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ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ  
**Karnataka State Pollution Control Board**

"ಪರಿಸರಭವನ", 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ, ಭಾರತ  
"Parisara Bhavana", 1st to 5th Floor, # 49, Church Street, Bengaluru - 560 001, Karnataka, INDIA

NO: KSPCB/134/II/COG/2010-11/ 369

DATE: 29 AUG 2011

To,  
The Member Secretary  
Central Pollution Control Board  
'Parivesh Bhavan' East Arjun Nagar,  
Delhi- 110 032

Kind Attn: Sri N.K. Gupta.  
S.E.E & member convenor.

Sir,

Sub: Meeting of the Steering Committee to review the  
Progress on the Implementation of the Action Plans in  
Critically Polluted Areas-reg  
Ref: CPCB Letter No; B-29012/ESS(CPA)/2011-12 Dtd;  
16-08-2011

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With reference to the above, please find herewith status of  
action taken for Critically polluted areas of Bhadravathi and Mangalore.  
The following annexures are herewith enclosed for your information and  
needful.

A. Mangalore

- Present Status of action taken by the Industries on Action plan.
- Present Status of action taken by other industries/organizations on  
Action plan.
- Present Status of action taken report by KSPCB on Action plan

B. Bhadravathi

- Present status of action taken by the industries on action plan with  
respect to Bhadravathi

C. Photographs of two critically polluted areas are enclosed.

Enc: As above.

Yours faithfully

Member Secretary

"ಪ್ಲಾಸ್ಟಿಕ್ ಬಳಕೆ ನಿಲ್ಲಿಸಿ, ಪರಿಸರ ಹಾನಿ ತಪ್ಪಿಸಿ"

AVOID USE OF PLASTICS - BE 'ECO' FRIENDLY

**A. Present Status of action taken by the Industries on Action plan**

Sl. No.	Name of the industry	Action Plan Proposed by major industries	Cost Estimate (Rs. in Lakhs)	Time Schedule	Remarks	Present Status of action taken as reported by industries
1	M/s MRPL Kuthethur,	a) ETP with RO Plant	14800	Oct 2011	Reduction in Fresh Water Consumption	<ul style="list-style-type: none"> <li>About 65% physical progress made on installation of advanced waste water treatment plant with RO plant</li> <li>Rs. 6000 Lakhs spent.</li> </ul>
		b) Condensate recovery system-2 Nos	61	31-12-2011	Fresh Water conservation	<ul style="list-style-type: none"> <li>Mechanical completion of the scheme in CDU-I is around 90 %</li> <li>Rs. 10 Laks paid</li> </ul>
		c) Installation of CAAQM monitoring system (2 <sup>nd</sup> )	75	31-03-2011	-----	<ul style="list-style-type: none"> <li>The second CAAQM Commissioned in June 2011.</li> </ul>
		d) Utilization of natural gas as internal fuel in the refinery	To be estimated	As and when natural gas is made available	Reduction in SO2 & CO2 Emissions	<ul style="list-style-type: none"> <li>As per GAIL, Natural Gas to Mangalore is expected by March-2013</li> <li>Utilization of RLNG (Re-gasified Liquefied Natural Gas) will be subject to its economic feasibility.</li> </ul>
		e) Installation of Sulphur pastillation unit for Phase-III	7000	31-10-2011	Reduction of Sulphur dust	<ul style="list-style-type: none"> <li>Physical progress made 87 %</li> <li>Construction progress about 70%</li> </ul>
		f) planting of 10,000 saplings	50	2011	Green belt development	<ul style="list-style-type: none"> <li>Letter of indent placed with Forest Department for developing green belt.</li> <li>Work order value is Rs 1.90 crores.</li> <li>About Rs 60 lakhs will be paid for the year 2011-12 depending on work progress.</li> </ul>

2	BASF India Ltd., Bala village.	a) Installation of diffused aerator system for biological treatment	15	31-1-2011	Improve oxygen transfer efficiency	<ul style="list-style-type: none"> <li>Installation work of diffused aeration system to Bio-aerators is completed.</li> </ul>
		b) Installation of scrubber for monomer storage tanks to control fugitive emissions	15	30-6-2011	Control of Air emission	<ul style="list-style-type: none"> <li>Awaiting critical instruments for controlling &amp; monitoring the scrubbing operation &amp; expected to complete before 31.12.2011.</li> </ul>
		b) Planting of 1000 saplings	4.5	2011	Green belt development	<ul style="list-style-type: none"> <li>In year 2010 they planted 3000 saplings covering 6 acres at cost of Rs. 4.5 lakhs</li> <li>During the current year 3000 tree saplings planted within factory premises at cost of ₹.5 Lakhs.</li> </ul>
3	M/s MCF Ltd., Panambur	a) Changeover of fuel from Naphtha and furnace oil to Natural Gas and Re-Liquefied Natural Gas	40000	2013	Reduction in SO <sub>2</sub> & CO <sub>2</sub> Emissions	<ul style="list-style-type: none"> <li>The LNG terminal work by M/s Petronet LNG at Kochi is in progress and gas pipeline connectivity is expected in March 2013.</li> <li>Industry has signed Gas Sale Agreement (GSA) with M/s IOCL on 16-02-11 and Gas Transmission Agreement (GTA) with M/s GAIL on 16-02-11.</li> <li>Applications submitted to MoEF for EC clearance for the proposed feed stock conversion from Naphtha to Natural Gas in Ammonia Plant, Boiler &amp; CPP.</li> <li>The Job of carrying out EIA studies for the project has awarded to M/s Tata consulting Engineers, Mumbai &amp; baseline data collection is under progress.</li> <li>Also started discussions with engineering Consultants &amp; Suppliers for carrying out engineering studies for conversion of feed stock and fuel to gas.</li> </ul>

		b) Planting of 4000 saplings	6	2011	Green belt development	<ul style="list-style-type: none"> <li>• Already developed 50 acres of green belt with 50,000 of trees</li> <li>• Proposed to plant 5,000 saplings during 2011 in an area of 5 acres. Till date 1,500 saplings planted</li> </ul>
4	<b>Sequent Scientific Ltd. Baikampady.</b>	Monitoring of VOCs	5	30-6-2011		<ul style="list-style-type: none"> <li>• Procured VOC measuring instrument at the cost of 3 lakhs.</li> <li>• Carrying out monitoring on weekly basis and results are being submitted to KSPCB.</li> </ul>
5	<b>M/s KIOCL Panambur</b>	a) Up gradation of the existing STP with latest technology	50	30-06-2011	Improve quality of treated sewage	<ul style="list-style-type: none"> <li>• CFE obtained from Board during Dec 10 for up gradation of STP.</li> <li>• Revised estimate of STP with MBR technology is Rs 80 lakhs.</li> <li>• Tenders are under scrutiny.</li> <li>• Date of completion of establishment of STP will be 31.12.2011</li> </ul>
		b) Installation of ETP for treatment of effluent generated from De-sulphurisation plant of Captive Power Plant	65	31-12-2011	Improve quality of treated water	<ul style="list-style-type: none"> <li>• Decision has been taken to switch over to low sulphur (less than 2%) content Furnace oil which will eliminate FGD unit itself.</li> </ul>
		c) Asphaltting of all internal roads	35	31-12-2011	Reduction of fugitive emissions	<ul style="list-style-type: none"> <li>• Tendering work for concreting 325 mts road with estimated cost of Rs.36 Laks is in progress.</li> <li>• Proposed another 100 mts of concreting of road with an estimate of Rs 25 lakh</li> </ul>
		d) Providing of closed sheds for raw materials storage	30	30-09-2011	Reduction of fugitive emissions	<ul style="list-style-type: none"> <li>• Consultants engaged for design of structures</li> </ul>
		e) Planting of 10,000 saplings	6	31-10-2011	Green belt development	<ul style="list-style-type: none"> <li>• Proposed to finance state Forest Dept for forestation.</li> </ul>

6	M/s NMPT, Panambur	a) Mechanization and Commissioning of Iron Ore Cargo handling	27700	October 2012	Reduction of cargo spills	<ul style="list-style-type: none"> <li>Since the State Govt. has banned export of iron ore the mechanization proposal kept on hold.</li> </ul>
		b) Concretization of roads to minimize spillage of cargo	3000	31-12-2011	Reduction of cargo spills	<ul style="list-style-type: none"> <li>Arterial roads have been concretized by incurring expenditure of Rs. 30 crores.</li> <li>Additional works to tune of Rs 800 lakhs has been taken up and will be completed by April 2012.</li> </ul>
		c) Green belt development along the highway NH 17 and Beach Road for one KM length, near VTMS building and at Meenakaliya Village road	80	2011	Green belt development	<ul style="list-style-type: none"> <li>About 10,000 saplings planted during 2010-11 along the highway NH 17 and Beach Road and Beach areas, near VTMS building and at Meenakaliya Village road, inside the Port arterial roads with tree guards</li> <li>For 2011-12 about 6000 saplings planted</li> <li>Total Amount spent Rs. 80 Lakhs.</li> </ul>
		d) Providing permanent sprinkling system along the concrete roads 600 M	10	30-04-2011	Dust suppression	<ul style="list-style-type: none"> <li>Rs 20 lakh estimate prepared and submitted for approval.</li> </ul>
		e) Providing bunds to settling tanks and extension of settling tank	60	30-06-2011	To stop entry of ore into sea	<ul style="list-style-type: none"> <li>Concrete bund has been provided to settling tank near KK Gate with approach drains for Rs. 12 Lakhs</li> <li>Further construction of additional settling tank with estimate of Rs. One crore is prepared and submitted for approval.</li> </ul>
		f) Providing of acoustic enclosures for two Nos of 1000 KVA DG Sets.	32	30-03-2011	To reduce the noise	<ul style="list-style-type: none"> <li>Work completed in July 2011</li> </ul>

7	<b>Ruchisoya Industries Ltd., Baikampady</b>	a) Concreting of roads	50	30-06-2011	Dust suppression	<ul style="list-style-type: none"> <li>Completed concreting of 15,000 Sq. Ft. road work from Main Gate to DG Set area by investing Rs. 50.00 Laks in first phase</li> </ul>
		b) Planting of 625 saplings	--	2011	Green belt development	<ul style="list-style-type: none"> <li>Planted 625 saplings</li> <li>Proposed additional saplings during current monsoon</li> </ul>
8	<b>Rajashri Packagers Pvt. Ltd., Baikampady</b>	a) Replacement of fuel from rice husk to imported coal	12	Dec 2010	Reduction of ash generation	<ul style="list-style-type: none"> <li>Boiler fuel changed from rice husk to imported coal.</li> </ul>
		b) Incorporating closed loop ash handling system (Silo's)	35	Dec 2010	Dust suppression	<ul style="list-style-type: none"> <li>Incorporated closed loop ash handling system (Silo's)</li> </ul>
		d) Facilities for in-house testing of ETP parameters	2.5	Dec 2010	-----	<ul style="list-style-type: none"> <li>Facilities for in-house testing of ETP parameters like pH, COD, TSS, Oil &amp; Grease, etc. established.</li> </ul>
9	<b>Eshwari Metal Industries, (unit 1), Baikampady</b>	Installation of Rotary Kiln furnace with Scrubber	40	31-12-2011	To minimize the emissions	<ul style="list-style-type: none"> <li>Scrubber purchased &amp; received at the plant</li> <li>Purchase order placed for Rotary Kiln furnace with advance of Rs. 5.00 lakhs</li> <li>Construction of shed for Rotary kiln is under progress.</li> <li>Proposed to install &amp; commission both Rotary kiln and Scrubber before 30-09-2011.</li> </ul>

### B. Present Status of action taken by other industries/organizations on Action plan

Sl.no	Name of the Industry/organization	Description of the Action Required/Proposed	Present Status
1	M/s Bharath Micron Industries Shed No. 143, Baikampady Ind. Estate	<ul style="list-style-type: none"> <li>Treatment facility for the treatment of waste water (0.5KLD) generated from electroplating (Ni &amp; Cr) activity</li> </ul>	<ul style="list-style-type: none"> <li>Treatment facility provided</li> <li>Small quantity of effluents treated in batches and discharged on land within the premises</li> </ul>
2	M/s Power Pack Batteries (India) Shed No C-51/52, Baikampady Ind. Estate	<ul style="list-style-type: none"> <li>Treatment facility for the treatment of trade effluents (1KLD).</li> </ul>	<ul style="list-style-type: none"> <li>Civil works of the proposed ETI is completed</li> <li>Orders placed for mechanical equipments and dual media filter</li> </ul>
3	CETP for 14 fishmeal & fish oil manufacturing units located in cluster at Kotepura- Ullal	<ul style="list-style-type: none"> <li>CETP of capacity 600 KLD at the cost of Rs 2.2 crores</li> </ul>	<ul style="list-style-type: none"> <li>CETP commissioned on 30.07.2011 and it is under stabilization</li> </ul>
4	M/s BAWA Fisheries Mukka,	<ul style="list-style-type: none"> <li>40 KLD capacity ETP for the treatment of trade effluents by end of December 2010</li> </ul>	<ul style="list-style-type: none"> <li>ETP completed &amp; commissioned</li> <li>Performance will be monitored by the RO during the season</li> </ul>
5	M/s BAWA Fishmeal & Oil Company, Mukka	<ul style="list-style-type: none"> <li>50 KLD capacity ETP for the treatment of trade effluents by end of December 2010</li> </ul>	<ul style="list-style-type: none"> <li>ETP completed &amp; commissioned</li> <li>Performance will be monitored by the RO during the season</li> </ul>
6	Mangalore City Corporation (MCC)	<ul style="list-style-type: none"> <li>Commissioning of remaining 3 STPs by December 2011</li> <li>Utilization of treated sewage</li> <li>Providing UGD for the entire city limits</li> </ul>	<ul style="list-style-type: none"> <li>2 STPs commissioned and remaining 2 will be commissioned before December 2011</li> <li>SPV with MSEZ formed for O&amp;M of STPs</li> <li>70% UGD works completed</li> </ul>

### C. Present Status of action taken report by KSPCB on Action plan

Sl. No	Action Points (including Source and mitigation measures)	Responsible Stake Holders	Time limit	Approx. Cost in laks	Present Status of Action Taken
1	Monitoring of Air/water & soil in cluster for special parameters.	KSPCB	30-9-2011	30	<ul style="list-style-type: none"> <li>• KSPCB is in the process of procuring few critical equipments</li> </ul>
2	Source apportionment study from air/water pollution point of view within the cluster	KSPCB	30-12-2011	10	<ul style="list-style-type: none"> <li>• Agencies identified for the study</li> </ul>
3	Water auditing in the major water consuming industries in the cluster. (To identify opportunities for Water conservation)	Industry	30-6-2011	-	<ul style="list-style-type: none"> <li>• 14 major water consuming industries identified and orientation programme conducted on 30.04.2011</li> </ul>
4	Up gradation of Regional Laboratory, including strengthening of infrastructure of Regional Office.	KSPCB	31-12-2011	100	<ul style="list-style-type: none"> <li>• Proposals sent to KSPCB</li> <li>• Recruitment process started</li> </ul>
5	Online effluent quality monitoring System for basic parameters.	2 Major Industries	31-12-2011	30	<ul style="list-style-type: none"> <li>• M/s BASF has installed online monitoring system to monitor PH, Conductivity &amp; DO of treated effluents being discharged into sea.</li> <li>• M/s MRPL has installed online monitoring system to monitor PH, DO, Sulphide, Phenols &amp; TOC of treated effluents being discharged into sea.</li> </ul>
7	Continuous Ambient Air quality monitoring Stations-1 Nos	PPP Model	31-12-2011	100	<ul style="list-style-type: none"> <li>• KSPCB, MCF, NMPT and KIOCL have agreed for contribution.</li> <li>• CPCB has been approached for assistance</li> </ul>
8	Preparation of feasibility report for infrastructure development like, Storm water Management, underground drainage (UGD), common effluent treatment plant (CETP) within the industrial cluster.	KIADB	30-9-2011	15	<ul style="list-style-type: none"> <li>• Storm water drains have been de silted</li> <li>• Works of construction of new drains as well as repairing of existing drains have been taken up</li> <li>• Feasibility study is yet to be taken up</li> </ul>



9	Preparation of feasibility report for infrastructure development of Common engineered landfill site for non-hazardous solid waste.	KSPCB	30-9-2011	10	<ul style="list-style-type: none"> <li>• Feasibility study is yet to be taken up</li> </ul>
10	Monitored Data transfer from the industries to Board and creation of necessary infrastructure in the Board	KSPCB/Industry	30-6-2011	15	<ul style="list-style-type: none"> <li>• 3 major industries identified and work in progress</li> </ul>
11	Establishment of a centre to promote waste minimization and waste exchange in the industrial cluster, adoption of cleaner technologies & changeover to cleaner fuels.	KSPCB	31-12-2011	10	<ul style="list-style-type: none"> <li>• Modalities to be worked out</li> </ul>
12	Setting up of waste collection centre in the cluster	KSPCB/Industry	30-9-2011	20	<ul style="list-style-type: none"> <li>• E-Waste collection centre has been established at the RO, KSPCB for the benefit of the industries located in Baikampady industrial area.</li> <li>• MCF, KIOCL &amp; MRPL have also established E-Waste Collection centers in their premises and also in the colony</li> </ul>
13	Avenue plantations in and around Baikampady Industrial Area	KIADB & Industry	31-12-2011	10	<ul style="list-style-type: none"> <li>• Avenue plantation has been taken up by KIADB</li> </ul>

**A. Present status of action taken by the industries on action plan with respect to Bhadravathi**

Sl. No.	Name of the industry	Action Plan Proposed by major industries	Cost Estimate (Rs. in Lakhs)	Time Schedule	Present Status of action taken as reported by industries	Remarks
1	<ul style="list-style-type: none"> <li>• Performance study of ETP</li> <li>• water auditing</li> <li>• Quantification of Green House Gas emissions.</li> </ul>	MPM	25	31-12-2011	<ul style="list-style-type: none"> <li>• Local area committee meeting held on 07.03.2011 and decided to have ETP performance evaluation jointly by KSPCB and MPM instead of conducting it through external agency.</li> <li>• ETP performance is study is under process and sample is being collected. The performance of ETP is optimal as indicated by the report submitted by KSPCB on the testing of final treated effluent.</li> </ul>	
2	<p>Upgradation of existing ETP</p> <ul style="list-style-type: none"> <li>• Installation of Diffused aeration system at Post Aeration Basin</li> <li>• Installation of Decanter for Secondary (Bio) sludge de-watering</li> <li>• Installation of Filter Press for Primary sludge de-watering</li> <li>• Installation of Diffused Aeration system at Aeration Basin</li> </ul>	MPM	610	31-12-2011	<ul style="list-style-type: none"> <li>• Offers have been received from various sources and it is under technical evaluation.</li> <li>• In the first phase, industry has taken up tendering for supply &amp; erection of Decanter. Other two projects will be taken up subsequently, after commissioning of Decanter.</li> </ul>	

3	Installation of Rotary Lime Kiln (RLK)	MPM	3100	31-03-2011	<ul style="list-style-type: none"> <li>• 46% of civil works have been completed</li> <li>• 55% of the equipments have already been received.</li> </ul>	
4	Refurbishing of 190 M3/hr STP at Township	VISL	18.40	31-12-2010	<ul style="list-style-type: none"> <li>• Repair work completed</li> <li>• Put into service from 20-01-2011 and it is operational.</li> </ul>	
5	Dust Collection System at Blast Furnace Cast House.	VISL	45	30-11-2011	<ul style="list-style-type: none"> <li>• Performance study of same type of equipment in other steel plants is conducted. It is not satisfactory. Further study is going on with the help SAIL-CET (Centre for Engineering and Technology). It is also being explored to install effective ventilation system for mitigating dust during taping.</li> <li>• Alternatively they have modified taping procedure to reduce dust generation during taping.</li> </ul>	
6	Revamping of existing Air pollution control system – Bag Filter at SMS	VISL	30	30-11-2011	<ul style="list-style-type: none"> <li>• Cooling water pipelines to fluid coupling cooler are repaired. Induced Draft Fan tested and trial runs conducted.</li> <li>• Testing/ Repair of Pipeline system from bag filter system to LRF's is under progress</li> </ul>	
7	Improvement of existing MSW treatment and disposal facility as per MSW Rules	CMC-Bhadravathi	605	After the release of funds from Government	<ul style="list-style-type: none"> <li>• The CMC, Bhadravathi has constructed compound wall, watch man shed and drilled the bore well, approach road constructed.</li> <li>• The solid waste is being dumped in the pits unscientifically without segregation.</li> </ul>	Time requested by the CMC for scientific disposal of land fill site and door to door collection is up to 31.12.2011

8	Providing UGD system in 2 <sup>nd</sup> Phase to cover the entire town	CMC-Bhadravati	1800		<ul style="list-style-type: none"> <li>The CMC will take up this work after the release of funds from the government.</li> </ul>	First phase of UGD is under progress and the work will be faster after the release of funds from the Government.
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**Note:** The first local area committee meeting was held on 07.03.2011 under the Chairmanship of Sri Araga Gnanendra, Chairman, MPM, Bhadravathi.

The photographs of VISL, STP is enclosed for kind perusal.

**B. Present Status of Action taken report by KSPCB on Action Plan**

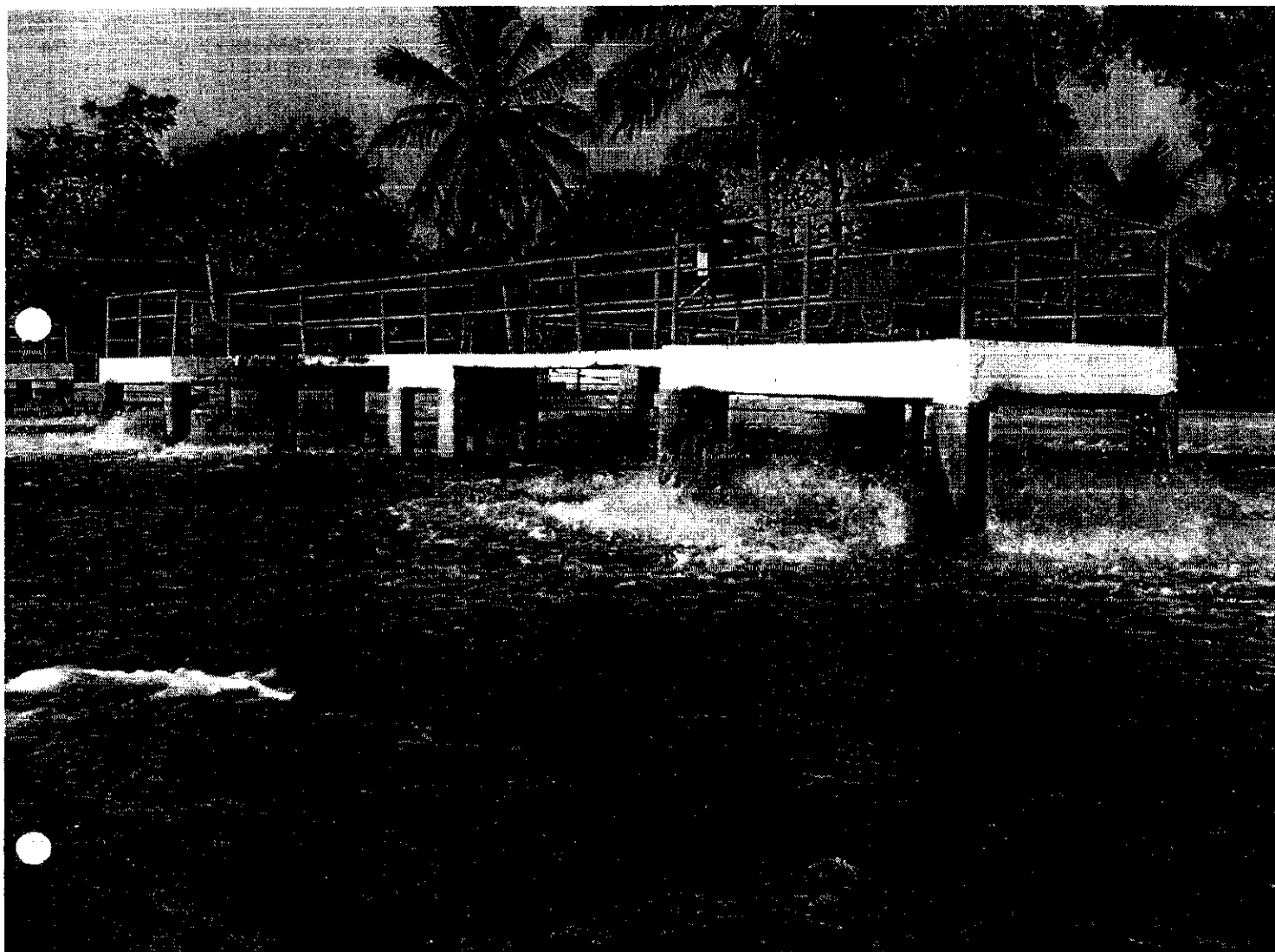
Sl. No.	Action Points(including Source and mitigation measures)	Responsible Stake Holders	Time limit	Cost in Lakhs	Present status
1	Monitoring of Air/Water & soil in cluster for special parameters and toxins	KSPCB	30-09-2011	30	It is under process. This will be carried out with the help of empanelled laboratory
2	Study on impact of effluent and sewage discharge on Bhadra river including bio mapping.	KSPCB	30-09-2011	10	It is under process
3	Air quality modeling study for the cluster	KSPCB	30-06-2011	10	It is under process
4	Up gradation and strengthening of existing laboratory at Davanagere	KSPCB	31-12-2011	100	It is under process
5	Setting up of new Continuous Ambient Air quality monitoring station on PPP model	PPP	31-12-2011	100	It is under process

M/s. VISL

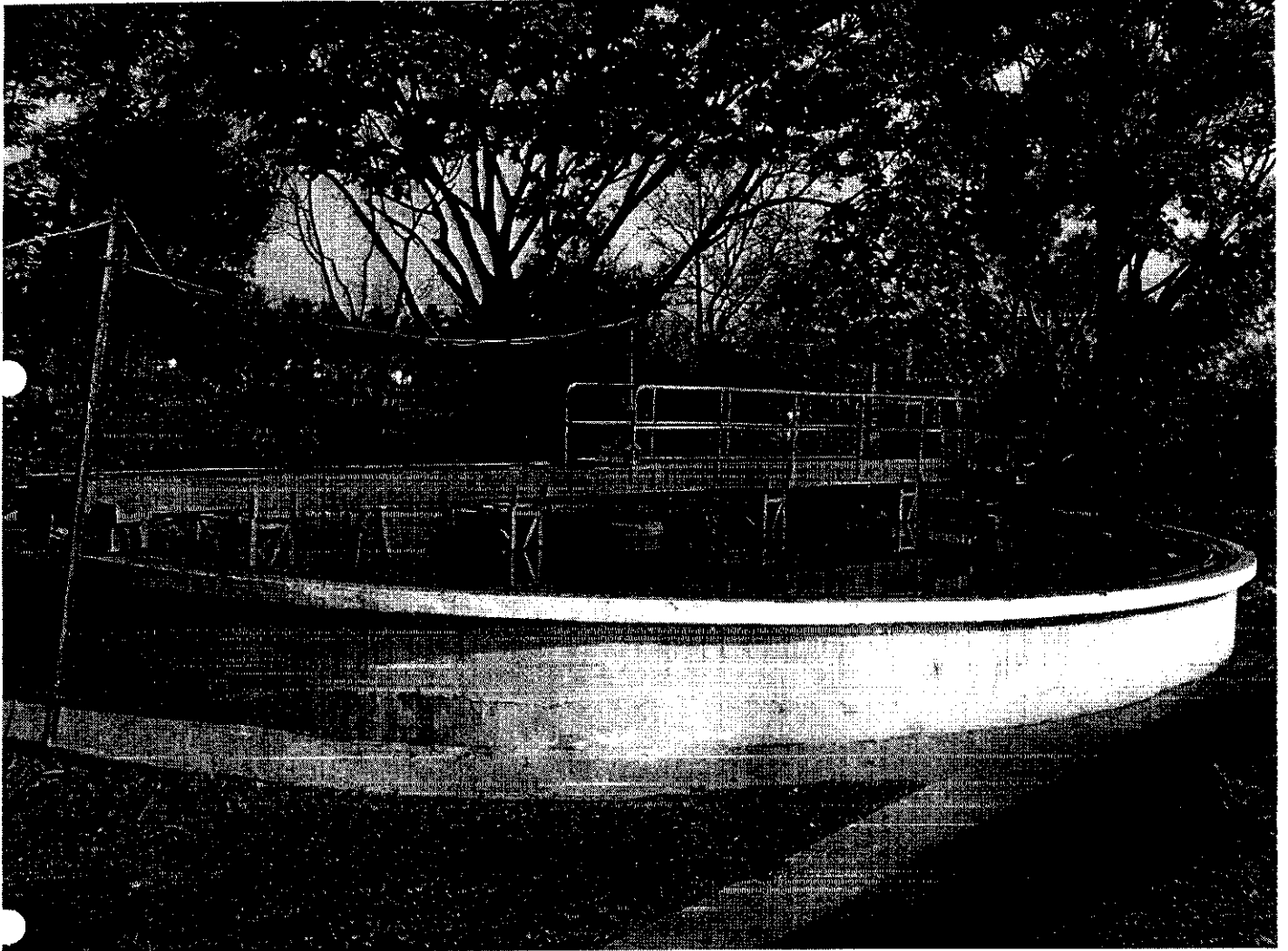
**190 KLH STP UNDER CONSTRUCTION**



190 KLH STP UNDER OPERATION(AERATION TANK)



190 KLH STP UNDER OPERATION(CLARIFIER TANK)





M/S. MPM

