Pharmaceuticals Limited	L	Granted - 29/12/2011	CEE
11	Mohidin Metal Industries	L	Granted - 29/12/2011	CEE
12	Merck Limited	M	Granted - 08/12/2011	CEE
13	Aparant Iron And Steel Private Limited	L	Granted - 29/11/2011	CEE
14	M/s Vimal Plastics,	S	Granted - 02/11/2011	CEE
15	Micro Labs Limited	L	Granted - 20/10/2011	CEE
16	Karthik Inductions Limited	S	Granted - 09/09/2011	CEE
17	Villa De Penha	S	Granted - 09/09/2011	CEE
18	Cipla Ltd	L	Granted - 22/08/2011	CEE
19	Watson Pharma Private Limited	L	Granted - 17/08/2011	CEE
20	Shri. Jairam B. Neogui, Tembeachem Dongor Iron & Manganese Ore Mine	L	Granted - 15/07/2011	CEE
21	Shirdi Steel Re-Rollers Pvt. Ltd	S	Granted - 07/07/2011	CEE
22	Encube Ethicals Pvt Ltd	M	Granted - 16/06/2011	CEE
23	Canacona Hydrocarbons	S	Granted - 13/06/2011	CEE
24	Nestle India Limited	L	Granted - 10/06/2011	CEE
25	Gemini Distilleries (Goa) Pvt Ltd	M	Granted - 10/06/2011	CEE
26	Esteem Industries Pvt. Ltd.,	M	Granted - 09/06/2011	CEE
27	Kashinath Talaulicar, Cormolachem Moll	S	Granted - 09/06/2011	CEE
28	United Breweries Ltd.	L	Granted - 25/04/2011	CEE
29	Haidar Kassim Khan, Vangi Bindi Advona Iron & Manganese Ore Mine	L	Granted - 31/03/2011	CEE
30	Syngenta India Limited	L	Granted - 30/03/2011	CEE
31	Executive Engineer, Works Div Xxiv, Pwd Mapusa	L	Granted - 20/03/2012	CEF
32	Executive Engineer, Works Div.Xxii(Phe),	S	Granted - 20/03/2012	CEF

	Pwd Mapusa			
33	Moasic De Goa	S	Granted - 20/03/2012	CEF
34	Gkb Ophthalmics Ltd., Unit-Ii	S	Granted - 20/03/2012	CEF
35	Om Shiv Samarth	S	Granted - 19/03/2012	CEF
36	S.S Products	S	Granted - 14/03/2012	CEF
37	Irfan Enterprises	S	Granted - 07/03/2012	CEF
38	M/s Tajasvi Estate Pvt. Ltd.(The Park)	L	Granted - 07/03/2012	CEF
39	Shivam Villa Pvt Ltd	S	Granted - 06/03/2012	CEF
40	Muktar Infrastructure (India) Private Limited	S	Granted - 06/03/2012	CEF
41	J K Enterprises	M	Granted - 06/03/2012	CEF
42	M/s Shrem Resort Private Limited	L	Granted - 06/03/2012	CEF
43	Mama Meia Bakery	S	Granted - 29/02/2012	CEF
44	Kitart	S	Granted - 28/02/2012	CEF
45	M/s Sai Samarth Ice Plant	S	Granted - 28/02/2012	CEF
46	M/s Khamini Engineering Works	S	Granted - 23/02/2012	CEF
47	M/s Castle Royal	L	Granted - 22/02/2012	CEF
48	S.P.Enterprises	S	Granted - 22/02/2012	CEF
49	M/s. Prince Marine Transport Services Pvt Ltd	S	Granted - 22/02/2012	CEF
50	Fabrizio Industries Pvt. Ltd.	L	Granted - 22/02/2012	CEF
51	Godbaim Plot	S	Granted - 20/02/2012	CEF
52	Lotus Hermitage,Resident Association	S	Granted - 15/02/2012	CEF
53	M/s Amiken	S	Granted - 10/02/2012	CEF
54	Naiknavare Construction Pvt.Ltd.,	L	Granted - 10/02/2012	CEF
55	M/s. Gagan Wine Trade & Financers Limited	S	Granted - 10/02/2012	CEF
56	Muktar Automobiles Pvt.Ltd.	S	Granted - 09/02/2012	CEF
57	Mr.Donald Milagres Fernandes	S	Granted - 07/02/2012	CEF
58	Aakaash Manufacturing Company Ltd	S	Granted - 07/02/2012	CEF
59	Amit Earthmovers	S	Granted - 06/02/2012	CEF
60	The Axis	L	Granted - 01/02/2012	CEF
61	Unichem Laboratories Limited	L	Granted - 31/01/2012	CEF
62	Rice Mill	S	Granted - 25/01/2012	CEF
63	Gera Developments Pvt. Ltd.	L	Granted - 24/01/2012	CEF
64	Marigold Hotel	M	Granted - 24/01/2012	CEF
65	Bougainvilla Hermitage Pvt. Ltd.	S	Granted - 24/01/2012	CEF
66	Campal Beach Resort	S	Granted - 24/01/2012	CEF
67	Goldy Finepacks Private Limited	S	Granted - 20/01/2012	CEF
68	Viegas Bakery	S	Granted - 18/01/2012	CEF
69	Macbrout Engineering Pvt. Ltd. ,A1\22, Margao Industrial Estate, San Jose De Are	S	Granted - 17/01/2012	CEF
70	Rudro Exports	S	Granted - 16/01/2012	CEF
71	M/s Goa Pipes & Steel Co	S	Granted - 06/01/2012	CEF
72	Vinay Exports	S	Granted - 06/01/2012	CEF
73	m/s Blow Can Industries	S	Granted - 06/01/2012	CEF
74	B And B Foods	S	Granted - 06/01/2012	CEF
75	M/s. Hindustan Industries	S	Granted - 29/12/2011	CEF
76	M/s. Hindustan Multi Tech	S	Granted - 29/12/2011	CEF
77	M/s S.N.Enterprises	S	Granted - 29/12/2011	CEF

78	Vision Multispeciality Hospital	S	Granted - 29/12/2011	CEF
79	M/s. Ureka Plast Tech	S	Granted - 28/12/2011	CEF
80	TCPL Packaging Limited	L	Granted -20/12/2011	CFF
81	M/s Om Sai Enterprises	L	Granted - 16/12/2011	CEF
82	L. R. Enterprises.,	S	Granted - 16/12/2011	CEF
83	M/s Gramodyog Goa	S	Granted - 08/12/2011	CEF
84	Annapurna Vishram Dhaam	S	Granted - 08/12/2011	CEF
85	David And Angel	S	Granted - 08/12/2011	CEF
86	Onkar Masala	S	Granted - 08/12/2011	CEF
87	Aventis Pharma Limited	L	Granted - 06/12/2011	CEF
88	M/s Keya Agro Industries	S	Granted - 01/12/2011	CEF
89	Glenco Distilleries Private Limited	S	Granted - 01/12/2011	CEF
90	Amma Auto Engineering	S	Granted - 30/11/2011	CEF
91	M/s Jonita Metals	S	Granted - 30/11/2011	CEF
92	M/s. Lakshmi Processing Company Private Limited	S	Granted - 25/11/2011	CEF
93	Star Communication	S	Granted - 24/11/2011	CEF
94	Siemens Ltd. - Medium Voltage 2	L	Granted - 17/11/2011	CEF
95	Bhumika Enterprises	S	Granted - 16/11/2011	CEF
96	National Engineers	S	Granted - 14/11/2011	CEF
97	Ambres Rice & Flour Mill	S	Granted - 10/11/2011	CEF
98	Krishna Fabricators	L	Granted - 02/11/2011	CEF
99	Karishma Grand	M	Granted - 02/11/2011	CEF
100	M/s Sagar Feeds & Food Processing Industries	S	Granted - 02/11/2011	CEF
101	M/s. Vijay Industries	S	Granted - 02/11/2011	CEF
102	Zuari Structural Works	S	Granted - 02/11/2011	CEF
103	Arcanjo Construction Private Limited	S	Granted - 31/10/2011	CEF
104	M/s Rane & Sons	S	Granted - 28/10/2011	CEF
105	B.G.Associates	S	Granted - 28/10/2011	CEF
106	Packaging Industry	M	Granted - 27/10/2011	CEF
107	Vithal Krupa Enterprise	S	Granted - 27/10/2011	CEF
108	St.Francis Xavier Iron Art	S	Granted - 27/10/2011	CEF
109	Souzco Refiners	S	Granted - 25/10/2011	CEF
110	Desmond Crasto	L	Granted - 21/10/2011	CEF
112	M/s Smiket Dynamics	S	Granted - 20/10/2011	CEF
113	Reliance Industries Limited	L	Granted - 14/10/2011	CEF
114	Murasit Bauchemie (Goa) Pvt.Ltd.	S	Granted - 13/10/2011	CEF
115	Jai Ganesh Ispat & Ferro Alloys Private Limited	S	Granted - 11/10/2011	CEF
116	M/s. Prithvi Consultants Private Limited	M	Granted - 11/10/2011	CEF
117	Sanjay Shriniwas Phadte Enterprise	S	Granted - 11/10/2011	CEF
118	M/s. Santana Beach Resort,	S	Granted - 11/10/2011	CEF
119	Buyao Sons	S	Granted - 23/09/2011	CEF
120	M/s. Sai Investments	S	Granted - 23/09/2011	CEF
121	Costa Cement Products	S	Granted - 22/09/2011	CEF
122	M/s. Shree Gajanan Industries	L	Granted - 22/09/2011	CEF
123	Micro Labs Limited	L	Granted - 22/09/2011	CEF
124	Fredrick Cement Products	S	Granted - 14/09/2011	CEF
125	M/s Vainika Enterprises	S	Granted - 13/09/2011	CEF

126	Putzmeister India Private Limited	S	Granted - 13/09/2011	CEF
127	St.Anthony Servicing Station	S	Granted - 12/09/2011	CEF
128	Mario Fernandes & Co.,	S	Granted - 09/09/2011	CEF
129	Sri Om Ganesh Packaging	S	Granted - 09/09/2011	CEF
130	Cebon Apparel Pvt. Ltd.	S	Granted - 29/08/2011	CEF
131	M/s Vimal Plastics,	S	Granted - 29/08/2011	CEF
132	Micro Labs Limited	L	Granted - 24/08/2011	CEF
133	Veda Packaging	S	Granted - 24/08/2011	CEF
134	M/s. Naik Auto Industries Korporation ( Unit - 2 )	S	Granted - 24/08/2011	CEF
135	M/s West Coast Industries	S	Granted - 24/08/2011	CEF
136	M/s K & K K Liquor Industries	L	Granted - 23/08/2011	CEF
137	Minescape Minerals Pvt. Ltd.	S	Granted - 22/08/2011	CEF
138	Goa Rajee Auto Pvt Ltd	S	Granted - 18/08/2011	CEF
139	United Breweries Ltd.	L	Granted - 17/08/2011	CEF
140	Arunraj Packaging	S	Granted - 16/08/2011	CEF
141	Mital Steel Engineering	S	Granted - 16/08/2011	CEF
142	Prime Tech	S	Granted - 16/08/2011	CEF
143	M/s. Mayur Packing Services	S	Granted - 16/08/2011	CEF
144	Indoco Remedies Ltd	L	Granted - 08/08/2011	CEF
145	M/s. Zealtek	L	Granted - 08/08/2011	CEF
146	Phadke Associate	L	Granted - 08/08/2011	CEF
147	M/s Joseph Welding Services	L	Granted - 08/08/2011	CEF
148	Rajesh P Timblo	S	Granted - 02/08/2011	CEF
149	Marck Biosciences Ltd	L	Granted - 02/08/2011	CEF
150	M/s. Raadhaas	L	Granted - 02/08/2011	CEF
151	M/s. Danish Industries	L	Granted - 22/07/2011	CEF
152	Samarth Plastics	S	Granted - 21/07/2011	CEF
153	Morjim Goa Hotels& Resort Pvt Ltd	S	Granted - 21/07/2011	CEF
154	Braganza Auto Works	S	Granted - 21/07/2011	CEF
155	The Village Inn.	S	Granted - 21/07/2011	CEF
156	M/s. M.D. Ice Plant	L	Granted - 19/07/2011	CEF
157	M/s. R.B.S. Candiaparcas-Unit-I	L	Granted - 19/07/2011	CEF
158	Sangeeta Engg Works	S	Granted - 19/07/2011	CEF
159	M/s. Akanksha Enterprises	L	Granted - 19/07/2011	CEF
160	M/s. Sajal Anand And Praveen Jain	L	Granted - 19/07/2011	CEF
161	Unique Equipments	S	Granted - 15/07/2011	CEF
162	Allegria Winery Pvt Ltd	S	Granted - 15/07/2011	CEF
163	Jrd Mines And Minerals	S	Granted - 13/07/2011	CEF
164	Shyam Marble	L	Granted - 13/07/2011	CEF
165	Shabnam Fabrication Works	S	Granted - 11/07/2011	CEF
166	Swami Samarth Flour Mill	S	Granted - 11/07/2011	CEF
167	Goa Pavers	S	Granted - 05/07/2011	CEF
168	Shree Navdurga Flooring Products	S	Granted - 05/07/2011	CEF
169	Fernandes Enterprises	S	Granted - 05/07/2011	CEF
170	M/s. John Varghese	L	Granted - 05/07/2011	CEF
171	Ved Metal Works	S	Granted - 05/07/2011	CEF
172	Ashwini Shankar Sancoale Goa	L	Granted - 04/07/2011	CEF
173	M/s. Devyani Food Industries Pvt. Ltd.	L	Granted - 04/07/2011	CEF
174	M/s. Punjab Sind Dairy Products Pvt Ltd	S	Granted - 04/07/2011	CEF

175	Lakshmi Juneja Residentail Complex At Sangolda	L	Granted - 01/07/2011	CEF
176	Cartini India Limited	S	Granted - 01/07/2011	CEF
177	Domnic Savio Fabrication Workshop	S	Granted - 27/06/2011	CEF
178	M/s. Damsan Agro	L	Granted - 27/06/2011	CEF
179	Suryahill Guests	L	Granted - 22/06/2011	CEF
180	M/s. New Horizons Biotek	L	Granted - 21/06/2011	CEF
181	Balaji Industry	L	Granted - 20/06/2011	CEF
182	M/s. Om Seva Industries	L	Granted - 20/06/2011	CEF
183	M/s United Marine Products	S	Granted - 16/06/2011	CEF
184	M/s. Sea Bird Resorts Pvt. Ltd., ( Alila Diva Goa. )	M	Granted - 16/06/2011	CEF
185	Sesa Goa Ltd. (Plot For Stacking At Dharbandora)	S	Granted - 16/06/2011	CEF
186	M/s United Marine Products	S	Granted - 16/06/2011	CEF
187	Anaya Fruit Products	S	Granted - 15/06/2011	CEF
188	Beau Ideals	S	Granted - 13/06/2011	CEF
189	M/s. Metroplast Industries	L	Granted - 13/06/2011	CEF
190	M/s. City Prints	L	Granted - 13/06/2011	CEF
191	Reet Enterprises	S	Granted - 13/06/2011	CEF
192	Team 24 Beverages	L	Granted - 13/06/2011	CEF
193	Laminex	S	Granted - 10/06/2011	CEF
194	S. Chems & Allied Producers Pvt. Ltd.(Unit Iii)	S	Granted - 08/06/2011	CEF
195	Shree Print &Pack Unit li	S	Granted - 01/06/2011	CEF
196	Prabhu Realtors (Residential Complex)	S	Granted - 01/06/2011	CEF
197	Pernod Ricard India Private Ltd	S	Granted - 01/06/2011	CEF
198	M/s. Indotech Ice And Cold Storage - Unit- li	S	Granted - 01/06/2011	CEF
199	Goa Chillers	S	Granted - 01/06/2011	CEF
200	M/s Matha Foods	S	Granted - 01/06/2011	CEF
201	M/s. Blue Bird Beverages And Resorts Pvt. Ltd	L	Granted - 01/06/2011	CEF
202	Vithal. Sharveni	S	Granted - 01/06/2011	CEF
203	Classic Pavers	S	Granted - 01/06/2011	CEF
204	Wallace Pharmaceuticals Pvt. Ltd.	S	Granted - 01/06/2011	CEF
205	Crompton Greaves Ltd	M	Granted - 01/06/2011	CEF
206	The Queeny	L	Granted - 27/05/2011	CEF
207	R/s Aqua Valley	S	Granted - 27/05/2011	CEF
208	Teracom Ltd	L	Granted - 27/05/2011	CEF
209	Abbott India Limited	L	Granted - 27/05/2011	CEF
210	M/s Casa Amarilla	S	Granted - 27/05/2011	CEF
211	Sbi Cement Product	S	Granted - 27/05/2011	CEF
212	M/s Kamakshi Auto Washing Centre	S	Granted - 27/05/2011	CEF
213	M/s Arifa Bottling	S	Granted - 27/05/2011	CEF
214	Domingo Santan Ice Plant	S	Granted - 27/05/2011	CEF
215	M/s Chamundi Udyog	S	Granted - 24/05/2011	CEF
216	Sharada Engineering	L	Granted - 24/05/2011	CEF
217	M/s. Ses Engineering Works - Unit-li	S	Granted - 24/05/2011	CEF
218	M/s. Shabnam Fabrication Works	L	Granted - 24/05/2011	CEF

219	Mineral Rich Corporation	S	Granted - 24/05/2011	CEF
220	Sneha Bakers	S	Granted - 24/05/2011	CEF
221	Pioneer Industries	S	Granted - 24/05/2011	CEF
222	M/s. Shafi Bengre Workshop	L	Granted - 24/05/2011	CEF
223	M/s. Tanavade Industries	L	Granted - 24/05/2011	CEF
224	Teknic Controls	S	Granted - 24/05/2011	CEF
225	Allied Food Industries	S	Granted - 24/05/2011	CEF
226	Atc Polyflex Industries	S	Granted - 11/05/2011	CEF
227	Bharat Met Pack Company	S	Granted - 11/05/2011	CEF
228	Proto Can Care Pvt Ltd	S	Granted - 11/05/2011	CEF
229	Aldeia Miraflor	S	Granted - 29/04/2011	CEF
230	Godwin Resorts And Hotels Private Limited.,	S	Granted - 29/04/2011	CEF
231	M/s. Aqua Goa	S	Granted - 29/04/2011	CEF
232	M/s. Krishna Polyplast	L	Granted - 25/04/2011	CEF
233	Shaikh Yakub & Sons Tyre Works	L	Granted - 25/04/2011	CEF
234	M/s. Kanodiya Enterprises	L	Granted - 25/04/2011	CEF
235	Krishna Industries	S	Granted - 21/04/2011	CEF
236	Prakash Corrugated Products	M	Granted - 21/04/2011	CEF
237	Lok-Beta Pharmaceuticals (I)pvt.Ltd.	S	Granted - 08/04/2011	CEF
238	Tyres India	S	Granted - 08/04/2011	CEF
239	Power Kleen Laundry	S	Granted - 08/04/2011	CEF
240	Kineco Private Limited	S	Granted - 08/04/2011	CEF
241	Chowgule Abp Coatings(India) Private Limited	S	Granted - 07/04/2011	CEF
242	G.N. Agrawal, Beneficiation Plant At Huldool Dongor Bimbol Iron Ore Mine	S	Granted - 06/03/2012	CEP
243	M/s Sai Deep	S	Granted - 06/01/2012	CEP
244	Kodak India Pvt. Ltd.	L	Granted - 11/10/2011	CEP
245	Haidar Kassim Khan, Vangi Bindi Advona Iron & Manganese Ore Mine	L	Granted - 14/03/2012	COE
246	Rss Cement Products	S	Granted - 07/03/2012	COE
247	Kashinath Talaulicar, Cormolachem Moll	S	Granted - 02/03/2012	COE
248	Silva Cement Products	S	Granted - 21/02/2012	COE
249	Ranbaxy Laboratories Limited	L	Granted - 16/02/2012	COE
250	Shri. Jairam B. Neogui, Tembeachem Dongor Iron & Manganese Ore Mine	L	Granted - 10/02/2012	COE
251	Haidar Kassim Khan, Vangi Bindi Advona Iron & Manganese Ore Mine	L	Granted - 10/02/2012	COE
252	Bharat Petroleum Corporation Ltd	L	Granted - 24/01/2012	COE
253	Aventis Pharma Limited	L	Granted - 17/01/2012	COE
254	Merck Limited	M	Granted - 29/12/2011	COE
255	Cipla Ltd	L	Granted - 29/12/2011	COE
256	Ganesh Benzoplast Limited	S	Granted - 16/12/2011	COE
257	Sesa Goa Limited-Metcoke Division	L	Granted - 01/12/2011	COE
258	Putzmeister India Private Limited	M	Granted - 11/10/2011	COE
259	Sesa Goa Limited-Metcoke Division	L	Granted - 09/09/2011	COE
260	Vic Industries.,	S	Granted - 17/08/2011	COE
261	M/s. Mahalasa Pharma	S	Granted - 02/08/2011	COE
262	Essel Propack Limited	S	Granted - 02/08/2011	COE

263	Syngenta India Limited	L	Granted - 02/08/2011	COE
264	United Breweries Ltd.	L	Granted - 16/06/2011	COE
265	Gemini Distilleries (Goa) Pvt Ltd	M	Granted - 24/05/2011	COE
266	Syngenta India Limited	L	Granted - 29/04/2011	COE
267	Nestle India Limited	L	Granted - 25/04/2011	COE
268	M/s Goa Sagar Cashewnuts	S	Granted - 09/04/2012	COF
269	M/s Commonwealth Developers Pvt Ltd.	L	Granted - 04/04/2012	COF
270	Herald Publication Pvt. Ltd.	L	Granted - 30/03/2012	COF
271	Vision Multispeciality Hospital	S	Granted - 29/03/2012	COF
272	Sunit Enterprises	S	Granted - 29/03/2012	COF
273	Fantasy Guest House	S	Granted - 26/03/2012	COF
274	Hotel Ashok Plaza	L	Granted - 20/03/2012	COF
275	Ocean Palms Goa Unit Of Sterling Developers	M	Granted - 20/03/2012	COF
276	Vision Multispeciality Hospital	S	Granted - 20/03/2012	COF
277	Sewage Treatment Plant At Edc Complex, Patto	S	Granted - 19/03/2012	COF
278	Bonus Consultants Pune Pvt Ltd, Hotel Goa Highridge Residency	S	Granted - 19/03/2012	COF
279	Shailesh Packaging	S	Granted - 19/03/2012	COF
280	Navelkar Landmarks	M	Granted - 14/03/2012	COF
281	Oriental Engineering Works	S	Granted - 06/03/2012	COF
282	L'Amour Beach Resort	S	Granted - 01/03/2012	COF
283	Muktar Automobiles Pvt Ltd	L	Granted - 28/02/2012	COF
284	Marine Electricals India Pvt Ltd	S	Granted - 28/02/2012	COF
285	Reliance Industries Limited	L	Granted - 28/02/2012	COF
286	Royal Multiplast Private Limited	S	Granted - 28/02/2012	COF
287	Chowgule Industries Private Limited	S	Granted - 21/02/2012	COF
288	M/s Sea Shore Hotel	S	Granted - 21/02/2012	COF
289	Netzsch Technologies India Pvt. Ltd.	L	Granted - 21/02/2012	COF
290	M/s Shantha Pumps	S	Granted - 16/02/2012	COF
291	M/s Hotel Shaurya	S	Granted - 16/02/2012	COF
292	Hotel La Grace	M	Granted - 16/02/2012	COF
293	B And B Foods	S	Granted - 15/02/2012	COF
294	Maruti Pipes And Poles	S	Granted - 15/02/2012	COF
295	Chowgule Industries Private Limited	S	Granted - 14/02/2012	COF
296	V. M. Salgaocar & Bro. Pvt. Ltd. ( Mobile Screening & Crushing Plants ) 6 Nos )	S	Granted - 14/02/2012	COF
297	Siemens Ltd. - Medium Voltage 2	L	Granted - 10/02/2012	COF
298	Shivkrupa Fabrication & Vehical Repairs	S	Granted - 10/02/2012	COF
299	Sai Prasad	S	Granted - 10/02/2012	COF
300	M/s Chamundi Udyog	S	Granted - 10/02/2012	COF
301	Sameer Bakery	S	Granted - 07/02/2012	COF
302	Ultraaflex (India)	S	Granted - 07/02/2012	COF
303	Unnaty Vahan Ancillaries Pvt Ltd	S	Granted - 01/02/2012	COF
304	Chalston Hotel	S	Granted - 31/01/2012	COF
305	Rege Traders	S	Granted - 27/01/2012	COF
306	Hassan Khan Motor Garage	S	Granted - 25/01/2012	COF
307	Coastal Sunview Hotel Private	L	Granted - 25/01/2012	COF
308	Marck Biosciences Ltd	L	Granted - 25/01/2012	COF

309	Hnl Instruments & Controls Pvt Ltd	S	Granted - 20/01/2012	COF
310	Goa Natural Foods Pvt. Ltd.,	S	Granted - 20/01/2012	COF
311	Damodar Saw Mill Ind	S	Granted - 19/01/2012	COF
312	Green Peace Guest House	S	Granted - 19/01/2012	COF
313	Meal Makers	L	Granted - 18/01/2012	COF
314	Vinay Exports	S	Granted - 18/01/2012	COF
315	M/s. Sea Bird Resorts Pvt. Ltd., ( Alila Diva Goa. )	M	Granted - 17/01/2012	COF
316	M/s Siolim Hotels Pvt Ltd	M	Granted - 17/01/2012	COF
317	Indus Cama	S	Granted - 17/01/2012	COF
318	M/s Nivco Logistics	L	Granted - 13/01/2012	COF
319	Damodar Mangalji And Co. Ltd. (Plant No.3b)	S	Granted - 12/01/2012	COF
320	The Sea Horse Resort	S	Granted - 10/01/2012	COF
321	Gopaldas Visram & Co. Ltd.	S	Granted - 06/01/2012	COF
322	G. N. Agrawal, Huldool Dongor Mine, Mobile Dry Screening Plants	S	Granted - 05/01/2012	COF
323	Sesa Goa Ltd. (Plot For Stacking At Dharbandora)	S	Granted - 05/01/2012	COF
324	M/s. Aviatech Enterprises Private Limited	S	Granted - 30/12/2011	COF
325	Shri Mallikarjun Body Builder	S	Granted - 29/12/2011	COF
326	Francisca Sweets	S	Granted - 28/12/2011	COF
327	Suraksha Packers Pvt Ltd.	S	Granted - 28/12/2011	COF
328	Goa Roller Flour Mills Private Limited	S	Granted - 16/12/2011	COF
329	M/s Shafeen Fabrication Works	S	Granted - 08/12/2011	COF
330	Art Global Private Limited	S	Granted - 08/12/2011	COF
331	Concip Ice Plant	S	Granted - 08/12/2011	COF
332	M/s. Jimcap Electronics Pvt. Ltd.,	S	Granted - 08/12/2011	COF
333	Plaza Hotel	S	Granted - 08/12/2011	COF
334	M/s F.D'Costa Auto Repair And Service Centre	S	Granted - 06/12/2011	COF
335	Goa State Co-Operative Milk Producers Union Ltd.(Cattle Feed Plant)	M	Granted - 06/12/2011	COF
336	Omkar Packaging	S	Granted - 17/11/2011	COF
337	M/s. Satya Bahnu Vishwa Marine Products	S	Granted - 10/11/2011	COF
338	M/s Lawande Beach Resort	L	Granted - 02/11/2011	COF
339	Ramesh Flour Mill	S	Granted - 02/11/2011	COF
340	Ana Clara Ice Plant	S	Granted - 27/10/2011	COF
341	Azurite Calf Nutrition Private Limited	S	Granted - 21/10/2011	COF
342	Syngenta India Limited	L	Granted - 20/10/2011	COF
343	Ratiopharm India Private Limited	L	Granted - 14/10/2011	COF
344	Taj Plastic Products And Traders	L	Granted - 07/10/2011	COF
345	Sinquerim Plot For Stacking\stocking Of Iron Ore, Sirigao Mines, Chowgule & Co.	S	Granted - 28/09/2011	COF
346	Riya Packaging	S	Granted - 27/09/2011	COF
347	J.V. Garage	S	Granted - 22/09/2011	COF
348	. Kanak Industries,	S	Granted - 21/09/2011	COF
349	Godinho Washing Centre	L	Granted - 21/09/2011	COF
350	Crest Engineering	L	Granted - 12/09/2011	COF
351	M/s. Aci Engineering Division	S	Granted - 12/09/2011	COF

352	Skylark Resort	S	Granted - 09/09/2011	COF
353	M/s. Tirupati Sales	L	Granted - 09/09/2011	COF
354	Hotel Purushottama Pvt Ltd	S	Granted - 30/08/2011	COF
355	M/s Sangeeta Enggworks	S	Granted - 29/08/2011	COF
356	Ifb Industries Ltd.	S	Granted - 22/08/2011	COF
357	Teracom Ltd	L	Granted - 22/08/2011	COF
358	Salgaonkar Metal Trust	L	Granted - 18/08/2011	COF
359	Siemens Ltd. - Energy Automation	L	Granted - 09/08/2011	COF
360	Mallikeshwar Enterprises	S	Granted - 08/08/2011	COF
361	Mson Industries	S	Granted - 08/08/2011	COF
362	Gkb Hi Tech Lenses Pvt Ltd (Plot 17a)	L	Granted - 02/08/2011	COF
363	Pk Composites Private Limited.,	S	Granted - 29/07/2011	COF
364	Saritas Guest House	S	Granted - 20/07/2011	COF
365	Zillion Enterprises And Homes	S	Granted - 20/07/2011	COF
366	Arish Bakery	S	Granted - 20/07/2011	COF
367	Ar Mines Industries	S	Granted - 19/07/2011	COF
368	M/s. Seaward Packaging Private Limited	L	Granted - 19/07/2011	COF
369	Unique Equipments	S	Granted - 15/07/2011	COF
370	Kilito Engineering Works	S	Granted - 13/07/2011	COF
371	Gkb Hi-Tech Lenses Pvt.Ltd (Plot 12 & 13)	L	Granted - 08/07/2011	COF
372	Skylark Resort	S	Granted - 05/07/2011	COF
373	Omkar Marine Engineers	S	Granted - 05/07/2011	COF
374	Vivace Bricks And Blocks	L	Granted - 05/07/2011	COF
375	M/s Timblo Mining Infrastructure Limited	S	Granted - 04/07/2011	COF
376	Acerock Developers Pvt. Ltd. (The Baga Marina Beach Resorts)	M	Granted - 01/07/2011	COF
377	Hotel Sea Palace	S	Granted - 01/07/2011	COF
378	Hotel La Grace	M	Granted - 01/07/2011	COF
379	Best Western Peace Valley	S	Granted - 01/07/2011	COF
380	Citrus Hotels.,Silla Goa Hotels Pvt. Ltd.,	M	Granted - 01/07/2011	COF
381	Chari Furniture Works	S	Granted - 27/06/2011	COF
382	Panandiker Research And Development Private Ltd.	S	Granted - 27/06/2011	COF
383	M/s Siddi Vinayak Garage	L	Granted - 27/06/2011	COF
384	J.V. Garage	S	Granted - 27/06/2011	COF
385	Sunset Cottages	S	Granted - 27/06/2011	COF
386	Senhor Angelo Resorts	S	Granted - 23/06/2011	COF
387	M/s Palacete Rodrigues Holiday Home	S	Granted - 22/06/2011	COF
388	Anjuna Villa140\1	L	Granted - 20/06/2011	COF
389	Colmar Condominium Pvt. Ltd. (Soul Vacation)	L	Granted - 20/06/2011	COF
390	Hotel Mini Punjab	L	Granted - 15/06/2011	COF
391	Chowgule & Company Private Limited (Dry Screening Plant At Sirigao Mines)	L	Granted - 15/06/2011	COF
392	Chowgule & Company Pvt Ltd, Crushing & Screening Plant At Pale Mines	S	Granted - 15/06/2011	COF
393	M/s.-Mayfair Hotels & Resorts ( Goa) Pvt. Ltd., ( Mayfair Hideway Spa Resort	L	Granted - 13/06/2011	COF
394	Abhishek Engineers	S	Granted - 10/06/2011	COF
395	Moonrise Tourism Private Limited., Nilaya	S	Granted - 10/06/2011	COF

	Hermitage			
396	Neelam Hotels Pvt.Ltd. (Neelams The Glitz)	L	Granted - 10/06/2011	COF
397	M/s. P.D. Kudchadkar	S	Granted - 10/06/2011	COF
398	Saived Enterprises	S	Granted - 10/06/2011	COF
399	Indrason Hospitalities Pvt Ltd. Le Seasons Beach Resort	S	Granted - 10/06/2011	COF
400	Shree Print & Pack	S	Granted - 10/06/2011	COF
401	Myles High Health Concepts Private Limited	S	Granted - 08/06/2011	COF
402	Modest Holidal Homes Pvt Ltd	L	Granted - 08/06/2011	COF
403	Hotel Omkar Inn	L	Granted - 08/06/2011	COF
405	Shaparia Dock And Steel Company Private Limited.,	S	Granted - 08/06/2011	COF
406	Prime Mineral Export Pvt. Ltd., Mobile Dry Screening Plants (No.3)	S	Granted - 03/06/2011	COF
407	Madgavkar Salvage	L	Granted - 01/06/2011	COF
408	Shree Mahalasa Apartment Guest House	L	Granted - 01/06/2011	COF
409	Unity Ophthalmics	L	Granted - 01/06/2011	COF
410	Anil Metals	S	Granted - 01/06/2011	COF
411	The Karma Plaza Hotel	L	Granted - 01/06/2011	COF
412	M/s. Vishal Foods	L	Granted - 01/06/2011	COF
413	Barkelo Tilu Gaonkar	S	Granted - 01/06/2011	COF
414	Goa State Co-Operative Milk Producers Union Ltd.	S	Granted - 01/06/2011	COF
415	Philips Electronic India Limited	S	Granted - 01/06/2011	COF
416	M/s. Ganpati Marble & Granite	L	Granted - 27/05/2011	COF
417	Ashwin Capacitors Pvt. Ltd	S	Granted - 27/05/2011	COF
418	M/s. Panjim Peoples	S	Granted - 27/05/2011	COF
419	J & J Precision Industries Unit Ii	S	Granted - 27/05/2011	COF
420	Siemens Ltd. - Medium Voltage 2 (Temporary Location)	L	Granted - 27/05/2011	COF
421	Hotel Bareton	S	Granted - 27/05/2011	COF
422	M/s Plastic Export Zundert (I) Pvt. Ltd.	M	Granted - 27/05/2011	COF
423	Swanson Plastics (India) Private Limited	L	Granted - 24/05/2011	COF
424	Lupin Limited	L	Granted - 24/05/2011	COF
425	Aakaash Manufacturing Company Pvt. Ltd.	S	Granted - 29/04/2011	COF
426	Glenmark Genercis Limited (Plant I)	L	Granted - 29/04/2011	COF
427	Ms Alcon Resort Holdings Ltd - Unit Radisson Resort Goa	M	Granted - 29/04/2011	COF
428	Om Sai Plastic	L	Granted - 25/04/2011	COF
429	Pednekar Workshop	S	Granted - 21/04/2011	COF
430	M/s Pavan Packaging	S	Granted - 21/04/2011	COF
431	M/s Sai Packers	S	Granted - 21/04/2011	COF
432	Prestige Furnitures Pvt. Ltd	S	Granted - 21/04/2011	COF
433	Amona Beneficiation Plant	L	Granted - 12/04/2011	COF
434	Hotel Holiday Village	S	Granted - 08/04/2011	COF
435	Holiday Village	S	Granted - 08/04/2011	COF
436	Iqra Hospitality Services (Hotel Supreme)	S	Granted - 08/04/2011	COF
437	Prazeres Resorts	S	Granted - 07/04/2011	COF

438	Potential Investment & Finance Ltd	L	Granted - 31/03/2011	COF
439	M/s Rajbag Residency	S	Granted - 30/03/2011	COF
440	Prime Mineral Exports Pvt. Ltd.	S	Granted - 09/03/2012	COR
441	M/s Casa Severina	L	Granted - 25/01/2012	COR
442	Macbrout Engineering Pvt. Ltd., A122, Margao Indl. Estate, San Jose De Areal	S	Granted - 06/12/2011	COR
443	Ion Exchange (India) Ltd.	M	Granted - 01/12/2011	COR
444	M/s. Cosme Costa & Sons - Gaval Sonshi Iron Ore Mine	L	Granted - 24/05/2011	COR
445	Wyeth Limited	L	Granted - 04/04/2012	COW
446	Indian Hotels Co. Ltd. Unit: Taj Exotica	L	Granted - 04/04/2012	COW
447	Berger Becker Coatings Private Limited.,	S	Granted - 03/04/2012	COW
448	M/s Prestige Holiday Resorts Pvt Ltd (Royal Palms)	L	Granted - 03/04/2012	COW
449	Marico Limited	L	Granted - 03/04/2012	COW
450	Devashri Garden	S	Granted - 30/03/2012	COW
451	Shree Gajanan Paper Industries	S	Granted - 30/03/2012	COW
452	Fomento Resorts Hotels Ltd. (Cidade De Goa)	L	Granted - 29/03/2012	COW
453	Finolex Cables Limited (Cables Division)	L	Granted - 27/03/2012	COW
454	Kamacom Systems Pvt. Ltd.	S	Granted - 22/03/2012	COW
455	Silver Sands Holiday Village	S	Granted - 22/03/2012	COW
456	Vic Industries.,	S	Granted - 20/03/2012	COW
457	Crompton Greaves Ltd	M	Granted - 20/03/2012	COW
458	Ess Dee Aluminium Ltd.	L	Granted - 20/03/2012	COW
459	Macbrout Engineering Pvt. Ltd.	L	Granted - 19/03/2012	COW
460	Colonia Santa Maria (H) Pvt Ltd	M	Granted - 15/03/2012	COW
461	Himali Soap Products	L	Granted - 12/03/2012	COW
462	M/s. Goan Real Estate And Construction Pvt. Ltd.	S	Granted - 12/03/2012	COW
463	Bandekar Brothers Pvt. Ltd., ( Sandvik Qa-340 Msp)	S	Granted - 12/03/2012	COW
464	Rukminirama Steel Rollings Pvt Limited (Melting Division)	M	Granted - 09/03/2012	COW
465	V. M. Salgaocar & Bro. Pvt. Ltd. ( Beneficiation Plant )	L	Granted - 07/03/2012	COW
466	Chowgule & Company Private Limited	S	Granted - 07/03/2012	COW
467	Dry Screening & Crushing Plant	S	Granted - 07/03/2012	COW
468	Cosmos Premises Pvt. Ltd. (Royal Orchid Resort Galaxy)	M	Granted - 07/03/2012	COW
469	prasanna V Ghotage	S	Granted - 06/03/2012	COW
470	Chowgule & Company Private Limited	M	Granted - 06/03/2012	COW
471	V.M. Salgaocar Sales International (Mobile Screening Plants)	S	Granted - 06/03/2012	COW
472	Bogmallo Beach Resort	M	Granted - 06/03/2012	COW
473	Goa Sponge & Power Ltd	L	Granted - 01/03/2012	COW
474	Sotodecor Pvt. Ltd.	S	Granted - 29/02/2012	COW
475	Sunrise Electromelt Ltd.	L	Granted - 29/02/2012	COW
476	Phoenix Park Inn (Unit Of Phoenix Township Limited)	L	Granted - 28/02/2012	COW
477	V.M. Salgaocar And Brother Private	L	Granted - 28/02/2012	COW

	Limited-Hotel Division, Goa Marriott Resort			
478	Roots Corporation Limited ( Ginger Hotels)	L	Granted - 28/02/2012	COW
479	Cosme Bio-Tech Private Ltd.	S	Granted - 22/02/2012	COW
480	Amona Shipyard Pvt. Ltd. (Ore Loading Facility)	S	Granted - 22/02/2012	COW
481	Cosme Farma Laboratories Limited	S	Granted - 21/02/2012	COW
482	Goan Hotels And Clubs Pvt Ltd	L	Granted - 15/02/2012	COW
483	Sociedade Timblo Irmaos Ltda	S	Granted - 15/02/2012	COW
484	Pg Holiday Inn Private Limited	S	Granted - 15/02/2012	COW
485	Plasticon	M	Granted - 15/02/2012	COW
486	Automobile Corporation Of Goa Ltd - Plant li	L	Granted - 15/02/2012	COW
487	Vintage Bottlers Private Limited	S	Granted - 15/02/2012	COW
488	Vimal Plastics	S	Granted - 15/02/2012	COW
489	Bosch Limited	L	Granted - 08/02/2012	COW
490	Mandovi Pellets,	L	Granted - 07/02/2012	COW
491	M/s Tereza Crushing Enterprises	S	Granted - 07/02/2012	COW
492	Nanu Resort	M	Granted - 07/02/2012	COW
493	Watson Pharma Private Limited	L	Granted - 07/02/2012	COW
494	Cudnem Beneficiation Plant	L	Granted - 07/02/2012	COW
495	M/s Laxmi Twines & Ropes	M	Granted - 07/02/2012	COW
496	Dura-Line India Pvt. Ltd.	L	Granted - 01/02/2012	COW
497	Dry Screening Plant At Godbaim	S	Granted - 31/01/2012	COW
498	Betts India Private Limited	L	Granted - 31/01/2012	COW
499	Elin Electronics Ltd	L	Granted - 31/01/2012	COW
500	Goa Medical Research Private Limited	M	Granted - 31/01/2012	COW
501	Zuari Indian Oil Tanking Ltd.	L	Granted - 31/01/2012	COW
502	Vilashini Cleaning Works	S	Granted - 31/01/2012	COW
503	M/s Goa Formulations Ltd	L	Granted - 25/01/2012	COW
504	Ganesh Benzoplast Limited	S	Granted - 25/01/2012	COW
505	Sunrise Electromelt Ltd.	L	Granted - 25/01/2012	COW
506	Cipla Ltd	L	Granted - 25/01/2012	COW
507	Rivon Engineering Company	S	Granted - 25/01/2012	COW
508	Mr. Ramacanta V. S. Velingkar (Corpadega Iron Ore Mine)	L	Granted - 23/01/2012	COW
509	Automobile Corporation Of Goa Plant li	L	Granted - 20/01/2012	COW
510	V. M. Salgaocar & Bro. Pvt. Ltd. ( Beneficiation Plant )	L	Granted - 20/01/2012	COW
511	safira Coolers	L	Granted - 20/01/2012	COW
512	Arul Linu Grabs Private Limited	S	Granted - 19/01/2012	COW
513	Macbrout Engineering Pvt. Ltd. ,A1\22, Margao Industrial Estate, San Jose De Are	L	Granted - 19/01/2012	COW
514	Nilmac Packaging Industries Ltd.	S	Granted - 19/01/2012	COW
515	V. M. Salgaocar & Bro. Pvt. Ltd. ( Mobile Screening & Crushing Plants ) 6 Nos )	S	Granted - 19/01/2012	COW
516	M/s Bandekar Brothers Private Limited Mobile Screening Plant (Msp)	S	Granted - 18/01/2012	COW
517	Crompton Greaves Ltd	L	Granted - 17/01/2012	COW
518	M/s. Tool X Systems	S	Granted - 10/01/2012	COW

519	Shakuntalabai M Rege (Gutukwadecho Tembo Iron Ore Mine)	S	Granted - 09/01/2012	COW
520	V. M. Salgaocar & Bro. Pvt Ltd (Sancordem-Malpona Iron Ore Mine)	L	Granted - 09/01/2012	COW
521	Sociedade De Fomento Ind Pvt Ltd Quelchem Tour Tambdi Mine, T.C. No. 14 Of 1953	L	Granted - 09/01/2012	COW
522	Vagler Shismamordi Iron Ore Mine	S	Granted - 09/01/2012	COW
523	Rupesh Service & Repair	S	Granted - 05/01/2012	COW
524	M/s Counto Microfine Products Pvt. Ltd.	L	Granted - 05/01/2012	COW
525	Hindustan Coca-Cola Beverages Pvt Ltd.	L	Granted - 29/12/2011	COW
526	Vergo Pharma Research Laboratories Pvt Ltd	M	Granted - 29/12/2011	COW
527	Putzmeister Concrete Machines Pvt. Ltd.,	L	Granted - 29/12/2011	COW
528	Sundaram Industries Ltd.,	S	Granted - 29/12/2011	COW
529	Industrial Marketing Co.	S	Granted - 29/12/2011	COW
530	Sai Service Station Limited	S	Granted - 29/12/2011	COW
531	Aakaash Manufacturing Company Pvt.Ltd	S	Granted - 29/12/2011	COW
532	Parshuram Metaux	M	Granted - 29/12/2011	COW
533	Merck Specialities Private Limited	S	Granted - 29/12/2011	COW
534	Geno Pharmaceuticals Limited	L	Granted - 29/12/2011	COW
535	Rukminirama Steel Rollings Pvt. Limited	S	Granted - 29/12/2011	COW
536	De Nora India Limited	L	Granted - 29/12/2011	COW
537	Gkb Hi-Tech Lenses Pvt.Ltd (Plot 50)	S	Granted - 29/12/2011	COW
538	Nestle India Limited	L	Granted - 29/12/2011	COW
539	Highland Holiday Homes (Goa) Pvt. Ltd	S	Granted - 29/12/2011	COW
540	Victor Hospitals And Medical Services Ltd.	L	Granted - 29/12/2011	COW
541	Glenmark Genercis Limited (Plant li)	L	Granted - 29/12/2011	COW
542	Adelphi Pharmaceuticals	S	Granted - 28/12/2011	COW
543	Indian Plastics	L	Granted - 28/12/2011	COW
544	mspl Gases Ltd	S	Granted - 16/12/2011	COW
545	Prime Mineral Exports Pvt. Ltd.	S	Granted - 08/12/2011	COW
546	M/s J L Baptista	S	Granted - 08/12/2011	COW
547	Automobile Corporation Of Goa Ltd - Plant - I	L	Granted - 08/12/2011	COW
548	Beneficiation Plant At Piligao	L	Granted - 08/12/2011	COW
549	Britacel Silicones Ltd.	S	Granted - 01/12/2011	COW
550	Mabpharm Private Limited	L	Granted - 30/11/2011	COW
551	Stp, Phase li	S	Granted - 30/11/2011	COW
552	Chunimolo Or Gotifonda Tembo Colomba Mine	S	Granted - 18/11/2011	COW
553	D.B.Bandodkar Sons Pvt.Ltd (Kothambi Barge Loading Platform/facilities)	S	Granted - 16/11/2011	COW
554	D.B.Bandodkar And Sons Pvt.Ltd (Tixem Barge Loading Platform/facilities)	S	Granted - 16/11/2011	COW
555	Lokmat Media Ltd	L	Granted - 14/11/2011	COW
556	Revathi Synthetics Pvt Ltd	M	Granted - 10/11/2011	COW
557	M/s. Gate Gourmet India Pvt. Ltd.	S	Granted - 10/11/2011	COW
558	Samraj Enterprises	L	Granted - 04/11/2011	COW
559	Sonam Industries	S	Granted - 02/11/2011	COW

560	M/s. Leonoras Motel Rooms,	S	Granted - 28/10/2011	COW
561	M/s Ramdev Polypack	S	Granted - 27/10/2011	COW
562	Mohit Ispat Ltd	L	Granted - 21/10/2011	COW
563	Hindustan Petroleum Corporation Limited	S	Granted - 20/10/2011	COW
564	Srithik Ispat Pvt. Ltd.	M	Granted - 14/10/2011	COW
565	Gulf Goan Hotels Company Ltd - Hotel Goan Heritage	S	Granted - 13/10/2011	COW
566	Bateagal Mine Bearing T.C No. 12\1953	S	Granted - 11/10/2011	COW
567	Cipla Ltd	L	Granted - 11/10/2011	COW
568	Sinori Jetty	S	Granted - 11/10/2011	COW
569	G.N. Agrawal, Beneficiation Plant At Huldool Dongor Bimbol Iron Ore Mine	S	Granted - 04/10/2011	COW
570	Finolex Cables Limited (Cccr Division)	L	Granted - 04/10/2011	COW
571	Dona Sylvia	S	Granted - 03/10/2011	COW
572	M/s. Khr Hospitality India Limited	M	Granted - 29/09/2011	COW
573	Indian Oil Corporation Limited	S	Granted - 29/09/2011	COW
574	Sai Service Station Limited	S	Granted - 23/09/2011	COW
575	M/s Fantasy Spirit Pvt. Ltd.	S	Granted - 19/09/2011	COW
576	The Goa Industrial Co.Op.Sty.Ltd	L	Granted - 19/09/2011	COW
577	Ifb Industries Ltd.	S	Granted - 14/09/2011	COW
578	Aventis Pharma Limited	L	Granted - 12/09/2011	COW
578	Berger Becker Coatings Private Limited.,	S	Granted - 09/09/2011	COW
580	M/s. Devyani Food Industries Pvt. Ltd.	L	Granted - 09/09/2011	COW
581	Vila Goesa Beach Resort	S	Granted - 09/09/2011	COW
582	Sociedade Timblo Irmaos Ltda	S	Granted - 05/09/2011	COW
583	Panduronga Timblo Industrias (Bondra Advona Mine)	S	Granted - 05/09/2011	COW
584	Titan Timeproducts Ltd.	L	Granted - 29/08/2011	COW
585	Colgate Palmolive (India) Ltd	L	Granted - 26/08/2011	COW
586	Quality Foods	S	Granted - 24/08/2011	COW
587	M/s. La Calypso Hotels Pvt. Ltd.,	L	Granted - 24/08/2011	COW
588	Atlas Fisheries Pvt Ltd	S	Granted - 22/08/2011	COW
589	Cadila Healthcare Ltd.	L	Granted - 22/08/2011	COW
590	Virginia Simoes, Coti Dongor Pirla Iron Ore Mine, (T.C.No.10 Of 1953)	S	Granted - 19/08/2011	COW
591	Zambolimolacho Soddo Iron Ore Mines	S	Granted - 19/08/2011	COW
592	Kesarval Springs Distillers Pvt Ltd	S	Granted - 17/08/2011	COW
593	Berger Paints India Limited	L	Granted - 17/08/2011	COW
594	Richa Polyplast Private Limited	S	Granted - 16/08/2011	COW
595	Ramdev Plastic Industries	S	Granted - 16/08/2011	COW
596	Damodar Mangalji & Co. Ltd. (Beneficiatin Plant No 1)	L	Granted - 02/08/2011	COW
597	Asni Dongor Iron Ore Mine	S	Granted - 02/08/2011	COW
598	Dmmc (Plant No. 2)	S	Granted - 02/08/2011	COW
599	M/s. Advani Hotels & Resorts (I) Ltd., ( Ramada Caravella Beach Resort )	L	Granted - 02/08/2011	COW
600	Aaswad Cashew Industries	L	Granted - 02/08/2011	COW
601	Melca Dongor Iron Ore Mine	S	Granted - 02/08/2011	COW
602	Goa Rajee Auto Pvt Ltd	S	Granted - 02/08/2011	COW
603	Chemtrols Industries Ltd	M	Granted - 02/08/2011	COW

604	Esteem Industries Pvt. Ltd.,	M	Granted - 02/08/2011	COW
605	Sesa Goa Limited Ship Building Division	L	Granted - 27/07/2011	COW
606	Devashri Garden	S	Granted - 21/07/2011	COW
607	Nestle India Limited	L	Granted - 21/07/2011	COW
608	Excel Prints & Packs	S	Granted - 20/07/2011	COW
609	Vimal Art Printery	S	Granted - 19/07/2011	COW
610	Damodar Mangalji & Co. Ltd.(Plant No.4b)	L	Granted - 15/07/2011	COW
611	Procter & Gamble Hygiene & Health Care Ltd.	L	Granted - 15/07/2011	COW
612	Goa Carbon Limited	S	Granted - 13/07/2011	COW
613	M/s Mauli Gram Vikas Society	L	Granted - 13/07/2011	COW
614	M/s. Laxmi Industries,	S	Granted - 11/07/2011	COW
615	M/s Godrej Ijm Palm Oil Limited	S	Granted - 11/07/2011	COW
616	Lotlikar&Co.	S	Granted - 11/07/2011	COW
617	Karthik Alloys Limited (Rolling Division)	S	Granted - 07/07/2011	COW
618	Mandovi Casting Pvt Ltd	S	Granted - 07/07/2011	COW
619	Reliance Infrastructure Ltd,Goa Power Station	L	Granted - 07/07/2011	COW
620	Mrf Ltd.	L	Granted - 06/07/2011	COW
621	Tulip Diagnostics (P).Ltd.	S	Granted - 05/07/2011	COW
622	Resorte De Tio Carmino	S	Granted - 05/07/2011	COW
623	M/s.Tibna Metal Industries	S	Granted - 04/07/2011	COW
624	Infrastructure Logistics Pvt. Ltd.	S	Granted - 04/07/2011	COW
625	Bt Composites Ltd.	L	Granted - 04/07/2011	COW
626	Mahalaxmi Ice & Cold Storage	S	Granted - 04/07/2011	COW
627	Tech Force Composites Pvt.Ltd.	S	Granted - 04/07/2011	COW
628	M/s. Goa Coastal Resorts & Recreation Pvt. Ltd.,	S	Granted - 04/07/2011	COW
629	Masibus Electronics Pvt Ltd	S	Granted - 04/07/2011	COW
630	Sociedade De Fomento Ind. Pvt. Ltd., Capxem Iron Ore Transshipment Terminal	S	Granted - 04/07/2011	COW
631	Chowgule & Company Pvt Ltd, Crushing & Screening Plant At Pale Mines	S	Granted - 01/07/2011	COW
632	Shraddha Ispat Private Limited	L	Granted - 01/07/2011	COW
633	Chowgule & Company Private Limited (Dry Screening Plant At Sirigao Mines)	S	Granted - 01/07/2011	COW
634	Timblo Pvt. Ltd, Dignem Iron Ore Beneficiation Plant	S	Granted - 01/07/2011	COW
635	Dempo Shipbuilding & Engineering Pvt. Ltd.	M	Granted - 01/07/2011	COW
636	Sociadade De Fomento Industrial Pvt. Ltd.	S	Granted - 01/07/2011	COW
637	Sociadade De Fomento Industrial Pvt. Ltd.	S	Granted - 01/07/2011	COW
638	M/s Gouri Enterprises	S	Granted - 27/06/2011	COW
639	M/s.Harp Resorts Pvt. Ltd., ( Bay Watch Resort )	L	Granted - 27/06/2011	COW
640	M/s. Zuri Hospitality Pvt. Ltd.(The Zuri White Sands, Goa Resort & Casi)	L	Granted - 23/06/2011	COW
641	Chuninimol Iron Ore Mine	S	Granted - 22/06/2011	COW
642	Shree Print & Pack	S	Granted - 22/06/2011	COW
643	Haidar Kassim Khan, Vangi Bindi Advona Iron & Manganese Ore Mine	L	Granted - 22/06/2011	COW

644	Kashinath Talaulicar, Cormolachem Moll	S	Granted - 21/06/2011	COW
645	Cipla Ltd	L	Granted - 20/06/2011	COW
646	Siddharth Chemicals	S	Granted - 20/06/2011	COW
647	Cgppi Adhesive Products Ltd	L	Granted - 16/06/2011	COW
648	Xec Abdul Gofur (Pola Dongor Mine)	S	Granted - 16/06/2011	COW
649	Panandiker Research And Development Private Ltd.	S	Granted - 16/06/2011	COW
650	Panduronga Timblo Industrias	S	Granted - 16/06/2011	COW
651	Emperor Fabricators	S	Granted - 13/06/2011	COW
652	Trinity Plastopacks	S	Granted - 13/06/2011	COW
653	Sesa Goa Ltd, Codli Iron Ore Mines	L	Granted - 10/06/2011	COW
654	MS. V. G. QUENIM (100% EOU)	M	Granted - 10/06/2011	COW
655	V. M. Salgaocar & Bro. Pvt. Ltd. ( Mobile Screening & Crushing Plants ) 6 Nos )	S	Granted - 10/06/2011	COW
656	Parle (Exports) Pvt.Ltd	S	Granted - 10/06/2011	COW
657	M/s. John Distilleries Pvt. Ltd.	L	Granted - 10/06/2011	COW
658	Kilito Engineering Works	S	Granted - 10/06/2011	COW
659	V.S. Dempo & Co. Pvt. Ltd., Colomba Iron Ore Mine	L	Granted - 10/06/2011	COW
660	Damodar Mangalji & Co. Ltd. (Ambevalim Bharad Mine)	S	Granted - 09/06/2011	COW
661	Nanu Resort	M	Granted - 09/06/2011	COW
662	Goa Paper And Board Converters Pvt. Ltd.	S	Granted - 08/06/2011	COW
663	Dempo Mining Corporation Pvt. Ltd, Barge Loading Jetty At Sarmanus	S	Granted - 08/06/2011	COW
664	Manohar Packagings Private Limited	L	Granted - 08/06/2011	COW
665	Rukminirama Steel Rollings Pvt. Limited	S	Granted - 03/06/2011	COW
666	Ambey Metallic Ltd	M	Granted - 03/06/2011	COW
667	Vayudoot Industries	S	Granted - 03/06/2011	COW
668	M/s. Mandovi Ore Carrier	S	Granted - 03/06/2011	COW
669	Damodar Mangalji & Co. Ltd. (Jetty No. 2)	S	Granted - 01/06/2011	COW
670	Damodar Mangalji & Co. Ltd. (Jetty No. 1)	S	Granted - 01/06/2011	COW
671	Damodar Mangalji & Co. Ltd. (Plant No.4a)	S	Granted - 01/06/2011	COW
672	Damodar Mangalji & Co. Ltd. (Beneficiatin Plant No 1)	L	Granted - 01/06/2011	COW
673	Hira Film Exhibitors	L	Granted - 01/06/2011	COW
674	Beneficiation Plant - Bimbol	S	Granted - 01/06/2011	COW
675	Centaur Pharmaceuticals Pvt. Ltd. (Plant li)	M	Granted - 01/06/2011	COW
676	Chowgule & Company Private Limited (Khazan Jetty)	S	Granted - 01/06/2011	COW
678	Chowgule & Company Private Limited (Washing Plant-li)	S	Granted - 01/06/2011	COW
679	Chowgule & Company Private Limited (Costi Beneficiation Plant)	S	Granted - 01/06/2011	COW
680	Sesa Goa Limited Ship Building Division	L	Granted - 01/06/2011	COW
681	Goa State Co-Operative Milk Producers Union Ltd.	S	Granted - 01/06/2011	COW
682	M/s. Hotel Avenue	L	Granted - 27/05/2011	COW
682	Panduronga Timblo Industrias	S	Granted - 27/05/2011	COW
684	Crompton Greaves Ltd	S	Granted - 27/05/2011	COW

685	Hazardous Waste Management System	S	Granted - 27/05/2011	COW
686	Hindustan Petroleum Corporation Limited	S	Granted - 27/05/2011	COW
687	Zuari Industries Limited	L	Granted - 27/05/2011	COW
688	Counto Automobiles Pvt. Ltd.	S	Granted - 27/05/2011	COW
689	Kamat Holiday Homes	L	Granted - 27/05/2011	COW
690	Beneficiation Plant At Dhabdhaba	M	Granted - 27/05/2011	COW
691	Beneficiation Plant At Piligao	L	Granted - 27/05/2011	COW
692	Sociedade De Fomento Ind. Pvt. Ltd., Capxem Iron Ore Transshipment Terminal	S	Granted - 27/05/2011	COW
693	V. M. Salgaoncar & Bro. Pvt Ltd (Sigao Iron Ore Mine)	L	Granted - 27/05/2011	COW
694	Ambey Metallic Ltd	M	Granted - 27/05/2011	COW
695	Shirdi Steel Re-Rollers Pvt. Ltd	S	Granted - 27/05/2011	COW
696	Amona Shipyard Pvt. Ltd. (Ore Loading Facility)	S	Granted - 27/05/2011	COW
697	South West Port Ltd. (Berth No. 5a & 6a)	L	Granted - 27/05/2011	COW
698	Titan Timeproducts Ltd.	L	Granted - 27/05/2011	COW
699	Grand Organics Pvt. Ltd.,	S	Granted - 27/05/2011	COW
700	Automobile Corporation Of Goa Ltd - Plant - I	L	Granted - 27/05/2011	COW
701	Lafarge Aggregates & Concrete India Pvt. Ltd.	S	Granted - 27/05/2011	COW
702	Maharudra Bottling Company	S	Granted - 24/05/2011	COW
703	M/s Laxmi Polyprints	S	Granted - 24/05/2011	COW
704	Laxmi Plast	M	Granted - 24/05/2011	COW
705	Unichem Laboratories Limited	L	Granted - 24/05/2011	COW
706	M/s. Ramacanta V. S. Velingkar (100% E.O.U.)	S	Granted - 24/05/2011	COW
707	M/s. Ramacanta Velingkar Minerals (100% E.O.U.)	S	Granted - 24/05/2011	COW
708	Ongc Ipshem Goa	S	Granted - 24/05/2011	COW
709	Kodak India Pvt. Ltd.	L	Granted - 24/05/2011	COW
710	M/s Prateek Alloys Pvt. Ltd.	S	Granted - 24/05/2011	COW
711	Tata Consultancy Services Ltd.	L	Granted - 24/05/2011	COW
712	Lafarge Aggregates & Concrete India Pvt. Ltd.	S	Granted - 24/05/2011	COW
713	M/s. John Distilleries Pvt. Ltd.	L	Granted - 24/05/2011	COW
714	M/s New Era Handling Agency	M	Granted - 24/05/2011	COW
715	Goa Energy Private Limited	L	Granted - 24/05/2011	COW
716	Colorcon Asia Private Limited	L	Granted - 24/05/2011	COW
717	R.S. Shetye & Bros. (Deulem Mine)	S	Granted - 23/05/2011	COW
718	Acoustic Components Private Limited	S	Granted - 29/04/2011	COW
719	Power Engineering (India) Pvt Ltd	S	Granted - 29/04/2011	COW
720	Hindustan Lever Limited	L	Granted - 29/04/2011	COW
721	Funskool India Ltd	L	Granted - 29/04/2011	COW
722	Mahalasa Acoustic Private Limited	S	Granted - 29/04/2011	COW
723	Fomento Resorts Hotels Ltd. (Cidade De Goa)	L	Granted - 29/04/2011	COW
724	Botwadiacho Dongor Iron Ore Mines	M	Granted - 29/04/2011	COW
725	Venus Ethoxyethers Pvt. Ltd.,	S	Granted - 29/04/2011	COW
726	Mareto Sodo Iron Ore Mine	L	Granted - 25/04/2011	COW

727	Curpem Iron Ore Mine	L	Granted - 25/04/2011	COW
728	Jeevanlakshmi Packaging Solutions Pvt Ltd	L	Granted - 25/04/2011	COW
729	M/s Renuka Engineering Works	S	Granted - 21/04/2011	COW
730	B.M.K. Industries	S	Granted - 21/04/2011	COW
731	Shirdi Steel Re-Rollers Pvt. Ltd	S	Granted - 21/04/2011	COW
732	Bharat Petroleum Corporation Ltd	L	Granted - 19/04/2011	COW
733	Brite Industries	S	Granted - 19/04/2011	COW
734	M.V. Casino Royale	M	Granted - 19/04/2011	COW
735	M.V. 'Caravela', M/s Advani Pleasure Cruise Company Private Limited	L	Granted - 19/04/2011	COW
736	Teracom Limited	S	Granted - 13/04/2011	COW
737	M/s Shantadurga Metal Industries	S	Granted - 12/04/2011	COW
738	Polo Dongor Mine, Maria De Lourdes Filomena De Albuquerque	S	Granted - 08/04/2011	COW
739	Shraddha Ispat Pvt. Ltd. (Meelting Div)	M	Granted - 08/04/2011	COW
740	Goa Shipyard Limited	L	Granted - 08/04/2011	COW
741	Andrew Telecommunications Indis Pvt Ltd	L	Granted - 08/04/2011	COW
742	M/s. Bandekar Brothers Pvt. Ltd. (Vibrating Screening Plant)	S	Granted - 07/04/2011	COW
743	M/s Goa Granite	S	Granted - 01/04/2011	COW
744	A & A Hotels Pvt Ltd	S	Granted - 02/08/2011	COX

# ANNEXURE III

## MINARS DATA FOR THE YEAR APRIL 2011 – MARCH 2012

Table 3 - a : MINARS FOR THE MONTH APRIL 2011

Sr. No	Parameters	R. Chapora	R. Kalna	R. Mapusa	R. Assanora	R. Valvanti	R. Madei	R. Khandepar, Opa	R. Khandepar, Codli	R. Kushavati	R. Talpona	R. Sal, Panzorconi	R. Sal, Mobor	Harwale Waterfall	R. Bicholim
1	Total Dissolved Solids (mg/l)	112.0	100.0	9200.0	8.0	140.0	52.0	88.0	164.0	272	8.0	852.0	37248.0	16.0	256.0
2	Total Suspended solids(mg/l)	12.0	10.0	15.0	12.0	11.0	9.0	10.0	18.0	14.0	11.0	10.0	12.0	14.0	17.0
3	Hardeness(mg/l)	28.0	42.0	3600.0	18.0	24.0	52.0	42.0	34.0	74.0	24.0	400.0	13600.0	30.0	400.0
4	Flouride(mg/l)	0.3	BDL	0.96	0.4	0.23	0.17	0.32	0.17	0.18	0.19	0.39	-	0.07	0.3
5	Sulphate(mg/l)	3.59	3.40	478.78	2.9	2.04	1.37	3.71	2.23	8.31	1.54	61.88	2234.1	BDL	4.83
6	Total Alkalinity(mg/l)	69.0	18.0	61.0	25.0	35.0	33.0	25.0	29.0	62.0	44.0	88.0	82.0	94.0	15.0
7	Sodium(mg/l)	5.3	5.9	274.8	4.6	5.0	5.0	3.3	2.8	3.9	6.9	84.7	552.0	5.3	8.7
8	Potassium(mg/l)	1.1	1.1	52.7	0.9	0.6	1.1	0.5	0.4	0.7	1.0	9.4	108.0	0.5	1.4
9	Calcium(mg/l)	14.0	16.0	361.0	8.9	8.9	15.0	11.0	16.0	18.0	8.0	10.0	1283.0	10.0	19.0
10	Magnesium(mg/l)	2.4	6.0	787.0	2.0	4.0	9.0	8.0	4.4	14.0	4.0	95.0	293.0	5.0	93.0
11	Nickel(mg/l)	0.07	0.02	0.11	0.06	0.07	0.06	0.07	0.07	0.03	0.04	0.05	0.19	0.04	0.04
12	Copper(mg/l)	0.01	0.01	0.01	0.03	0.06	0.08	0.08	0.04	0.02	0.06	0.04	0.04	0.04	0.05
13	Chromium(mg/l)	0.06	0.05	0.21	0.02	0.02	0.01	ND	0.004	0.03	0.003	0.004	0.75	0.001	0.003
14	Cadmium(mg/l)	0.01	0.004	0.01	0.01	0.01	0.01	0.01	0.01	0.003	0.01	0.002	0.03	0.01	0.008
15	Zinc(mg/l)	0.25	0.05	0.001	0.04	0.03	0.03	0.03	0.05	0.36	0.01	0.29	ND	0.02	0.03
16	Lead(mg/l)	0.05	0.06	0.08	0.07	0.09	0.12	0.13	0.13	0.15	0.16	0.18	0.40	0.21	0.23
17	Iron(mg/l)	0.95	0.06	0.07	0.13	0.13	0.17	0.23	0.59	0.54	0.18	3.26	0.17	0.10	0.12
18	Alpha BHC(mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Gamma BHC (Lindane) (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
20	OP DDT(mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
21	PP DDT(mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
22	Alpha Endosulphane (mg/l)	0.001	0.0005	0.003	0.004	0.003	0.002	ND	0.005	0.001	0.008	0.002	0.002	ND	0.002
23	Beta Endosulphane(mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003	ND	ND	ND	ND
24	Diieldrin(mg/l)	ND	0.003	ND	0.007	ND	ND	ND	ND	ND	0.005	ND	ND	ND	ND
25	Carboryl (Carbamate) (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.006	ND
26	2,4 D, Aldrin(mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Table 3 – b: MINARS DATA FOR THE MONTH OF APRIL 2011**

Sr. No	Parameters	Cumbarjua canal	R. Zuari, Pancha wadi	R. Zuari, Cortali m	Dando Mollo Creek	R. Manovi, Panaji	R. Mandovi, Tonva Marcela	Salauli m Reservo ir	Borewell at M/s. Zuari Industries	Borewell at Sancoale I.E	Borewell at Verna I.E	Borewell at Kundaim I.E	Borewell at Corlim I.E	Borewell at Pilerne I.E
1	Total Dissolved Solids (mg/l)	29844.0	6764.0	31672.0	4368.0	38692.0	30916.0	676.0	472.0	404.0	468.0	624.0	212.0	420.0
2	Total Suspended solids(mg/l)	18.0	17.0	18.0	19.0	18.0	17.0	10.0	8.0	7.0	7.0	8.0	6.0	7.0
3	Hardness(mg/l)	9400.0	4400.0	4000.0	2000.0	12000.0	9200.0	22.0	106.0	46.0	152.0	88.0	8.0	56.0
4	Flouride(mg/l)	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Sulphate(mg/l)	1964.4	901.39	2251.5	412.91	2170.1	1757.1	11.03	11.29	4.18	54.28	19.52	BDL	6.27
6	Total Alkalinity(mg/l)	85.0	23.0	25.0	20.0	23.0	21.0	36.0	38.0	41.0	48.0	37.0	41.0	47.0
7	Sodium(mg/l)	490.4	283.8	537.2	188.7	556.1	456.2	8.1	10.2	9.0	12.4	6.4	5.8	11.2
8	Potassium(mg/l)	96.8	57.4	104.8	42.4	108.0	90.2	0.7	1.7	1.0	4.9	5.5	0.3	5.3
9	Calcium(mg/l)	1764.0	3527.0	1202.0	1844.0	1683.0	2325.0	10.0	26.0	10.0	34.0	35.1	7.0	14.0
10	Magnesium(mg/l)	1856.0	212.0	680.0	38.0	2507.0	1670.0	3.0	19.0	9.0	29.0	73.0	0.2	10.0
11	Nickel(mg/l)	0.24	0.07	0.04	0.07	0.33	0.34	0.06	0.02	0.001	0.08	0.08	0.04	0.04
12	Copper(mg/l)	0.06	0.01	0.06	ND	0.08	0.06	ND	ND	ND	0.02	0.08	0.07	0.04
13	Chromium(mg/l)	0.87	0.27	0.9	0.17	0.33	0.86	0.04	0.05	0.04	0.07	0.07	0.009	0.07
14	Cadmium(mg/l)	0.04	0.01	0.07	0.01	0.06	0.06	0.002	0.004	ND	0.003	0.008	0.005	0.005
15	Zinc(mg/l)	ND	0.04	ND	ND	ND	0.003	0.03	ND	0.001	0.06	0.18	0.09	0.02
16	Lead(mg/l)	0.49	0.36	0.76	0.34	0.76	0.72	0.44	0.31	0.31	0.34	0.36	0.35	0.37
17	Iron(mg/l)	0.25	1.14	1.13	0.13	0.29	0.70	0.19	ND	ND	0.12	2.24	0.23	0.18
18	Alpha BHC (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Gamma BHC (Lindane) (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
20	OP DDT(mg/l)	ND	ND	ND	ND	ND	ND	ND	0.005	ND	ND	ND	ND	ND
21	PP DDT(mg/l)	ND	ND	ND	ND	ND	ND	ND	0.037	ND	ND	ND	ND	ND
22	Alpha Endosulphane (mg/l)	0.003	0.002	0.003	0.002	0.002	0.007	0.01	0.012	ND	0.014	ND	0.018	ND
23	Beta Endosulphane(mg/l)	ND	ND	ND	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND
24	Dieldrin(mg/l)	ND	ND	ND	ND	0.005	ND	ND	ND	ND	0.033	ND	0.067	ND
25	Carbaryl (Carbamate) (mg/l)	ND	ND	ND	0.008	ND	ND	0.025	ND	ND	0.006	ND	ND	ND
26	2,4 D, Aldrin(mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**Table 3 - c: MINARS DATA FOR THE MONTH OF APRIL 2011**

Sr. No	Parameters	Mayem Lake	Agricultural Canal U/s of Cuncolim I.E	Agricultural Canal d/s of Cuncolim I.E	R. Sal at Rumder	R. Sal, Orlim	R. Sal, Khareband	R. Sal, Navelim	R. Sal, Jakni band
1	Total Dissolved Solids (mg/l)	160.0	40.0	28.0	372.0	180.0	620.0	448.0	440.0
2	Total Suspended solids(mg/l)	15.0	8.0	8.0	18.0	17.0	19.0	20.0	20.0
3	Hardeness(mg/l)	16.0	20.0	18.0	800.0	5000.0	60.0	4800.0	8000.0
4	Flouride(mg/l)	0.14	0.42	0.14	-	-	-	-	-
5	Sulphate(mg/l)	1.82	3.54	5.76	0.67	1731.8	13.03	8.87	19.02
6	Total Alkalinity(mg/l)	90.0	30.0	28.0	50.0	44.0	21.0	27.0	30.0
7	Sodium(mg/l)	3.8	3.2	3.5	14.2	420.6	17.3	10.8	20.6
8	Potassium(mg/l)	0.3	0.5	0.5	1.8	84.3	3.1	1.6	2.9
9	Calcium(mg/l)	3.0	5.6	6.4	18.0	1122.0	20.0	13.0	17.0
10	Magnesium(mg/l)	6.2	3.5	3.9	190.0	942.0	10.0	1163.0	190.0
11	Nickel(mg/l)	0.03	0.04	0.05	0.02	0.17	0.02	0.03	ND
12	Copper(mg/l)	0.03	0.001	0.01	0.04	0.05	0.03	ND	0.02
13	Chromium(mg/l)	0.01	0.04	0.02	0.07	0.61	0.05	0.006	0.02
14	Cadmium(mg/l)	0.004	0.003	0.01	0.003	0.03	0.007	0.001	0.27
15	Zinc(mg/l)	0.02	0.14	0.04	0.02	ND	0.02	0.03	0.03
16	Lead(mg/l)	0.24	0.07	0.05	0.37	0.63	0.39	0.39	0.40
17	Iron(mg/l)	0.1	0.08	0.3	0.84	0.27	0.86	0.11	0.51
18	Alpha BHC(mg/l)	ND	ND	ND	ND	0.003	ND	ND	ND
19	Gama BHC (Lindane) (mg/l)	ND	ND	ND	ND	0.02	0.008	ND	ND
20	OP DDT(mg/l)	ND	ND	ND	ND	ND	ND	ND	ND
21	PP DDT(mg/l)	ND	ND	ND	ND	0.397	0.122	0.057	ND
22	Alpha Endosulphane (mg/l)	0.002	0.002	0.003	ND	ND	0.031	ND	0.003
23	Beta Endosulphane(mg/l)	ND	ND	ND	ND	0.041	ND	ND	ND
24	Dieldrin(mg/l)	ND	0.01	0.007	ND	0.023	0.051	0.018	0.003
25	Carboryl (Carbamate) (mg/l)	ND	ND	ND	ND	ND	ND	0.005	ND
26	2,4 D, Aldrin(mg/l)	ND	ND	ND	ND	ND	ND	ND	ND

**Table 3 - d: RIVER KALNA AT CHANDEL, PERNEM**

Sr. No	Parameters	Apr-11	Jul-11	Oct-11	Jan-12
1	pH	6	6.36	6.33	7.39
2	Temperature °C	26°C	23°C	29°C	28°C
3	Conductivity	108.6 µs/cm	72.6 µs/cm	72.2 µs/cm	69.9 µs/cm
4	Dissolved Oxygen mg/l	8.46	7.1	6.8	7.49
5	Turbidity (NTU)	1.63	5.75	3.73	3.86
6	Nitrite Nitrogen mg/l	0.001	0.03	BDL	0.003
7	Nitrogen(Nitrate) mg/l	0.12	0.28	0.56	0.12
8	Phosphate mg/l	0.06	0.05	0.05	0.06
9	BOD mg/l	1.3	0.9	0.9	1.12
10	COD mg/l	0.5	6.8	3.2	0.8
11	Chloride mg/l	350	29.6	4.99	97.4
12	Fecal Coliform MPN/100 ml	9	4	1	NIL
13	Total Coliform MPN/100 ml	170	150	190	65
14	Ammonia mg/l	0.14	0.05	0.01	0.02

**Table 3 - e: RIVER ASSANORA AT ASSANORA**

Sr. No	Parameters	Apr-11	Jul-11	Oct-11	Jan-12
1	pH	6	5.56	6.31	7.58
2	Temperature °C	31°C	28°C	28°C	26°C
3	Conductivity	84.3 µs/cm	62.4 µs/cm	64.6 µs/cm	52.4 µs/cm
4	Dissolved Oxygen mg/l	7.16	7.1	8.5	7.65
5	Turbidity (NTU)	3.48	17.9	9.52	3.7
6	Nitrite Nitrogen mg/l	BDL	0.02	BDL	0.001
7	Nitrogen(Nitrate) mg/l	0.33	0.26	0.22	0.16
8	Phosphate mg/l	0.17	0.05	0.2	0.11
9	BOD mg/l	1.97	1.2	2.3	1.11
10	COD mg/l	7	6.4	8	0.4
11	Chloride mg/l	8.5	15	2.9	3.42
12	Fecal Coliform	7	NIL	9	NIL
13	Total Coliform	175	NIL	170	15
14	Ammonia mg/l	0.47	0.02	0.14	BDL

**Table 3 - f: RIVER VALVANTI AT SANQUELIM**

Sr. No	Parameters	Apr-11	Jul-11	Oct-11	Jan-12
1	pH	6	5.42	6.64	7.54
2	Temperature °C	32°C	28°C	29°C	28°C
3	Conductivity	87.0 µs/cm	61.9 µs/cm	62.7 µs/cm	71.5 µs/cm
4	Dissolved Oxygen mg/l	7.16	7.1	7.8	7.16
5	Turbidity (NTU)	2.9	6.09	13.1	5.06
6	Nitrite Nitrogen mg/l	BDL	0.0088	BDL	0.002
7	Nitrogen(Nitrate) mg/l	0.1	0.25	0.04	0.14
8	Phosphate mg/l	0.14	0.07	0.05	0.03
9	BOD mg/l	2.62	0.9	2.3	3.07
10	COD mg/l	5	6.4	6	1.6
11	Chloride mg/l	10	15	1.93	3.42
12	Fecal Coliform	4	11	9	9
13	Total Coliform	125	300	175	175
14	Ammonia mg/l	0.2	0.03	0.02	0.02

**Table 3 - g: RIVER MADEI AT DABOSE, VALPOI**

Sr. No	Parameters	Apr-11	Jul-11	Oct-11	Jan-12
1	pH	6	5.25	6.38	7.45
2	Temperature °C	33°C	28°C	28°C	29°C
3	Conductivity	137.2 µs/cm	71.9 µs/cm	80 µs/cm	93.8 µs/cm
4	Dissolved Oxygen mg/l	6.51	7.1	8.1	7
5	Turbidity (NTU)	2.31	31.1	5.42	2.49
6	Nitrite Nitrogen mg/l	0.001	0.05	BDL	0.002
7	Nitrogen(Nitrate) mg/l	0.03	0.71	0.21	0.03
8	Phosphate mg/l	0.15	0.04	0.12	0.04
9	BOD mg/l	1	1.2	2	1.12
10	COD mg/l	6	5.2	6.5	5.2
11	Chloride mg/l	9	11	1.93	3.91
12	Fecal Coliform	4	7	7	NIL
13	Total Coliform	150	250	165	11
14	Ammonia mg/l	0.13	0.06	0.02	0.01

**Table 3 - h: RIVER KHANDEPAR, OPA, PONDA**

Sr. No	Parameters	Apr-11	May-11	Jul-11	Oct-11	Jan-12
1	pH	6.05	5.89	5.32	5.92	7.05
2	Temperature °C	33°C	28°C	22°C	30°C	29°C
3	Conductivity	115.2 µs/cm	117.8µs/cm	70.1µs/cm	67.7µs/cm	80.5µs/cm
4	Dissolved Oxygen mg/l	6.09	6.8	7.81	7.4	7.2
5	Turbidity (NTU)	3.49	3.39	22.6	5.69	2.81
6	Nitrite Nitrogen mg/l	BDL	0.02	BDL	BDL	0.002
7	Nitrogen(Nitrate) mg/l	0.05	0.15	0.15	0.99	0.16
8	Phosphate mg/l	0.13	0.06	0.02	0.02	0.05
9	BOD mg/l	3.93	0.9	1.64	1.6	0.29
10	COD mg/l	22	6	8	2.4	4.4
11	Chloride mg/l	8.5	15	3.17	5.99	3.91
12	Fecal Coliform	7	11	4	14	NIL
13	Total Coliform	145	100	125	165	11
14	Ammonia mg/l	0.17	0.04	0.13	0.032	BDL

**Table 3 - i: RIVER TALPONA AT CANACONA**

Sr. No	Parameters	Apr-11	Jul-11	Oct-11	Jan-12
1	pH	7.31	6.03	5.81	6.6
2	Temperature °C	32°C	22°C	32°C	30°C
3	Conductivity	94.9 µs/cm	69.4 µs/cm	66.8 µs/cm	67 µs/cm
4	Dissolved Oxygen mg/l	6.5	6.8	7.4	6.19
5	Turbidity (NTU)	2.52	5.63	4.68	2.32
6	Nitrite Nitrogen mg/l	0.006	0.021	BDL	0.002
7	Nitrogen(Nitrate) mg/l	0.02	0.5	0.25	0.06
8	Phosphate mg/l	0.15	0.04	0.03	0.02
9	BOD mg/l	0.6	1.2	1.2	0.66
10	COD mg/l	8	7.6	7.2	9.2
11	Chloride mg/l	11.5	13.5	5.99	5.87
12	Fecal Coliform	4	4	7	NIL
13	Total Coliform	145	175.4	175	NIL
14	Ammonia mg/l	0.11	0.03	0.01	BDL

**Table 3 - j: RIVER ZUARI AT PANCHAWADI**

Sr. No	Parameters	Apr-11	Jul-11	Oct-11	Jan-12
1	pH	7.03	6.01	7.85	8
2	Temperature °C	31°C	26°C	31°C	28°C
3	Conductivity	16.24 ms/cm	14.12ms/cm	145.9µs/cm	2729µs/cm
4	Dissolved Oxygen mg/l	6.5	6.8	6.5	6.5
5	Turbidity (NTU)	5.93	9.08	9.96	6.2
6	Nitrite Nitrogen mg/l	0.05	0.03	BDL	0.005
7	Nitrogen(Nitrate) mg/l	0.01	0.6	0.14	0.09
8	Phosphate mg/l	0.15	0.09	0.007	0.07
9	BOD mg/l	0.9	0.9	1.6	1.28
10	COD mg/l	4	16.4	2.4	1.2
11	Chloride mg/l	6800	3303.6	21.33	684.89
12	Fecal Coliform	4	11	NIL	NIL
13	Total Coliform	120	210	10	150
14	Ammonia mg/l	0.22	0.08	0.02	0.02

**Table 3 - k: RIVER ZUARI AT CORTALIM**

Sr. No	Parameters	Apr-11	Jul-11	Oct-11	Jan-12
1	pH	6.29	6.02	6.68	7.43
2	Temperature °C	32°C	26°C	32°C	28°C
3	Conductivity	51.3 ms/cm	48.7ms/cm	32.7ms/cm	44.1ms/cm
4	Dissolved Oxygen mg/l	6.5	7.1	6.51	5.21
5	Turbidity (NTU)	10.6	201	6.21	8.63
6	Nitrite Nitrogen mg/l	0.007	0.02	0.06	0.04
7	Nitrogen(Nitrate) mg/l	0.15	0.61	0.16	0.04
8	Phosphate mg/l	0.13	0.03	0.1	0.12
9	BOD mg/l	0.9	1.2	1.6	1.61
10	COD mg/l	12	19.6	9.6	32.2
11	Chloride mg/l	20000	6356.9	11881.42	15459.03
12	Fecal Coliform	7	7	12	NIL
13	Total Coliform	170	190	220	90
14	Ammonia mg/l	0.06	0.05	0.07	0.03

**Table 3 - l: RIVER MANDОВI AT PANAJI**

Sr. No	Parameters	Apr-11	Jul-11	Oct-11	Jan-12
1	pH	6.38	5.56	6.65	6.68
2	Temperature °C	32°C	22°C	33°C	27°C
3	Conductivity	55.1ms/cm	289.9µs/cm	25.57ms/cm	49.9ms/cm
4	Dissolved Oxygen mg/l	4.557	6.4	5.86	6.51
5	Turbidity (NTU)	10.8	33.6	2.31	3.29
6	Nitrite Nitrogen mg/l	0.005	0.03	0.002	0.01
7	Nitrogen(Nitrate) mg/l	0.7	0.08	0.1	0.55
8	Phosphate mg/l	0.13	0.05	0.34	0.11
9	BOD mg/l	1.635	1.1	2.27	0.99
10	COD mg/l	18	18.4	16	16.4
11	Chloride mg/l	24600	6507.1	12546.11	18296.45
12	Fecal Coliform	11	7	14	4
13	Total Coliform	154	200	200	120
14	Ammonia mg/l	0.05	0.06	0.09	0.01

**Table 3 - m: RIVER MANDОВI AT TONCA MARCELA**

Sr. No	Parameters	Apr-11	Jul-11	Oct-11	Jan-12
1	pH	7.04	5.82	7.12	6.84
2	Temperature °C	32°C	22°C	31°C	28°C
3	Conductivity	38.4 ms/cm	107.5µs/cm	1888 µs/cm	25.78 ms/cm
4	Dissolved Oxygen mg/l	4.88	6.1	6.18	5.7
5	Turbidity (NTU)	7.95	19.4	7.94	5.75
6	Nitrite Nitrogen mg/l	0.09	0.02	0.002	0.06
7	Nitrogen(Nitrate) mg/l	0.06	0.08	0.13	0.19
8	Phosphate mg/l	0.08	0.15	0.05	0.08
9	BOD mg/l	1.96	0.8	0.95	1.71
10	COD mg/l	20	14.4	14.4	21.3
11	Chloride mg/l	21300	4905.3	799.75	8854.7
12	Fecal Coliform	12	7	7	14
13	Total Coliform	195	180	145	215
14	Ammonia mg/l	0.11	0.03	0.06	0.01

**Table 3 - n: BOREWELL IN ZUARI INDUSTRIES LTD, ZUARINAGAR**

Sr. No	Parameters	Apr-11	Oct-11
1	pH	5.9	5.8
2	Temperature °C	27°C	31°C
3	Conductivity	262.2 µs/cm	108.7µs/cm
4	Dissolved Oxygen mg/l	3.9	5.53
5	Turbidity (NTU)	3.3	0.25
6	Nitrite Nitrogen mg/l	0.004	BDL
7	Nitrogen(Nitrate) mg/l	0.31	0.4
8	Phosphate mg/l	0.22	0.42
9	BOD mg/l	2.61	2.61
10	COD mg/l	NIL	4
11	Chloride mg/l	17.5	6.49
12	Fecal Coliform	NIL	NIL
13	Total Coliform	11	23
14	Ammonia mg/l	0.15	0.1

**Table 3 - o: BOREWELL WATER AT SANCOALE INDUSTRIAL ESTATE**

Sr. No	Parameters	Apr-11	Oct-11 11
1	pH	6.38	6.25
2	Temperature °C	27°C	32°C
3	Conductivity	153.7 µs/cm	250.2µs/cm
4	Dissolved Oxygen mg/l	5.85	4.557
5	Turbidity (NTU)	2.56	10.6
6	Nitrite Nitrogen mg/l	0.004	BDL
7	Nitrogen(Nitrate) mg/l	0.7	0.02
8	Phosphate mg/l	0.19	0.06
9	BOD mg/l	1.31	0.66
10	COD mg/l	NIL	2
11	Chloride mg/l	19	7.99
12	Fecal Coliform	NIL	NIL
13	Total Coliform	80	NIL
14	Ammonia mg/l	0.12	0.12

**Table 3 - p: BOREWELL WATER AT VERNA INDUSTRIAL ESTATE**

Sr. No	Parameters	Apr-11	Oct-11
1	pH	6.2	6.55
2	Temperature °C	28°C	32°C
3	Conductivity	387 µs/cm	242.4µs/cm
4	Dissolved Oxygen mg/l	5.85	5.208
5	Turbidity (NTU)	0.82	1.14
6	Nitrite Nitrogen mg/l	0.002	BDL
7	Nitrogen(Nitrate) mg/l	0.08	0.04
8	Phosphate mg/l	0.16	0.21
9	BOD mg/l	1.31	0.98
10	COD mg/l	NIL	2
11	Chloride mg/l	12.5	6.49
12	Fecal Coliform MPN/100 ml	NIL	NIL
13	Total Coliform MPN/100 ml	10	28
14	Ammonia mg/l	0.2	0.11

**Table 3 - q: BOREWELL KUNDAIM INDUSTRIAL ESTATE**

Sr. No	Parameters	Apr-11	Oct-11
1	pH	5.86	5.77
2	Temperature °C	26°C	32°C
3	Conductivity	241.1 µs/cm	147.0µs/cm
4	Dissolved Oxygen mg/l	2.32	6.51
5	Turbidity (NTU)	39.3	4.19
6	Nitrite Nitrogen mg/l	0.001	0.01
7	Nitrogen(Nitrate) mg/l	0.03	1.08
8	Phosphate mg/l	0.18	0.08
9	BOD mg/l	1.73	2.91
10	COD mg/l	NIL	6.8
11	Chloride mg/l	11	12.49
12	Fecal Coliform MPN/100 ml	NIL	NIL
13	Total Coliform MPN/100 ML	NIL	4
14	Ammonia mg/l	0.22	0.09

**Table 3 - r : OPENWELL IN CORLIM INDUSTRIAL ESTATE**

Sr. No	Parameters	Apr-11	Oct-11
1	pH	6.53	6.1
2	Temperature °C	25°C	32°C
3	Conductivity	55.1 µs/cm	45.5µs/cm
4	Dissolved Oxygen mg/l	6.83	8.14
5	Turbidity (NTU)	0.3	0.76
6	Nitrite Nitrogen mg/l	0.002	BDL
7	Nitrogen(Nitrate) mg/l	0.78	0.67
8	Phosphate mg/l	0.38	0.03
9	BOD mg/l	2.29	1.6
10	COD mg/l	NIL	6
11	Chloride mg/l	9	6.49
12	Fecal Coliform MPN/100 ml	NIL	NIL
13	Total Coliform MPN/100 ml	125	4
14	Ammonia mg/l	0.22	0.08

**Table 3 - s: BOREWELL IN PILERNE INDUSTRIAL ESTATE**

Sr. No	Parameters	Apr-11	Oct-11
1	pH	5.9	6.5
2	Temperature °C	28°C	33°C
3	Conductivity	199.8 µs/cm	312 µs/cm
4	Dissolved Oxygen mg/l	2.27	3.26
5	Turbidity (NTU)	1.07	0.93
6	Nitrite Nitrogen mg/l	0.001	BDL
7	Nitrogen(Nitrate) mg/l	0.07	0.32
8	Phosphate mg/l	0.57	0.15
9	BOD mg/l	1.63	0.96
10	COD mg/l	NIL	5.2
11	Chloride mg/l	10	4.99
12	Fecal Coliform MPN/100 ml	4	NIL
13	Total Coliform MPN/100 ml	150	NIL
14	Ammonia mg/l	0.15	0.14

**Table 3 - t: AGRICULTURAL CANAL UPSTREAM OF CUNCOLIM INDUSTRIAL ESTATE**

Sr. No	Parameters	Apr-11	Jul-11	Oct-11	Jan-12
1	pH	7.7	5.34	4.81	5.51
2	Temperature °C	26°C	27°C	31°C	27°C
3	Conductivity	65.1 µs/cm	78.8µs/cm	697µs/cm	49.7µs/cm
4	Dissolved Oxygen mg/l	7.1	6.83	1.95	7.81
5	Turbidity (NTU)	1.4	3.71	2.01	1.83
6	Nitrite Nitrogen mg/l	0.001	BDL	BDL	0.04
7	Nitrogen(Nitrate) mg/l	0.04	1.1	2.18	0.07
8	Phosphate mg/l	0.136	0.03	0.024	0.14
9	BOD mg/l	1.6	1.4	0.97	1
10	COD mg/l	4	4	9.2	1.94
11	Chloride mg/l	8	5.65	44.12	3.91
12	Fecal Coliform MPN/100 ml	4	NIL	NIL	12
13	Total Coliform MPN/100 ml	200	165	4	175
14	Ammonia mg/l	0.17	0.15	0.08	0.04

**Table 3 - u: AGRICULTURAL CANAL DOWNSTREAM OF CUNCOLIM INDUSTRIAL ESTATE**

Sr. No	Parameters	Apr-11	Jul-11	Oct-11	Jan-12
1	pH	7.99	5.57	6.34	5.77
2	Temperature °C	26°C	26°C	32°C	29°C
3	Conductivity	66.4 µs/cm	351µs/cm	584µs/cm	47.6µs/cm
4	Dissolved Oxygen mg/l	7.1	6.8	5.208	7.94
5	Turbidity (NTU)	1.32	8.93	3.06	1.81
6	Nitrite Nitrogen mg/l	BDL	BDL	BDL	0.003
7	Nitrogen(Nitrate) mg/l	0.02	2.57	0.7	0.04
8	Phosphate mg/l	0.122	0.01	0.029	0.06
9	BOD mg/l	1.6	1.6	1.28	0.67
10	COD mg/l	0.6	20	10.4	4.65
11	Chloride mg/l	7	17.92	118.88	3.91
12	Fecal Coliform MPN/100 ml	4	NIL	4	11
13	Total Coliform MPN/100 ml	150	4	120	185
14	Ammonia mg/l	0.0123	0.08	0.063	0.02

**Table 3 – v : RIVER CHAPORA NEAR ALORNA FORT, PERNEM**

Sr. No	Parameters	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12
1	pH	7	5.72	5.43	6.26	6.1	6.42	6.55	5.9	6.4	7.57	6.3	6
2	Temperature °C	26°C	29°C	23°C	23°C	21°C	22°C	29°C	31°C	29°C	30°C	28°C	29°C
3	Conductivity	92.3 µs/cm	167.6 µs/cm	126.7µs/cm	75.4 µs/cm	72.9 µs/cm	87.7 µs/cm	74.3 µs/cm	114.2µs/cm	221 µs/cm	897 µs/cm	2433 µs/cm	9.53 ms/cm
4	Dissolved Oxygen mg/l	7.16	6.51	7.16	6.8	6.4	5.2	6.8	6.83	7.5	6.998	7.48	6.18
5	Turbidity (NTU)	1.6	3.13	16.9	5.28	8.7	11.4	4.78	3.43	6.02	3.83	3.54	2.25
6	Nitrite Nitrogen mg/l	0.001	0.09	0.03	0.02	0.03	BDL	BDL	BDL	0.02	0.005	0.002	0.07
7	Nitrogen(Nitrate) mg/l	0.1	BDL	0.23	0.05	0.15	0.04	0.81	0.19	0.11	0.09	0.07	0.05
8	Phosphate mg/l	0.09	0.19	0.1	0.04	0.08	BDL	0.05	0.01	0.12	0.03	0.01	0.01
9	BOD mg/l	2.95	2.29	2.3	1.2	1.1	0.3	0.9	2.61	1.9	0.79	2.27	2.29
10	COD mg/l	10	12	16	14	13.6	10.4	4	4	4	20.8	22.88	15
11	Chloride mg/l	500	1451.5	1351.4	1628.5	1301.1	6.49	4.49	15.99	575.84	244.61	471.48	1612.98
12	Fecal Coliform MPN/100 ml	11	7	11	12	NIL	NIL	12	7	9	NIL	9	10
13	Total Coliform MPN/100 ml	185	175	225	200	110	10	210	120	125	75	170	145
14	Ammonia mg/l	0.15	0.05	0.05	0.01	0.07	0.01	BDL	0.09	0.01	BDL	0.15	0.06

**Table 3 - w: RIVER MAPUSA ON CULVERT ON HIGHWAY MAPUSA-PANAJI**

Sr. No	Parameters	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12
1	pH	5.19	5.75	5.73	6.29	5.89	5.9	6.38	6.15	6.2	7.49	6.2	6
2	Temperature °C	27°C	28°C	26°C	22°C	23°C	24°C	31°C	31°C	31°C	29°C	29°C	28°C
3	Conductivity	15.61 µs/cm	18.07 ms/cm	200.7 µs/cm	188.0 µs/cm	130.8 µs/cm	256.8 µs/cm	650 µs/cm	1245 µs/cm	4.81 ms/cm	8.02 ms/cm	13.90 µs/cm	17.86 ms/cm
4	Dissolved Oxygen mg/l	4.88	6.19	7.4	6.8	6.4	7.1	6.5	3.25	3.9	4.23	5.53	5.53
5	Turbidity (NTU)	1	2.94	12.9	31.4	12.2	10.2	3.79	2.47	1.81	2.04	2.44	2.13
6	Nitrite Nitrogen mg/l	0.004	0.03	0.02	0.04	0.02	BDL	0.04	0.07	0.02	0.006	0.007	0.004
7	Nitrogen(Nitrate) mg/l	0.09	0.13	0.36	0.2	0.17	0.07	1.38	0.12	0.13	0.15	0.13	0.08
8	Phosphate mg/l	0.09	0.08	0.17	0.16	0.14	0.02	0.02	0.06	0.04	0.04	0.02	0.02
9	BOD mg/l	1	3.26	1.6	0.9	0.8	3.2	1.3	2.6	3.2	1.94	1.3	3.26
10	COD mg/l	15	16.8	16.8	12	15.6	9.2	6	19	15	7.2	28.08	24.96
11	Chloride mg/l	7500	900.9	1001.1	4755.2	1151.2	749.76	1349.58	999.69	1383.89	2299.29	3394.69	3318.12
12	Fecal Coliform MPN/100 ml	11	7	12	12	4	7	14	11	11	9	11	NIL
13	Total Coliform MPN/100 ml	200	165	225	190	125	145	225	210	150	190	220	140
14	Ammonia mg/l	0.08	0.03	0.05	0.03	0.1	0.26	BDL	0.23	0.02	0.03	0.12	0.08

**Table 3 - x RIVER KUSHAWATI NEAR BUND AT KEVONA, RIVONA, SANGUEM**

Sr. No	Parameters	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12
1	pH	5.87	5.96	5.68	5.2	6.44	6.76	6.18	6.78	6.15	6.97	7.1	6.5
2	Temperature °C	30°C	27°C	22°C	22°C	22°C	22°C	28°C	26°C	27°C	25°C	27°C	29°C
3	Conductivity	176.7 µs/cm	175.6 µs/cm	74.8 µs/cm	65.3 µs/cm	89 µs/cm	62.9 µs/cm	64.1 µs/cm	105.9 µs/cm	116.1 µs/cm	118.3 µs/cm	195.4 µs/cm	223.6 µs/cm
4	Dissolved Oxygen mg/l	8.46	6.8	6.84	7.16	6.8	7.48	7.1	8.13	7.8	7.2	7.32	7.16
5	Turbidity (NTU)	4.52	4.52	26.2	6.24	8.69	8	39	3.47	7.87	5.1	5.75	2.46
6	Nitrite Nitrogen mg/l	0.002	0.01	0.02	BDL	BDL	BDL	0.01	0.01	0.02	0.004	0.002	0.003
7	Nitrogen(Nitrate) mg/l	0.13	0.52	0.5	0.15	0.11	0.1	1.24	0.13	0.35	0.19	0.15	0.1
8	Phosphate mg/l	0.12	0.09	0.16	0.05	0.02	BDL	0.06	0.01	0.14	0.07	0.02	0.007
9	BOD mg/l	0.35	0.9	1	1.32	0.8	0.7	1.2	3.23	2	0.62	1.12	1.79
10	COD mg/l	12	8.8	7.2	4	5	4.8	14.8	0.4	2.4	8	11.44	9.36
11	Chloride mg/l	7	18.5	21	4.71	27.3	13.3	4.49	10	54.98	4.4	7.07	1.38
12	Fecal Coliform MPN/100 ml	5	9	NIL	7	NIL	7	12	11	14	NIL	12	12
13	Total Coliform MPN/100 ml	165	125	110	145	45	160	155	150	175	28	210	155
14	Ammonia mg/l	0.08	0.05	0.12	0.08	BDL	BDL	0.03	0.07	0.01	BDL	0.08	0.03

**Table 3 – y: RIVER SAL AT PAZORCONI, CUNCOLIM**

Sr. No	Parameters	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12
1	pH	6.78	7.72	6.01	6.04	5.83	7.78	6.08	7.95	5.72	6.73	8.2	6
2	Temperature °C	31°C	28°C	20°C	24°C	25°C	25°C	32°C	30°C	28°C	28°C	28°C	28°C
3	Conductivity	1470 µs/cm	116.1 µs/cm	55.3 µs/cm	98.1 µs/cm	81.6 µs/cm	9.91 µs/cm	87.3 µs/cm	97.8 µs/cm	86.1 µs/cm	87.9 µs/cm	120.6µs/cm	83.5 µs/cm
4	Dissolved Oxygen mg/l	6.2	5.21	5.859	6.8	7.1	6.83	6.8	6.84	6.2	5.21	5.86	6.19
5	Turbidity (NTU)	12.9	11.6	58.3	18.6	12	6.49	14	13.5	10.9	21.3	9.78	7.09
6	Nitrite Nitrogen mg/l	0.007	0.03	0.04	0.01	0.04	BDL	0.01	0.002	0.03	0.02	0.02	0.003
7	Nitrogen(Nitrate) mg/l	0.08	0.77	0.37	0.29	0.25	0.24	0.39	0.21	0.46	0.32	0.41	0.07
8	Phosphate mg/l	0.21	0.05	0.09	0.07	0.13	0.19	0.02	0.05	0.09	0.15	0.05	0.02
9	BOD mg/l	2.9	1.312	1.314	0.9	1.8	5.84	1.2	0.63	2.6	2.61	3.24	2.95
10	COD mg/l	9	17.6	14	17.6	12.8	13	16.4	2.8	10	10	15.6	12.48
11	Chloride mg/l	1400.9	3754.1	3103.4	17.51	3403.2	7.49	1149.64	199.94	6.9659	195.68	1603.04	138.26
12	Fecal Coliform MPN/100 ml	9	9	4	4	NIL	4	4	11	11	11	11	4
13	Total Coliform MPN/100 ml	190	125	190	165	14	165	90	150	175	250	215	175
14	Ammonia mg/l	0.1	0.06	0.03	0.07	0.08	0.06	0.01	0.07	BDL	0.03	0.29	0.08

**Table 3 - z: RIVER SAL AT MOBOR**

Sr. No	Parameters	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12
1	pH	6.3	6.96	5.62	5.81	5.1	6.4	6.01	7.22	6.5	8.51	5.21	6
2	Temperature °C	32°C	28°C	21°C	26°C	24°C	24°C	30°C	31°C	30°C	29°C	28°C	31°C
3	Conductivity	56.1 ms/cm	52.2 ms/cm	1574 µs/cm	30.8 µs/cm	883 µs/cm	47.8 µs/cm	51.4 ms/cm	51.3 ms/cm	45.8 ms/cm	52 µs/cm	75 ms/cm	70.6 ms/cm
4	Dissolved Oxygen mg/l	6.5	1.302	5.86	6.4	6.8	3.9	6.8	6.84	5.5	6.35	5.86	6.51
5	Turbidity (NTU)	1.31	38.6	34.9	6.22	13.8	6.39	2.63	2.92	60.5	4.3	3.93	7.11
6	Nitrite Nitrogen mg/l	0.005	0.03	0.02	0.03	0.009	0.01	BDL	0.002	0.01	0.008	0.003	0.002
7	Nitrogen(Nitrate) mg/l	0.05	0.35	1.35	0.1	0.34	0.14	0.42	0.008	0.18	0.05	0.12	0.03
8	Phosphate mg/l	0.0022	0.09	0.17	0.1	0.76	0.14	0.19	0.01	0.35	0.08	0.03	0.1
9	BOD mg/l	2.3	0.65	2.29	0.8	0.9	1.95	1.2	3.59	3.2	2.45	1.94	1.48
10	COD mg/l	11	17.2	13.2	16	17.2	18	22.8	22.8	9.2	28.7	33.28	16.64
11	Chloride mg/l	21200	6100	5956.5	6807.4	6407	18594.2	20493.6	22593	18444.3	18198.6	21216.8	17051.5
12	Fecal Coliform MPN/100 ml	NIL	7	4	7	NIL	7	NIL	NIL	12	11	4	NIL
13	Total Coliform MPN/100 ml	165	110	175	200	20	170	55	85	225	190	165	45
14	Ammonia mg/l	0.06	0.05	0.06	0.04	0.06	0.06	0.14	0.008	0.06	BDL	0.12	0.1

Table 3 - aa: Harwale Waterfall

Sr. No	Parameters	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12
1	pH	7.46	6.52	4.88	6.87	5.42	6.68	5.9	6.73	6.65	8.44	7.16	6
2	Temperature °C	30°C	28°C	24°C	22°C	24°C	29°C	29°C	28°C	26°C	28°C	26°C	30°C
3	Conductivity	99.4 µs/cm	101.5µs/cm	69 µs/cm	52.7 µs/cm	62 µs/cm	63.4 µs/cm	69.2 µs/cm	74.2 µs/cm	67.1 µs/cm	76.6 µs/cm	80.9 µs/cm	113.9 µs/cm
4	Dissolved Oxygen mg/l	7.16	6.84	7.81	7.9	7.4	7.1	8.5	7.49	8.8	7.48	7.81	8.23
5	Turbidity (NTU)	14.6	7.37	53.7	119	23.3	13.3	25.8	19.7	11.1	5.28	6.4	7.19
6	Nitrite Nitrogen mg/l	0.004	0.05	BDL	0.01	0.005	BDL	0.01	BDL	BDL	0.005	0.001	0.023
7	Nitrogen(Nitrate) mg/l	0.24	0.29	0.66	0.18	0.34	0.25	0.08	0.33	0.2	0.26	0.24	0.16
8	Phosphate mg/l	0.22	0.05	0.03	0.06	0.13	0.01	0.01	0.02	0.05	0.06	0.01	0.02
9	BOD mg/l	2.94	3.71	1.64	0.8	0.87	1.2	2	1	2.6	2.85	0.62	1.76
10	COD mg/l	4	8	8	7.6	8	5.6	8	3	2	1.94	12.48	1
11	Chloride mg/l	13.5	14.5	7.54	17.5	19	4.99	3.71	7.5	7	1.96	5.66	1.38
12	Fecal Coliform MPN/100 ml	9	11	7	11	7	14	12	7	7	4	NIL	11
13	Total Coliform MPN/100 ml	170	175	225	220	190	190	170	175	175	175	25	220
14	Ammonia mg/l	0.13	0.04	0.06	0.02	0.09	0.03	0.01	0.01	0.08	0.02	0.02	0.08

**Table 3 - ab: RIVER BICHOLIM, BARAZAN NAGAR, BICHOLIM**

Sr. No	Parameters	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12
1	pH	7.5	6.9	6.2	6.57	5.25	6.27	6.02	6.75	6.16	6.63	7.02	6
2	Temperature °C	30°C	29°C	25°C	22°C	24°C	30°C	31°C	31°C	27°C	28°C	26°C	30°C
3	Conductivity	172.2 µs/cm	186.3µs/cm	104.7µs/cm	51.5 µs/cm	60.2 µs/cm	98.9 µs/cm	110.3µs/cm	125.7µs/cm	162.8 µs/cm	147.1µs/cm	221.6µs/cm	222.5 µs/cm
4	Dissolved Oxygen mg/l	5.6	6.511	7.48	6.4	7.4	6.8	7.2	4.56	7.1	8.95	7.81	8.59
5	Turbidity (NTU)	5.13	8.21	24	20.3	9.75	10.6	30.4	10.8	19	19.8	4.47	4.81
6	Nitrite Nitrogen mg/l	0.008	0.01	BDL	0.03	0.03	0.05	0.04	BDL	0.01	0.009	0.006	0.008
7	Nitrogen(Nitrate) mg/l	0.27	0.66	0.78	0.19	0.84	0.1	0.47	0.23	0.39	0.31	0.42	0.34
8	Phosphate mg/l	0.07	0.04	0.06	0.03	0.15	BDL	0.07	0.03	0.12	0.06	0.01	0.01
9	BOD mg/l	2.94	2.94	1.96	0.8	0.87	1	3.7	3.91	NIL	3.22	2.58	3.2
10	COD mg/l	8	7.6	4	14.8	11.6	9.2	17.2	9	11.6	0.38	12.48	1
11	Chloride mg/l	300	17.5	10.37	1862	2853.1	249.92	6.96	11.5	11	11.25	12.26	7.37
12	Fecal Coliform MPN/100 ml	14	9	4	11	NIL	14	14	12	NIL	7	NIL	7
13	Total Coliform MPN/100 ml	200	150	170	225	3	195	190	225	90	190	90	170
14	Ammonia mg/l	0.25	0.02	0.05	0.1	0.08	0.1	0.005	0.03	0.09	0.02	0.16	0.03

**Table 3 – ac: MAYEM LAKE AT MAYEM, BICHOLIM**

Sr. No	Parameters	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12
1	pH	7.61	7.49	5.93	6.45	5.34	5.96	6.2	6.17	6.5	8.1	8.44	6
2	Temperature °C	30°C	28°C	25°C	23°C	25°C	30°C	32°C	32°C	27°C	28°C	27°C	33°C
3	Conductivity	59.5 µs/cm	66.4 µs/cm	41.6 µs/cm	43.4 µs/cm	45.1 µs/cm	50.7 µs/cm	55.6 µs/cm	49.1 µs/cm	42.1 µs/cm	50 µs/cm	59.7 µs/cm	64.6 µs/cm
4	Dissolved Oxygen mg/l	8.14	7.49	8.14	7.4	7.1	6.8	6.5	5.86	6.2	6.51	6.51	8.95
5	Turbidity (NTU)	12.5	8.97	6.84	3.74	7.66	4.09	3.02	3.07	3.67	5.07	7.3	6.6
6	Nitrite Nitrogen mg/l	0.005	0.02	BDL	0.03	0.03	BDL	BDL	BDL	0.01	0.004	0.003	0.003
7	Nitrogen(Nitrate) mg/l	0.04	1.06	0.13	0.18	0.43	0.07	0.27	0.08	0.13	0.08	0.08	0.08
8	Phosphate mg/l	0.07	0.08	BDL	0.06	0.29	0.06	0.08	0.14	0.07	0.04	0.01	0.009
9	BOD mg/l	3.59	4.24	1.32	1.5	2.53	1.3	2.6	1.64	0.3	2.37	0.95	1.76
10	COD mg/l	19	11.6	8	7.6	7.6	6.4	9.6	3	9.6	2.8	15.6	17.68
11	Chloride mg/l	17.5	1451.5	7.54	15	24	2.99	4.17	5.998	4.17	6.85	8.486	6.91
12	Fecal Coliform MPN/100 ml	7	9	NIL	4	NIL	15	4	NIL	7	7	7	4
13	Total Coliform MPN/100 ml	225	150	150	175	14	210	135	4	190	200	165	150
14	Ammonia mg/l	0.06	0.03	0.03	0.52	0.14	0.02	0.02	0.13	0.08	0.02	0.21	0.04

**Table 3 - ad: CUMBHARJUA CANAL, CORLIM**

Sr. No	Parameters	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12
1	pH	5.92	6.1	5.28	7	4.87	6.12	5.8	6.34	6.09	7.3	7.36	6.2
2	Temperature °C	30°C	29°C	25°C	23°C	24°C	30°C	32°C	32°C	28°C	27°C	29°C	31°C
3	Conductivity	44.2 ms/cm	45.1 ms/cm	3.77 ms/cm	320 µs/cm	549 µs/cm	608 µs/cm	7.42 ms/cm	19.77 ms/cm	35.2 ms/cm	40.7 µs/cm	56.1 ms/cm	62 ms/cm
4	Dissolved Oxygen mg/l	4.88	7.49	4.88	6.4	5.8	7.1	6.5	5.86	4.9	4.55	4.88	3.58
5	Turbidity (NTU)	8.84	17	10.5	7.91	1.61	8.13	9.68	6.56	3.76	9.29	6.14	11.6
6	Nitrite Nitrogen mg/l	0.03	0.04	BDL	0.01	0.02	BDL	0.02	BDL	0.01	0.01	0.02	0.006
7	Nitrogen(Nitrate) mg/l	0.04	0.73	0.43	0.84	0.15	0.1	0.58	0.15	0.11	0.09	0.1	0.07
8	Phosphate mg/l	0.15	0.16	0.01	0.16	0.16	0.1	0.08	0.02	0.04	0.08	0.07	0.05
9	BOD mg/l	4.23	6.19	1.31	0.8	1.88	3.8	5.5	2.29	2.2	4.55	2.27	2.5
10	COD mg/l	60	13.2	24	17.6	14.8	12.4	10.4	31	19.3	25.6	29.12	30.16
11	Chloride mg/l	16400	29.5	1131.6	4504.9	4104	499.85	2066.55	14995.4	16694.8	14774.1	14710.3	15023.7
12	Fecal Coliform MPN/100 ml	4	7	4	7	NIL	7	NIL	NIL	7	4	NIL	NIL
13	Total Coliform MPN/100 ml	145	125	170	210	11	160	110	90	210	195	40	65
14	Ammonia mg/l	0.15	0.02	0.19	0.02	0.06	0.06	0.05	BDL		BDL	0.17	0.14

**Table 3 - ae: CREEK AT DANDO MOLLO, VELSAO, MORMUGAO**

Sr. No	Parameters	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12
1	pH	8.26	8.02	6.3	5.58	6.86	6.32	6.34	7.12	7.55	6.83	6	6
2	Temperature °C	32°C	29°C	27°C	26°C	24°C	27°C	32°C	30°C	29°C	27°C	29°C	33°C
3	Conductivity	17.48 ms/cm	17.06 ms/cm	1796 µs/cm	16.12ms/cm	305 µs/cm	619 µs/cm	9.71 ms/cm	38.7 ms/cm	52 ms/cm	46 ms/cm	31.2 µs/cm	16.58 ms/cm
4	Dissolved Oxygen mg/l	6.8	8.46	6.8	6.8	6.5	6.51	6.8	7.16	2.2	8.78	5.8	5.86
5	Turbidity (NTU)	62.3	10.1	7.49	12.9	9.33	7.51	5.43	3.3	2.32	5.67	4.9	2.05
6	Nitrite Nitrogen mg/l	0.73	0.02	0.02	0.02	0.04	BDL	0.01	0.1	0.07	0.06	1.13	0.61
7	Nitrogen(Nitrate) mg/l	2.96	0.45	0.87	0.28	0.26	2.53	3.5	0.37	0.73	2.41	10.67	13.65
8	Phosphate mg/l	0.04	0.05	0.07	0.1	0.09	0.05	0.16	0.07	0.26	0.33	0.46	0.34
9	BOD mg/l	1.2	3.27	1	1.2	1.93	1.94	3.9	6.83	0.5	1.21	1.2	1.29
10	COD mg/l	17	16.4	10.4	12.8	12.4	10.8	8	32.8	26.8	26	37.44	21
11	Chloride mg/l	3200	3003.3	1001.1	4004.4	1201.3	249.9	2764.2	32190	19394	16828.8	7638.05	3225.95
12	Fecal Coliform MPN/100 ml	NIL	11	11	7	7	4	NIL	NIL	4	9		4
13	Total Coliform MPN/100 ml	10	150	200	175	125	145	95	90	125	210		125
14	Ammonia mg/l	0.15	0.06	0.09	0.03	0.05	0.29	0.32	0.38	0.34	0.09	0.44	0.48

**Table 3 – af : RIVER SELAULIM LAKE AT SELAULIM, SANGUEM**

Sr. No	Parameters	Apr-11	May-11	Jun-11	Jul-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12
1	pH	6.26	5.8	6.78	6.02	6.95	7.55	7.02	7.82	6.03	6	6
2	Temperature °C	34°C	31°C	26°C	23°C	26°C	35°C	31°C	31°C	30°C	29°C	35°C
3	Conductivity	68.5 µs/cm	68.7 µs/cm	61.1 µs/cm	56.9 µs/cm	50.9 µs/cm	44.5 µs/cm	47.3 µs/cm	47.8 µs/cm	48.6 µs/cm	73.4 µs/cm	69.2 µs/cm
4	Dissolved Oxygen mg/l	6.84	5.85	7.4	6.4	6.51	7.81	7.16		6.51	7.48	7.81
5	Turbidity (NTU)	1.74	3.58	2.12	1.75	0.67	1.83	0.88	0.92	1.23	1.12	1
6	Nitrite Nitrogen mg/l	0.06	0.03	0.009	0.008	BDL	0.002	0.12	BDL	0.002	0.001	0.005
7	Nitrogen(Nitrate) mg/l	0.04	0.32	0.74	0.09	0.03	0.04	3.9	0.23	0.06	2.16	0.04
8	Phosphate mg/l	0.11	0.03	0.14	0.1	0.07	0.06	0.02	0.12	0.06	0.07	0.02
9	BOD mg/l	1.32	1.96	1.2	0.5	0.3	2.58	2.25		0.68	0.3	2.62
10	COD mg/l	6	13.2	6.4	6	3.6	2.8	4.4	1.6	1.04	17.68	18.72
11	Chloride mg/l	14	1751.9	21	13	4.99	5	5	7.5	4.4	7.07	1.38
12	Fecal Coliform MPN/100 ml	NIL	7	NIL	4	NIL	NIL	NIL	4	NIL		NIL
13	Total Coliform MPN/100 ml	10	110	125	125	65	4	80	120	4		95
14	Ammonia mg/l	0.05	0.04	0.05	0.02	0.04	0.04	0.01	0.03	BDL	0.07	0.16

## Annexure IV

**Table 4 – a: RIVER SAL AT RUMDER, NUVEM**

Sr. No	Parameters	Apr-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Apr-12
1	pH	5.46	7.25	5.18	6.6	7.13	6.85	6.09
2	Temperature °C	30°C	23°C	22°C	28°C	24°C	30°C	28°C
3	Conductivity	142.2 µs/cm	92.8 µs/cm	102.7µs/cm	101.2µs/cm	97.1 µs/cm	143.6µs/cm	193.5 µs/cm
4	Dissolved Oxygen mg/l	0	6.18	5.5	6.5	6.18	2.6	0
5	Turbidity (NTU)	6.53	92.3	17.6	17.4	7.66	11	16.4
6	Nitrite Nitrogen mg/l	0.004	0.02	0.04	0.02	BDL	BDL	0.009
7	Nitrogen(Nitrate) mg/l	0.02	0.35	0.43	0.5	0.58	0.06	0.005
8	Phosphate mg/l	0.22	0.12	0.12	0.15	0.06	0.14	0.02
9	BOD mg/l	5.19	5.21	1.2	1.27	1.62	2.6	30
10	COD mg/l	15	12	10.8	9.6	12.4	10	70
11	Chloride mg/l	200	31	27.5	39	7.99	11.49	40.5
12	Fecal Coliform MPN/100 ml	NIL	4	11	NIL	9	3	11
13	Total Coliform MPN/100 ml	10	150	200	40	185	64	210
14	Ammonia mg/l	0.16	0.25	0.05	0.1	0.08	0.04	1.51

**Table 4 – b: RIVER SAL AT ORLIM BRIDGE**

Sr. No	Parameters	Apr-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Apr-12
1	pH	5	6.16	5.3	5.92	7.74	6.05	6.76
2	Temperature °C	30°C	25°C	23°C	28°C	26°C	20.5°C	28°C
3	Conductivity	33.4 ms/cm	322 µs/cm	342 µs/cm	764.0µs/cm	2260 µs/cm	24.25 ms/cm	43.1 ms/cm
4	Dissolved Oxygen mg/l	4.88	4.55	5.5	6.8	6.18	3.26	6.2
5	Turbidity (NTU)	4.08	40.3	16.7	6.23	3.41	3.87	4.85
6	Nitrite Nitrogen mg/l	0.004	0.03	0.02	0.008	0.03	0.01	0.007
7	Nitrogen(Nitrate) mg/l	0.03	0.35	0.28	0.28	0.36	0.22	0.04
8	Phosphate mg/l	0.15	0.17	0.07	0.08	0.11	0.04	0.06
9	BOD mg/l	1.06	3.58	2.5	1.57	3.57	2.6	2
10	COD mg/l	10	20	7.6	11	12	8	45
11	Chloride mg/l	22300	62.2	30	34	539.83	8646.54	11378
12	Fecal Coliform MPN/100 ml	NIL	NIL	NIL	NIL	4	NIL	4
13	Total Coliform MPN/100 ml	110	125	145	5	155	95	150
14	Ammonia mg/l	0.12	0.35	0.03	0.06	0.03	0.18	0.05

**Table 4 – c: RIVER SAL AT JACKNI BAND, NAVEILIM**

Sr. No	Parameters	Apr-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Apr-12
1	pH	6.06	6.5	5.54	5.59	6.5	7.12	6
2	Temperature °C	29°C	26°C	23°C	28°C	24°C	29.5°C	24°C
3	Conductivity	241.9 µs/cm	113.0µs/cm	204.1µs/cm	186.2µs/cm	190.3µs/cm	201.02 µs/cm	888 µs/cm
4	Dissolved Oxygen mg/l	5.86	7.81	3.25	6.5	3.58	3.26	0.65
5	Turbidity (NTU)	2.69	47.8	155	19.4	3.58	4.29	5.24
6	Nitrite Nitrogen mg/l	0.007	0.02	0.03	0.03	0.12	0.02	0.02
7	Nitrogen(Nitrate) mg/l	0.32	0.39	0.12	0.32	0.54	0.72	0.18
8	Phosphate mg/l	0.15	0.02	0.04	0.14	0.13	0.08	0.03
9	BOD mg/l	1.32	1.32	2.2	1.27	1.62	0.98	7.4
10	COD mg/l	29	20	10.4	8	18.4	18	24
11	Chloride mg/l	100	10.37	25	37.5	19.49	19.49	337.48
12	Fecal Coliform MPN/100 ml	7	14	11	NIL	12	3	NIL
13	Total Coliform MPN/100 ml	170	250	225	90	190	75	80
14	Ammonia mg/l	0.28	0.18	0.03	0.07	0.31	0.18	0.97

**Table 4 – d: RIVER SAL AT MUNGUL, MARGAO**

Sr. No	Parameters	Apr-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Apr-12
1	pH	5.52	6.2	5.3	5.6	6.15	6.53	8
2	Temperature °C	31°C	24°C	22°C	28°C	25°C	30°C	29°C
3	Conductivity	139.0 µs/cm	130.4µs/cm	115.0µs/cm	116.2µs/cm	134.3µs/cm	280.9µs/cm	462 µs/cm
4	Dissolved Oxygen mg/l	5.2	3.9	4.5	6.8	4.55	1.63	0
5	Turbidity (NTU)	10	40.3	17.7	15.2	7.02	11.7	14.4
6	Nitrite Nitrogen mg/l	0.004	0.04	0.01	0.06	0.12	0.01	0.006
7	Nitrogen(Nitrate) mg/l	0.16	0.57	0.28	0.2	0.91	0.08	0
8	Phosphate mg/l	0.06	0.11	0.06	0.1	0.06	0.26	0.22
9	BOD mg/l	0.98	2.93	3.8	1.2	1.62	1.63	10
10	COD mg/l	27	12.8	9.6	9.2	9.8	10	25
11	Chloride mg/l	150	22.52	24.5	30	12.99	27.48	48.21
12	Fecal Coliform MPN/100 ml	4	7	11	4	12	4	NIL
13	Total Coliform MPN/100 ml	150	160	200	125	200	90	20
14	Ammonia mg/l	0.17	0.44	0.04	0.08	0.46	0.04	5.52

**Table 4 – e: RIVER SAL AT KHAREBAND, MARGAO**

Sr. No	Parameters	Apr-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Apr-12
1	pH	6	6.56	5.34	6.17	6.58	6.48	6.21
2	Temperature °C	31°C	25°C	23°C	28°C	25°C	30°C	26°C
3	Conductivity	204.7 µs/cm	118.7µs/cm	136.4µs/cm	147.7µs/cm	38.9 µs/cm	293.5µs/cm	431 µs/cm
4	Dissolved Oxygen mg/l	0	4.88	4.7	6.5	4.23	5.21	0
5	Turbidity (NTU)	5.72	63.3	13.2	11.4	7.01	14.7	16.1
6	Nitrite Nitrogen mg/l	0.005	0.02	0.006	0.01	0.1	0.01	0.01
7	Nitrogen(Nitrate) mg/l	0.04	0.33	0.45	0.38	0.58	0.03	0.02
8	Phosphate mg/l	0.24	0.09	0.05	0.04	0.05	0.16	1.86
9	BOD mg/l	3.57	2.61	2.5	0.6	2.59	5.21	15
10	COD mg/l	26	28	11.6	11.6	20	14.5	34
11	Chloride mg/l	150	13.2	43	37	11.49	32.98	96.42
12	Fecal Coliform MPN/100 ml	7	7	4	4	9	4	12
13	Total Coliform MPN/100 ml	150	175	160	165	185	120	225
14	Ammonia mg/l	0.49	0.25	0.06	0.12	0.26	0.29	5.58

## Annexure V

### AMBIENT AIR QUALITY DATA

**Table 5-a Station : Panaji**

Month & Year	RSPM ( $\mu\text{gm}/\text{m}^3$ ) Arith Mean	SPM( $\mu\text{gm}/\text{m}^3$ ) Arith Mean	NO <sub>x</sub> $\mu\text{gm}/\text{m}^3$ Arith Mean	SO <sub>2</sub> $\mu\text{gm}/\text{m}^3$ Arith Mean
April 2011	87.7	150.4	14.1	BDL
May 2011	66.6	122.7	15.4	BDL
June 2011	56.1	95.2	BDL	BDL
July 2011	42.9	77.7	17.8	BDL
August 2011	33.7	71.8	15.8	4
September 2011	35.1	64.9	13.3	BDL
October 2011	60	100	20.6	6.8
November 2011	97.5	146.3	19	4
December 2011	119.7	217.9	19.6	BDL
January 2012	109	224	25	10
February 2012	122	285	22	8
March 2012	101	248	17	9

**Table 5-a Station : MPT Vasco**

Month & year	RSPM $\mu\text{gm}/\text{m}^3$ Arith Mean	SPM $\mu\text{gm}/\text{m}^3$ Arith Mean	NO <sub>x</sub> $\mu\text{gm}/\text{m}^3$ Arith Mean	SO <sub>2</sub> $\mu\text{gm}/\text{m}^3$ Arith Mean
April 2011	59.3	129.7	15.6	BDL
May 2011	60.3	139.4	13.9	BDL
June 2011	49.7	83	9	BDL
July 2011	53.3	104	18.7	BDL
August 2011	34.4	71.5	14.5	BDL
September 2011	45.8	72.7	11.6	BDL
October 2011	65.6	114.9	17.5	BDL
November 2011	82.1	145.2	30.5	4
December 2011	103	166.7	24.4	BDL
January 2012	99	191	27	10
February 2012	159	418	28	5
March 2012	129	274	20	6

**Table 5-a Station: Vasco**

Month & year	RSPM $\mu\text{gm}/\text{m}^3$ Arith Mean	SPM $\mu\text{gm}/\text{m}^3$ Arith Mean	NO <sub>x</sub> $\mu\text{gm}/\text{m}^3$ Arith Mean	SO <sub>2</sub> $\mu\text{gm}/\text{m}^3$ Arith Mean
April 2011	52	123.3	16.8	BDL
May 2011	65.3	187.2	15.4	BDL
June 2011	37.7	84.8	10.4	BDL
July 2011	44.4	80.8	17.7	BDL
August 2011	26.7	46.8	14.4	BDL
September 2011	36.9	63.3	11.2	BDL
October 2011	41.1	83.7	16.6	5.2
November 2011	74.3	118	31.9	6.2
December 2011	68	124.1	26.6	BDL
January 2012	77	150	31	8
February 2012	101	168	26	7
March 2012	98	184	21	8

Table 5-d Station : Curchorem

Month &Year	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> µg/m <sup>3</sup>	PM10 µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>
	Arith Mean	Arith Mean	Arith Mean	Arith Mean
April '11	6.11	12.76	68.39	30.04
May '11	6.78	15.33	96.48	32.08
June '11	4.33	8.02	55.60	19.03
July '11	5.53	10.23	58.33	17.65
August '11	3.16	9.98	38.75	10.42
September '11	4.18	14.53	64.99	12.97
October '11	3.98	10.95	67.53	31.17
November 11	5.02	14.44	116.28	43.86
December '11	16.72	26.77	80.54	27.03
January '12	19.17	26.58	111.50	38.47
February 12	17.56	24.37	159.12	48.35
March '12	19.31	22.75	204.90	48.52

Table 5-e Station : Codli

Month &Year	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> µg/m <sup>3</sup>	PM10 µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>
	Arith Mean	Arith Mean	Arith Mean	Arith Mean
April '11	10.25	14.70	84.66	40.60
May '11	8.87	13.00	71.49	20.35
June '11	7.94	14.57	68.77	20.35
July '11	6.63	10.96	36.56	16.41
August '11	7.03	12.49	31.41	22.40
September '11	6.11	11.78	40.57	21.09
October '11	8.03	12.87	70.13	23.52
November 11	8.81	13.67	87.54	29.66
December '11	26.23	30.67	132.12	62.45
January '12	26.70	31.18	161.93	66.55
February 12	21.66	27.64	238.61	64.70
March '12	19.78	23.04	223.51	61.87

Table 5-f Station : Bicholim

Month &Year	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> µg/m <sup>3</sup>	PM10 µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>
	Arith Mean	Arith Mean	Arith Mean	Arith Mean
April '11	13.25	18.33	149.18	40.93
May '11	9.35	16.61	157.54	43.11
June '11	8.74	14.62	54.79	18.27
July '11	7.23	11.83	53.56	19.38
August '11	6.66	12.41	60.24	24.20
September '11	7.11	11.27	51.80	27.14
October '11	7.24	12.82	94.47	27.30
November 11	9.49	14.07	204.42	47.20
December '11	11.72	17.46	196.42	59.04
January '12	11.91	19.08	253.28	77.52
February 12	12.74	20.10	257.01	62.43
March '12	11.35	18.59	228.02	59.61

**Table 5-k Station :Mapusa Town**

Month &Year	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> µg/m <sup>3</sup>	PM10 µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>
	Arith Mean	Arith Mean	Arith Mean	Arith Mean
January '12	3.85	8.34	85.75	54.16
February '12	3.56	7.72	112.72	56.25
March '12	5.40	6.90	123.45	47.68
April '12	6.45	8.65	123.57	39.81
May '12	6.42	8.67	80.46	30.09
June '12	6.11	8.15	79.11	23.61
July '12	7.20	9.58	74.47	26.39
August'12	7.94	9.98	61.70	17.59
September' '12	7.65	9.75	44.78	15.16

**Table 5-L Station :Margao Town**

Month &Year	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> µg/m <sup>3</sup>	PM10 µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>
	Arith Mean	Arith Mean	Arith Mean	Arith Mean
December '11	14.8	23.0	90.2	41.5
January '12	12.6	20.3	109.9	48.9
February '12	8.7	19.8	89.6	33.6
March '12	8.7	14.8	89.3	40.2

**Table 5-m Station : Ponda Town**

Month &Year	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> µg/m <sup>3</sup>	PM10 µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>
	Arith Mean	Arith Mean	Arith Mean	Arith Mean
December '11	11.4	17.7	81.1	31.6
January '12	10.9	18.2	67.3	29.6
February '12	11.7	21.4	80.7	27.6
March '12	9.3	16.0	88.8	38.5

**Table 5-N Station :Tilamol**

Month &Year	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>x</sub> µg/m <sup>3</sup>	PM10 µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>
	Arith Mean	Arith Mean	Arith Mean	Arith Mean
December '11	18.54	26.45	94.3	45.79
January '12	18.65	26.16	126.44	48.52
February '12	17.14	24.32	185.17	49.46
March '12	19.38	22.61	202.58	54.59
April '12	16.70	20.89	182.26	48.35
May '12	15.30	21.33	178.38	50.03
June '12	13.87	20.57	63.66	17.31
July '12	12.20	16.55	53.51	15.21
August'12	12.76	17.72	64.22	18.79
September' '12	13.41	17.78	74.20	31.73

## Annexure VI

**Table 6: STATUS OF HAZARDOUS WASTE GENERATED DURING THE YEAR 2011 - 2012**

Sr. No.	Name of Industry	Category	Type of waste	Quantity	Mode of disposal
1.	M/s Goa Art Enterprises, Plot No. 57, Canacona Industrial Estate, Canacona-Goa	33.3	Ink tins	15 nos./ month	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
2	M/s Goa Formulation Ltd., Plot no. 1, Phase no. III, Honda Industrial Estate, H, Sattari-Goa	5.1	Used /Spent Oil	100 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		33.3	Discarded barrels	20 nos./ annum	Wash water treated in Effluent Treatment Plant & decontaminated drums given for recycling.
		34.2	Spent resin	50 kg/ annum	Chemical-Physical Treatment followed by disposal in a secured landfill site having valid authorization from SPCB
		34.3	ETP Sludge	0.2 MT/ annum	Chemical-Physical Treatment followed by disposal in a secured landfill site having valid authorization from SPCB
3	M/s. Birla Farukwala Fibre Optics Limited, Plot No. L.62 (Sub – leased part premises) Verna Industrial Estate Verna, Salcete - Goa	5.1	Used /Spent Oil	0.5 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		5.2	Cotton waste	0.02 MT/ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
		20.2	Spent solvent	0.5 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB OR To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
		21.1	Ink waste & residue	1 MT/ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
		23.1	Waste & residue (resin)	3 MT/ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
		33.3	Discarded containers	7 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB
	M/s Plastic Export Zundert (I) Pvt. Ltd. Plot No. L-68 (A),	5.2	Cotton waste	3 kg/ month	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration

4	Verna Industrial Estate, Verna, Salcete-Goa	33.3	Empty oil container/ drum	1 no. for 2 months	To recycler registered with CPCB and having valid authorization of SPCB
5	M/s Kineco Pvt. Ltd. Plot No. 41, 42 & 43, Pilerne Industrial Estate, Pilerne, Bardez-Goa	5.1	Used/ Spent oil	30 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
6	M/s Rivon Engineering Company Plot No. 9, Margao Industrial Estate, St. Jose De Areal, Salcete- Goa	5.2	Cotton waste	2 kg/ month	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
7	M/s. Nitya Resort H. No. 2/105 B, Naika Vaddo, Calangute, Bardez-Goa	5.1	Used/ Spent oil	20 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
8	M/s Emco Goa Pvt. Ltd. "Shree Damodar Krupa Prasad" Rawanfond-Mandop Road, Aquem, Margao-Goa	5.1	Used/ Spent oil	1500 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
9	M/s Elsteel Modular Products Private Limited Plot No. P-3, Phase-III Honda Industrial Estate, Honda, Sattari-Goa	5.1	Used/ Spent oil	0.2 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		12.5	Phosphat e sludge	1.6 MT/ annum	Chemical-Physical Treatment followed by disposal in a secured landfill site having valid authorization from SPCB
		34.3	ETP sludge	0.6 MT/ annum	
10	M/s. Aakaash Manufacturing Co. Pvt Ltd, Plot No. A – 6 & A – 7, Kundaim Industrial Estate, Kundaim - Goa	5.1	Used /Spent Oil	3MTA	To recycler registered with CPCB and having valid authorization of SPCB
		5.2	Cotton Waste	0.600 MTA	To be sent to M/s Mumbai Waste Management Ltd, Taloja for incineration
11	M/s Themepark Design House Plot No. 1501/1, Behind Eliza Estate, Karaswada, Bardez-Goa	33.3	Ink containers	50 nos./ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
12	M/s Mandovi Shipyard Pvt. Ltd. Visa Plaza, 6 <sup>th</sup> floor, Near Hari Mandir, Margao-Goa	5.1	Used /Spent Oil	120 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		33.3	Paint drums	10 nos./ month	To recycler registered with CPCB and having valid authorization of SPCB

13	M/s Glynwed Pipe Systems India Pvt. Ltd. Plot No. L-148 & L-149, Verna Industrial Estate, Verna-Goa	5.1	Used /Spent Oil	1000 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
14	M/s. Graciano Cottages, Survey No. 40/4-B, 37/2-A, 4 <sup>th</sup> Ward, Colva Beach, Colva, Salcete-Goa	5.1	Used /Spent Oil	50 kg/ annum	To recycler registered with CPCB and having valid authorization of SPCB
15	M/s Priyadarshani River Cruises(Royal Cruise) Below Mandovi Bridge, Patto, Panaji-Goa.	5.1	Used/ Spent oil	200 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
16	M/s Priyadarshani River Cruises(Princessa De Goa) Below Mandovi Bridge,Patto, Panaji-Goa	5.1	Used/ Spent oil	200 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
17	M/s. Hotel Baga Oyster (A unit of Colonial Estates Pvt. Ltd.) H. No. 7/118/F-1, Saunta Vaddo, Calangute, Bardez Goa	5.1	Used/ Spent oil	20 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
18	M/s. Pristine Resort H. No. 268/F,Banda, Arossim,Cansaulim-Goa	5.1	Used/ Spent oil	5 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
19	M/s. STP Limited, Plot No. M-6 to 9, Cuncolim Industrial Estate, Cuncolim, Salcete-Goa	5.1	Used/ Spent Oil	30 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
20	M/s. Kundil Ispat Ltd. Gogolvoril Mol,Khandepar, Opp. Hindustan Foods, Usgaon, Ponda-Goa	5.1	Used/ Spent Oil	35 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
21	M/s Abhishek Engineers Karma Empress, No. 5 to 13, 1 <sup>st</sup> floor,Near KTC Bus Stand,Mundvel, Vasco da Gama, Goa	5.1	Used /Spent Oil	5-10 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
22	M/s Paradise Ventures, Paradise I, Patto Cruise Jetty,	5.1	Used/ Spent oil	100 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB

	Panaji-Goa				
23	Shri. Allabakash M. Fakir, M/s Sea Star Enterprises, Shop No. D-1, Valmik Business Center, Baina, Vasco-da-Gama	5.1	Used oil	1500 KL/ annum	Collection, reception & transportation from the ships docked at Mormugao Port to M/s Poonam Petrochem Pvt. Ltd., Gut No. 459, Dinkarpada, Village Kondle, Taluka Wada, Dist. Thane – 421312, Maharashtra
		5.2	Waste oil	2500 KL/ annum	
24	M/s. Counto Automobiles Pvt. Ltd. 1st floor, Sukerkar Mansion, M.G. Road, Panaji-Goa	5.1	Used/ Spent oil	5016 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		5.2	Cotton waste contamina ted with oil	300 kg/ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
25	M/s Mahalaxmi Industries, Plot No. 73, Kundaim Industrial Estate, Kundaim- Goa	33.3	Discarded containers / drums	20 nos./ month	To recycler registered with CPCB and having valid authorization of SPCB
26	M/s. Iqra Hospitality Services Hotel Supreme Near Damodar Temple, Vasco-da-Gama, Goa	5.1	Used /Spent Oil	50 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
27	M/s Aqua World (M.V. Coral Queen) 2 <sup>nd</sup> floor, Joffre Residency, Behind Goa College of Pharmacy, Panaji-Goa	5.1	Used /Spent Oil	100 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		5.2	Cotton waste contamina ted with oil	1 kg/ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
28	M/s. B.M.K. Industries Plot No. 16, Honda Industrial Estate, Honda, Sattari-Goa	33.3	Paint tins	1 no./ month	To recycler registered with CPCB and having valid authorization of SPCB
29	M/s Soto Décor Pvt. Ltd, Plot No. 103, Pilerne Industrial Estate, Pilerne, Bardez-Goa	33.3	Empty paint tins	200 nos.	Wash water treated in Effluent Treatment Plant & decontaminated drums given for recycling.
30	M/s. Moonrise Tourism Pvt. Ltd. Nilaya Hermitage, H. No. 60, Bhatti, Arpora, Bardez-	5.1	Used /Spent Oil	0.02 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB

	Goa				
31	M/s Mandovi Ore Carrier Karma Empress, No. 5 to 15, 1 <sup>st</sup> floor, Opp. Laksh Jyot Complex, Near KTC Bus Stand, Mundvel, Vasco-da-Gama, Goa	5.1	Used /Spent Oil	5-10 litres/ hr.	To recycler registered with CPCB and having valid authorization of SPCB
32	M/s Godwin Resorts & Hotels Pvt. Ltd., Survey no. 197/3, Anna Wado, Candolim, Bardez-Goa	5.1	Used /Spent Oil	0.1 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB
33	M/s. Alcon Resort Holdings Ltd. Radisson Blu Resort Goa, Alcon Chambers, 2nd floor, M.G. road, Panaji-Goa	5.1	Used /Spent Oil	0.2 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB
34	M/s. Philips Electronics India Ltd. Plot No. S-6, Verna Industrial Estate, Verna-Goa	5.1	Used /Spent Oil	25-30 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
35	M/s Goa State Co-Operative Milk Producers Union Ltd. Survey no. 79/1, Curti, Ponda-Goa	5.1	Used /Spent Oil	200 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
36	M/s Damodar Mangalji & Co. Ltd. Damodar Niwas, M.G. Road, Panaji-Goa	5.1	Used /Spent Oil	500 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
37	M/s Mayfair Hotels & Resorts Goa Pvt. Ltd., Mayfair Hideaway Spa Resort, H. No. 1409/A, Rangelim, Velim, Salcete-Goa	5.1	Used /Spent Oil	100 kg/ annum	To recycler registered with CPCB and having valid authorization of SPCB
38	M/s. Neelam Hotels Pvt. Ltd. Neelams The Glitz Survey No. 474/2, Calangute, Bardez-Goa	5.1	Used /Spent Oil	50 kg/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		34.3	STP sludge	300 kg/ annum	Chemical-Physical Treatment followed by disposal in a secured landfill site having valid

					authorization from SPCB
39	M/s Goa Paper & Board Converters Pvt. Ltd., Plot No. L-29, Verna Industrial Estate, Verna, Salcete-Goa	5.2	Cotton waste contaminated with oil	20 kg/ month	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration.
		33.3	Ink containers	15 nos./ month	To recycler registered with CPCB and having valid authorization of SPCB
40	M/s Damodar Mangalji & Co. Ltd. Damodar Niwas, M.G. Road, Panaji	5.1	Used /Spent Oil	500 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
41	M/s Damodar Mangalji & Co. Ltd. Damodar Niwas, M.G. Road, Panaji	5.1	Used /Spent Oil	500 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
42	M/s Shree Print & Pack, Plot no. C-3 & C-5, Phase I-A, Verna Industrial Estate, Verna-Goa	5.1	Used /Spent Oil	50 kg/ annum	To recycler registered with CPCB and having valid authorization of SPCB
43	M/s. The Karma Plaza C/o Mr. Giovanni Karl Vaz, Dr. Rajendra Prasad Avenue, Vasco-da-Gama, Goa	5.1	Used /Spent Oil	50 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
44	M/s Schneider Electric India Pvt. Ltd., Plot No. L-3 & L-30, Verna Industrial Estate, Verna, Salcete-Goa	B-4	Solder Dross	0.5 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		5.1	Used /Spent Oil	0.2 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		5.2	Cotton Waste	0.01 MT/ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
		33.3	Discarded containers	50 nos./ annum	Wash water treated in Effluent Treatment Plant & decontaminated drums given for recycling.
		Schedule IV (18)	E-Waste	0.1 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB

45	M/s. Modest Holiday Homes Pvt. Ltd. H. No. 659/5, D'mello Vaddo, Anjuna, Bardez-Goa	5.1	Used /Spent Oil	10 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
46	M/s. Parle (Exports) Pvt. Ltd, Plot No. L-72, Verna Electronic City, Verna, Salcete-Goa	5.1	Used /Spent Oil	50 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
47	M/s. Colmar Condominium Pvt. Ltd.(Soul Vacation) Ward-4, Colva Beach, Colva, Salcete-Goa	5.1	Used /Spent Oil	80 kg/ annum	To recycler registered with CPCB and having valid authorization of SPCB
48	M/s. Hindustan Petroleum Corporation Ltd, Goa Aviation Service Facility, Plot No. A – 10 & A – 11, Murgaon Co – operative Industrial Estate, Near Dabolim Airport, Chicalim – Goa	5.1	Used /Spent Oil	0.6 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB
49	M/s. Panandiker Research & Development Pvt. Ltd. Plot No. L-79, Phase II-D, Verna Industrial Estate, Verna, Salcete-Goa	5.1	Used /Spent Oil	3 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
50	M/s Silla Goa Hotel Pvt. Ltd.,(Citrus Hotels) Survey No. 178/24, 30 & 14, Umta Vaddo, Calangute, Bardez-Goa	5.1	Used /Spent Oil	0.1 MT/ annum	To recycler registered with CPCB and having valid authorization of SPCB
51	M/s Santiago Resort Survey No.231/7 (part), Cobra Vaddo, Calangute, Bardez-Goa	5.1	Used /Spent Oil	0.1 ton/ annum	To recycler registered with CPCB and having valid authorization of SPCB
52	M/s GKB Hi-Tech Lenses Pvt. Ltd.Plot No. 50, Tivim Industrial Estate, Mapusa-Goa	34.3	ETP sludge	40 kg/ annum	Chemical-Physical Treatment followed by disposal in a secured landfill site having valid authorization from SPCB
53	M/s. G. N. Agrawal Anand Bhavan, Old Station Road, Margao-Goa	5.1	Used /Spent Oil	6 tons/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		5.2	Oil soaked cotton waste	1 ton/ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
			Oil filters	1 ton/ annum	

54	M/s. Unique Equipments, Z-15, Mormugao Industrial Estate, Airport Road, Chicalim-Goa	5.1	Used /Spent Oil	10 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
55	M/s Damodar Mangalji & Co. Ltd. Damodar Niwas, M.G. Road, Panaji	5.1	Used /Spent Oil	500 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
56	M/s. Excel Prints and Packs Shed No. P/43, Mapusa Industrial Estate, Mapusa, Bardez-Goa	5.1	Used /Spent Oil	80 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		33.3	Ink tins	30 nos./ month	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
57	M/s. Highland Holiday Homes Pvt Ltd, Sequeira Wado, Candolim, Bardez-Goa,	5.1	Used /Spent Oil	40 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
58	M/s Palette Hotels (I) Pvt Ltd, Swatantra Path, P. O. Box no. 31, Vasco-da-Gama-Goa.	5.1	Used /Spent Oil	60 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
59	M/s. P. K. Composites Pvt. Ltd, Plot no. D2/2, Bicholim Industrial Estate, Bicholim -Goa,	21.1	Resin waste & residue	240 Kg/ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
		33.3	Discarded containers	4800 nos. per annum	Wash water treated in Effluent Treatment Plant & decontaminated containers given for recycling.
60	M/s Damodar Mangalji & Co. Ltd.Damodar Niwas, M.G. Road, Panaji	5.1	Used /Spent Oil	500 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
61	M/s GKB Hi-Tech Lenses Pvt. Ltd.Plot No. 50, Tivim Industrial Estate, Mapusa-Goa	34.3	ETP sludge	40 kg/ annum	Chemical-Physical Treatment followed by disposal in a secured landfill site having valid authorization from SPCB
62	M/s B T Composites Ltd, Plot No. C5-C9, C12-C16, Madkaim Industrial Estate, Mardol Post, Madkaim- Goa	5.1	Used / Spent Oil	40 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		5.2	Cotton waste contamina ted with oil	3.0 Kg/annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
63	M/s Goodwill Enterprises, Survey no. 125/7, Gauthan Priol, Mardol-Goa	5.1	Used /Spent Oil	120 litres	To recycler registered with CPCB and having valid authorization of SPCB

		23.1	Resin waste/ residues	7,000 kg	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
		33.3	Discarded containers	8,000 nos	Wash water treated in Effluent Treatment Plant & decontaminated containers given for recycling.
64	M/s Tech-Force Composites Pvt Ltd, Plot no. 48?A, S. no. 73-A, Nessai, St. Jose de Areal, Margao, Salcete-Goa	5.1	Used /Spent Oil	100 litres	To recycler registered with CPCB and having valid authorization of SPCB
		23.1	Resin waste/ residues	0.5 MT	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
		33.3	Discarded containers	0.5MT	Wash water treated in Effluent Treatment Plant & decontaminated containers given for recycling.
65	M/s. Crest Engineering, C/o Mr. John Joe Lobo, G-17, Souza Towers, Panaji – Goa.	33.3	Empty paint tins	10 nos./ annum	Wash water treated in Effluent Treatment Plant & decontaminated containers given for recycling.
66	M/s Shaiv Distilleries Pvt Ltd. (Lambana Resort), Survey no. 205/4, Umtawaddo, Calangute-Goa	5.1	Used /Spent Oil	10 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
67	M/s. Skylark Resort. H. no.447/2, 4 <sup>th</sup> Ward, Colva, Salcete -Goa.	5.1	Used /Spent Oil	20 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
68	M/s KHR Hospitality India Ltd (The Kenilworth Beach Resort & Spa), Survey No. 43, 44, 45 & 46, Utorda, Salcete -Goa.	5.1	Used /Spent Oil	70 kg/ annum	To recycler registered with CPCB and having valid authorization of SPCB
69	M/s Saritas Guest House C/o Mr. Anthony Vaz, H. No. 206, Near Bogmalo Beach, Bogmalo-Goa	5.1	Used /Spent Oil	2 kg/ annum	To recycler registered with CPCB and having valid authorization of SPCB
70	M/s. Indian Oil Corporation Ltd.(Aviation Fuel Station), Inside INS Hansa, Dabolim Airport Road, Goa	5.1	Used Oil	550 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
71	M/s. Sai Om Petro Specialities Ltd, C/o Shri Anil Kankonkar, MHN – 15, St. Xaviers Chapel,	5.2	Waste oil	5000 KL/ annum	Recycle/ Re-refining waste oil by means of technology having Environmentally Sound Management Facility as approved

	Mormugao Harbour, Goa – 403804				by CPCB
72	M/s. Karthik Alloys Limited, (Rolling Division) Plot No. L-6/ L-7, Cuncolim Industrial Estate, Cuncolim-Goa	5.1	Used /Spent Oil	30 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
73	M/s Mohit Ispat Ltd, Plot No. 01, Navelim Village, Bicholim Industrial Estate, Bicholim-Goa.	5.1	Used /Spent Oil	250 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
74	M/s Sonam Industries, Plot no. 21, Pilerne Industrial Estate, Pilerne, Bardez-Goa	5.1	Used Oil	5 kg/ month	To recycler registered with CPCB and having valid authorization of SPCB
		34.3	E.T.P. Sludge	300 kg/ annum	Chemical-Physical Treatment followed by disposal in a secured landfill site having valid authorization from SPCB
75	M/s Roots Corporation Ltd (Ginger Hotel), Plot no. 37 & 38, Adjoining SGO Complex, EDC Patto, Panaji –Goa.	5.1	Used Oil	40 kg/ annum	To recycler registered with CPCB and having valid authorization of SPCB
76	M/s A & A Hotels Pvt. Ltd. Plot No. 12 & 13, La Oceana Colony, Dona Paula-Goa.	5.1	Used Oil	20 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
77	M/s. Arish Bakery, Plot no. 2, Sancoale Industrial Estate, Zuarinagar-Goa	5.1	Used Oil	40 litres/annum	To recycler registered with CPCB and having valid authorization of SPCB
78	Mr. Savio Messias, (St. Anthonea MRH - 685) Below Mandovi Bridge, Patto, Panaji-Goa.	5.1	Used /Spent Oil	200 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
79	M/s Chalston Hotel, Survey No. 207, Baga Road, Cobra vaddo, Calangute -Goa	5.1	Used /Spent Oil	0.04 MTA	To recycler registered with CPCB and having valid authorization of SPCB
80	M/s Colonia Santa Maria Hotel Pvt Ltd, Cobra Vaddo, Calangute, Bardez-Goa.	5.1	Used /Spent Oil	0.03 MTA	To recycler registered with CPCB and having valid authorization of SPCB

81	M/s Tanu Petrochem Products Pvt Ltd, Chamunda Krupa, Near Nayak Building, Baina, Vasco-da-Gama, Goa – 403802	5.1	Used oil	2000 KL/Yr	Collection, reception & transportation from the ships at Mormugao Port to M/s Tanu Petrochem Products Pvt Ltd, Plot No. 238, Phase – II, IDA, Pashamilaram, Ptancheru (M), Medak District – 502 307 Andhra Pradesh
		5.2	Waste oil	2000 KL/Yr	
82	M/s Siemens Ltd, (Energy Automation) Plot No. L-6, Verna Industrial Estate, Verna-Goa	5.1	Used /Spent Oil	200 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		B4	Lead and lead compounds	6,000 litres /annum	To recycler registered with CPCB and having valid authorization of SPCB
		20.1	Contaminated aromatic, aliphatic or naphthenic solvents may or may not be fit for reuse	3,000 kg/annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
		23.1	Wastes residues from industrial use of glues	1,000 kg/annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
83	M/s SAF Petroleums, Plot no. 204, Auto Nagar, APIIDC Industrial Estate, Sarvaparam, Kakinada -5, Andhra Pradesh.	5.1	Used oil	360 KL/Yr	Collection, reception & transportation from the ships at Mormugao Port to M/s SAF Petroleums, Plot no. 204, Auto Nagar, APIIDC Industrial Estate, Sarvaparam, Kakinada -5, Andhra Pradesh
		5.2	Waste oil	375 KL/Yr	
84	M/s. Hotel La Grace Near K.T.C. Bus Stand, Madel, Margao-Goa	5.1	Used /Spent Oil	200 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB

85	Shri. Jairam B. Neogui C/o Shri. Dinar Tarcar 1 <sup>st</sup> floor, Opp. Govinda Bldg. M.G. Road, Panaji-Goa	5.1	Used /Spent Oil	1,500 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		5.2	Oil filters	500 nos/ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
			Cotton waste contamina ted with oil	500 kg/ annum	
86	The Director, M/s Apollo Victor Hospital, Malbhat, Margao-Goa	5.1	Used /Spent Oil	100 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
87	M/s. Vintage Bottlers Pvt Ltd, Plot no. 30 & 31, Phase III A, Sancoale Industrial Estate, Zuarinagar-Goa	5.1	Used /Spent Oil	10 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
88	M/s So My Resorts Pvt Ltd, Survey No. 483/4, Naikawaddo, Calangute - Goa	5.1	Used /Spent Oil	10 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
89	M/s. Sri Shantha Pumps, Anandsmruti, Goenchembhat, P.O. Velim, Salcete- Goa.	5.1	Used /Spent Oil	20 kg/ annum	To recycler registered with CPCB and having valid authorization of SPCB
		21.1	Sludge from paint booth	100 kg/annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
90	Shri. Suleman A. Makandar, Shop no. D-1, Valmilk Business Centre, Baina, Vasco-da-gama, Goa	5.2	Waste oil	4000 KL/ annum	Recycle/ Re-refining waste oil by means of technology having Environmentally Sound Management Facility as approved by CPCB
91	M/s. Lexus Petro, C/o Shri. Sayed Nasir Ahamed, H. no. 307, Gauliwado, Fatorda, Margao - Goa	5.1	Used oil	1000 KL/ annum	Collection, reception & transportation to M/s. Vipro Industries, located at Plot no. D- 2/2, MIDC Gokul Sirgaon, Kolhapur- Maharashtra
		5.2	Waste oil	1000 KL/annum	
92	M/s. Mohidin Metal Industries 0-1, 1 <sup>st</sup> floor, Commerce Centre Next to old Bus Stand, Vasco-da-Gama, Goa 403802	5.1	Used /Spent Oil	1.5 Tones/ annum	To recycler registered with CPCB and having valid authorization of SPCB
93	M/s Kashinath D.S. Talaulikar C/O Vsundhara Minererals	5.1	Used /Spent Oil	1500 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB

	Shiv-Shail,Shiroda-Goa 403103	5.2	Oil soaked cotton waste	300 kg/ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
		5.2	Oil Filter	300 nos./ annum	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
94	M/s SUVM Shipping Surendra A Shirodkar,Shop Shop no.9, Gr. Floor, Elvira Appt Opp St Andrew Church Vasco Goa	5.1	Used /Spent Oil	1500 KL/ annum	To M/s Meher Petro Chem Pvt Ltd C-33,KPD Ind. Estate, Plot No.17, Village Hamrapur, Wada Thana,
		5.2	Waste Oil	4000 KL/annum	To M/s Meher Petro Chem Pvt Ltd C-33,KPD Ind. Estate, Plot No.17, Village Hamrapur, Wada Thana,
95	M/s. Casa Severina H.No.E1/205,Gaura Waddo. Calangute Bardez, Goa-403516	5.1	Used /Spent Oil	40 liters/ annum	To recycler registered with CPCB/GSPCB and having valid authorization of SPCB
96	M/s Damodar Mangalji & Co. Ltd. Damodar Niwas, M.G. Road, Panaji	5.1	Used /Spent Oil	500 litres/ annum	To recycler registered with CPCB and having valid authorization of SPCB
97	M/s. Canacona Hydrocarbons, Plot no. 87 & 89, Canacona Industrial Estate, Canacona-Goa	4.1	Oily sludge from recycling of waste oil	0.135 MT per month	To be sent to M/s Mumbai Waste Management Ltd. at Taloja for incineration
98	M/s Aakaash Manufacturing Co. Pvt. Ltd, Plot No. A-6 & A-7, Kundaim Industrial Estate, Kundaim-Goa	5.1	Used /Spent Oil	3MTA	To recycler registered with CPCB and having valid authorization of SPCB
		5.2	Cotton Waste	0.600 MTA	To be sent to M/s Mumbai Waste Management Ltd, Taloja for incineration

## Annexure VII

**Table 7: STATUS OF BIO-MEDICAL WASTE GENERATED DURING THE YEAR 2011 – 2012**

Health Care Facilities (HCF) under Schedule VI Health Care Facilities (HCF) under Schedule VI of the Rules	Total no. of HCF	Total no. of Beds	No. of CBWTF / Private agencies	No. of HCF which are utilising CBWTF	No. of HCF having treatment and disposal facilities	No. of HCF applied for Authorisation	No. of HCF granted Authorisation	Total no. of treatment equipment (excluding CBWTF)					Total Qty of BMW generated kg/day	Total Qty of BMW treated kg/day	No. of Health Care Facilities violated BMW Rules	Total no. of Show Cause Notices issued to default HCF
								Incinerator	Autoclave	Microwave	Hydroclave	Shredder				
								With Air Pollution Control Device (APCD)	Without APCD							
<b>A) Hospitals &amp; Nursing homes in town with population of 30 lakhs and above</b>																
B) Hospitals & Nursing homes in town with population below 30 lakhs:																
a) with 500 beds and above	1															
b) with 200 beds but less than 500 beds	1															
c) with 50 beds but less than 200 beds	12	4529	NIL	NIL	1	324	323	NIL	1	175	1		4950.9	4950.9	1	1
d) with less than 50 beds	294															
C) All other institutions generating bio-medical waste not included in A) and B)	8															
<b>Total</b>	316	4529	NIL	NIL	1	317	316	NIL	1	175	1		4950.9	4950.9	1	1

## ***Annexure VIII***

**Table 8: SYNOPSIS OF MAJOR CASES PENDING IN THE HIGH COURT OF BOMBAY AT GOA.**

<b>Sr. No.</b>	<b>Case no.</b>	<b>Name</b>	<b>Court</b>	<b>Subject</b>	<b>Brief synopsis</b>	<b>Present status</b>
1.	<b>Suo Motu Writ Petition no. 2/2007</b>	Suo motu matter re: the disposal of solid waste by Municipalities and Village Panchayats in the State of Goa.	High Court of Bombay at Goa	Matter pertains to the disposal of solid waste by Municipalities and Village Panchayats in the State of Goa.	The Hon. High Court of Bombay at Goa has issued a number of directions to be complied with by the Municipalities and Village Panchayats in the State of Goa, in order to ensure that the solid waste generated by them is disposed off in an environmentally sound manner. The Board has conducted a number of inspections in this regard and has submitted various reports to the Hon. High Court in this regard. The latest report of inspection has been submitted by the Board to the Hon. High Court in the month of July 2012. The same indicates that a large number of Municipalities and Coastal village Panchayats have not complied with the directions of the Hon. High Court.	The matter is now placed for Final Hearing before the Hon. High Court.

2.	<b>PIL W.P. no. 15/2011</b>	Colva Civic Consumer Forum v/s State of Goa and ors.	High Court of Bombay at Goa	Matter pertains to the pollution of the water in the Colva Creek due to the indiscriminate discharge of sewage into it by adjacent commercial establishments.	On considering the reports of inspections conducted by the Board with regard to the pollution of the Colva Creek , the Hon. High Court has issued a number of directions to the Water Resource Department, Government of Goa and to the local village Panchayats directing them to desilt the Colva Creek.	The matter is now placed for admission before the Hon. High Court.
3.	<b>PIL W.P. No. 1/2008</b>	Shirigao Nagrik Samithi	High Court of Bombay at Goa	Matter pertains to the destruction of water sources in the village of Sirigao due to mining operations by 3 mining units.	On considering the report submitted by the NEERI regarding the measures to be undertaken by the 3 mining units in order to restore the water sources in Sirigao village, and on considering the Boards directions to the aforesaid 3 mining units the Court is monitoring the compliance by the mining units.	The matter is now placed for orders before the Hon. High Court
4.	<b>Suo motu Writ Petition no. 8/2001</b>	Suo Motu matter re: pollution caused in Vasco town due to manual coal handling by Mormugao Port Trust (MPT)	High Court of Bombay at Goa	Matter pertains to air pollution caused in Vasco town due to manual coal handling by Mormugao Port Trust (MPT)	The Hon. High Court has disposed off the matter by converting the directions issued by the Board to MPT as its own. These directions have been issued by the Board to ensure that efficient air pollution control measures were adopted by the MPT while handling coal and coke at its	The matter has been disposed.

					berths. The Court has also directed the Board to monitor the Ambient Air Quality at Vasco town and initiate appropriate legal action in the event its directions were not complied with.	
5.	<b>Writ Petition (Civil) no. 435/2012</b>	Goa Foundation v/s The State of Goa nad ors.	Supreme Court of India	Matter pertains to alleged illegal mining in the State of Goa as mentioned in the Report submitted by Justice Shah Commission of Inquiry.	Vide an interim order the Hon. Supreme Court of India has directed that mining activity at all the mining leases as mentioned in the Shah Report be suspended till the submission of a report by the Central Empowered Committee.	The Report of the CEC is to be submitted to the Hon. Supreme Court.

## Annexure IX

**Table 9: TABLE DETAILS OF REQUESTS RECEIVED, DISPOSED OFF, REJECTED, FEES COLLECTED, APPEALS PREFERRED TO THE FIRST APPELLATE AUTHORITY, OUTCOME OF APPEALS UNDER RTI ACT, 2005 FOR THE THE FINANCIAL YEAR JANUARY 2011 TO DECEMBER 2011**

Sr no	Name of the Public Authority	Names/ Designation of the PIO	No. of request made under section 6	No. of request received by PIO	No. of request where the information is provided within statutory period of 30days	No. of request where no decision is communicated	No. of request rejected - quoting the relevant provisions of the RTI Act	Amount of application fees collected	Amount of Charges collected towards the supply of Information	No. of cases in which the information supplied free of cost and no. of pages	No. of first appeals filed	No. of appeals allowed within the time limit by first Appellate Authority	No. of appeals rejected by the first Appellate Authority	No. of appeals where no decision is taken even after the expiry of statutory period
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Goa State Pollution Control Board	Shri. Srinet Kothwale (Member Secretary)	274	274	274	NIL	6	Rs. 2420/- paid through court fee stamps	Rs. 18207/-	Nil	3	3	NIL	NIL

ANNEXURE X		
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2012		
Particulars	1-Apr-2011 to 31-Mar-2012	1-Apr-2011 to 31-Mar-2012
<b>Direct Expenses</b>	<b>21419653.00</b>	<b>Direct Incomes</b>
Salaries	21161407.00	Air Consent Fees
G/S		Ambient Monitoring Fees
Payment to Contractor (Salaries)	258246.00	Bio Medical Fees
<b>Indirect Expenses</b>	<b>20345697.05</b>	Grants Towards NWM/P
Advertisement & Publicity	1038060.00	Income From RTI
Chairman Expenses	2629394.00	Income From Stack Analysis
Laboratory Exp.	6914179.00	Lab Analysis Fees
Office Exp.	4622218.05	Noc Fees
AD FILM-PREVENTION OF NOISE POLLUTION	600000.00	Other Receipt
Books & Periodicals	2000.00	Water Consent Fees
Honorarium	637000.00	<b>Indirect Incomes</b>
Hospitality Expenses	35659.00	Income
Hospitality Exp-Chairman.	15904.00	Grants Towards Ambentment of Pollution
Income Tax Paid	320.00	Interest Accrued on Fdr
Legal Expenses	700.00	Interest Recieved
Legal Fees	1016981.00	Sale of Scrap
NABL Expenses	36476.00	Share Water Cess From Central Govt.
News Papers & Periodicals-News Paper	7007.00	
Professional Fee-Lab	1299957.00	
Professional Fees	931448.00	
Rates & Taxes	170256.00	
Renewal Fees-NABL	14039.00	
Rent Paid	165450.00	
Seminar (XGN Software)	192186.00	
Tour Advance		
Travelling Exp-NABL	16463.00	
<b>Excess of Income over Expenditure</b>	<b>161838191.78</b>	
<b>Total</b>	<b>203603541.83</b>	<b>Total</b>
		<b>203603541.83</b>

