

INDIA
Capacity Building for Industrial Pollution Management Project
Fourth Implementation Review Mission:
January 17 – 30, 2013

Aide Mémoire

I. Introduction and Objectives

1. The fourth Implementation Review mission of the project was undertaken over the period January 17 – 30, 2013, which included discussions with the Ministry of Environment and Forests (MoEF), and the Pollution Control Boards of Andhra Pradesh and West Bengal (APPCB and WBPCB respectively). Wrap-up meetings were held with Dr. V. Rajagopalan, Secretary, MoEF, Mr. Trilochan Singh, Additional Chief Secretary, Government of West Bengal, Mr. M. Samuel, Special Chief Secretary and Mr. B.S.S. Prasad, Special Secretary, Environment, Government of Andhra Pradesh, Chairpersons of WBPCB and APPCB and the Department of Economic Affairs (DEA). Field visits to some of the pilot sites and technical meetings to discuss key studies were undertaken prior to the official mission. The list of people met during the mission is presented in Annex I.

2. The objectives of the mission were to (i) review overall status of implementation, since the last Implementation review mission in June 2012 (ii) discuss draft technical reports and agree on revised timelines (iii) review Financial Management and Procurement arrangements and activities; (iv) review status of implementation of capacity building and social and communication activities; and (v) agree on Action plan for next 6 months, including actions to resolve key issues and expediting disbursements. In addition, the mission started the discussion of the restructuring process, which includes revision of the Results Framework, assessment of activities and associated financial reallocations, where needed.

3. The World Bank mission team¹ wishes to thank the officials from MoEF and the Governments of Andhra Pradesh and West Bengal for their commitment, cooperation and support to the mission. The *Aide Memoire* summarizes the discussions during the mission and agreed next steps.

II. Key Project Data

| Project Data | | | Project Performance Ratings | | |
|------------------------|------------------------------|-------------------------|---|--|------------------------|
| Board Approval: | 3 June 2010 | | <i>Summary Ratings:</i> | | <i>Last</i> <i>Now</i> |
| Effectiveness Date: | 13 October 2010 | | Achievement of Project Development Objectives | | S S |
| Original Closing Date: | 30 September 2015 | | Implementation Progress | | S MS |
| MTR Date: | 30 June 2013 | | Safeguards | | MS MU |
| | Original Grant Amount (US\$) | Amount Disbursed (US\$) | | | |

¹ Ruma Tavorath (Sr. Environment Specialist, TTL), A.S.Harinath (Environment Specialist, co-TTL), Sangeeta Kumari (Social Development Specialist), Sanjay Gupta (Communication Specialist), Mehul Jain (Environment Specialist), Arvind Prasad Mantha (FM Specialist), Swayamsiddha Mohanty (Procurement Specialist), Vaideeshwaran Sankaran (Environmental Specialist) and Genevieve Maria Dutta (Program Assistant).

| | | | | | |
|------|------------|-------------------|----------------------|---|----|
| IBRD | 25,210,000 | 63,025 (0.25%) | Financial Management | S | S |
| IDA | 38,940,000 | 5,081,600 (19.8%) | Procurement | S | MS |

III. Project Development Objective (PDO):

4. The PDO is to build tangible human and technical capacity in selected state agencies for undertaking environmentally sound remediation of polluted sites and support the development of a policy, institutional and methodological framework for the establishment of a National Program for Rehabilitation of Polluted Sites (NPRPS). The mission observations and review indicate that the PDO remains relevant and the project activities are well aligned with the PDO. Based on the progress made, as reflected in the detailed description of activities below, the mission concludes that continued satisfactory progress of project activities will allow project to achieve the PDO and rates this as Satisfactory.

IV. Current Implementation Progress

5. Project activities have been progressing since the last mission in June 2012. However, some activities were delayed earlier due to various issues (detailed in table 3 below) but the MOEF and states are now making significant effort to catch up with the timelines and disbursement. Change in project team at MOEF in August 2012 also resulted in a slowdown in momentum for about 3 months. It is encouraging to note that the MOEF has put in a strong and committed team, which includes technical experts from the CPCB. The mission rates project implementation progress as **Moderately Satisfactory** and the rating will be upgraded if current pace of activities is maintained to meet stringent deadlines established during the review mission. Status of Project Outcome Indicators is detailed in Table 2 below:

Table 2

| Project Outcome Indicators | Status of implementation |
|--|--|
| i) Clean up/remediation technologies have been piloted at orphan hazardous waste sites and municipal dumpsites in selected states and a network of state PCBs established by MOEF for knowledge dissemination and project based training | <ul style="list-style-type: none"> ✓ The Reconnaissance and preliminary site assessment and Environment for the entire area (upstream and downstream) and social assessments for the 4 pilot sites in AP and WB have been satisfactorily completed. ✓ Geophysical site screening and comprehensive sub-surface investigation has been completed ✓ Sampling Protocol and Sample Analysis physico-chemical parameters, heavy metals, volatile, semi-volatile and non-volatile organics based on pollutant parameters has been completed ✓ Detailed field investigations /surveys have been completed for 3 sites, nearing completion for 1. ✓ Recommendation of best options and implementation strategies for remediation based on cost, complexity and technology transfer have been completed for 3 sites, nearing completion for 1. ✓ Remediation plan for the approved option, comprising detailed designs, engineering drawings, cost estimates and implementation schedule have been completed for 3 sites, nearing completion for 1 remaining site. ✓ Assessment of environmental and social impacts of remediation options have been completed for 3 sites, nearing completion for 1 |

| | |
|--|--|
| <p>ii) Guidelines and standards for remediation developed and supervisory capacity of technical staff at environment agencies to implement remediation plans and monitor environmental conditions strengthened.</p> | <ul style="list-style-type: none"> ✓ National training on cost-benefit analysis of remediation processes was completed in February 2012 ✓ International study tour to Superfund sites completed in collaboration with USEPA, completed in April 2012 ✓ Hands on training in situ/on site and on laboratory equipment and sampling being provided by technical consultants to WBPCB and APPCB staff ✓ Other State Pollution Control Boards invited for training and workshops; 8 technical workshops and 2 cross-state exchange visits on Sponge Iron and Textiles undertaken by WBPCB |
| <p>iii) An Environmental Compliance Assistance Center has been established and fully functional by end of year 2 in WB and by end of year 4 in AP</p> | <ul style="list-style-type: none"> ✓ ECAC in WB is functioning but needs some strengthening in terms of manpower and strategic thinking. More details below ✓ Both states are in process of completing the Business Strategies which include identifying business models at the national and international levels for cleaner production and environmental compliance and assessment of feasibility for self sustainability. |
| <p>iv) Water quality and soil characteristics at the pilot sites comply with specified standards and mechanisms established to monitor in the long term.</p> | <p>This indicator is a component of indicator # (i) and will be realized after remediation activities are completed on the ground; and completion of the NPRPS which will also enable development of guidelines and standards (indicator #ii)</p> |
| <p>v) Supporting the NPRPS by developing a methodological framework for inventorying polluted sites, establishing remediation procedures and solutions and engaging multiple stakeholders in the implementation, including cost recovery mechanisms.</p> | <p>The three baseline studies for the development of the NPRPS are <i>Financial, Legal and Institutional Study</i></p> <ul style="list-style-type: none"> ✓ Final draft of Tasks 1 and 2 have been completed, i.e review of current systems and overview of international practices. ✓ Task 3: Identifying options for legal and institutional strengthening (in process) <p><i>Development of methodologies</i></p> <ul style="list-style-type: none"> ✓ Final draft of Tasks 1, 2 and 3 have been completed, i.e review of nature and type of hazardous waste sites and of national and international approaches and options and standards for remediation ✓ Task 4: Guidance Document on methodology (in process) <p><i>Inventory and mapping</i></p> <ul style="list-style-type: none"> ✓ Final draft of Tasks 1 and 2 have been completed, i.e updating information and formulating approaches for identification and assessment of contaminated Sites Task 3: Development of inventory and database of contaminated site (in process) |

6. The project has initiated a process of stock-taking, as part of its Mid Term Review (MTR) process. The MOEF, in consultation with APPCB and WBPCB, will prepare a MTR evaluation report and a Restructuring plan which will detail the proposed changes in terms of activities and financial reallocations. This will be submitted to the Bank by end May 2013. Key issues in project implementation and agreements to address them are detailed in the table below:

Table 3:

| Issue | Reason | Agreed actions |
|---|--|---|
| Slower than anticipated disbursement | This issue results primarily from the technical and complex nature of project activities and the fact that majority of disbursement is associated with remediation works. | All 4 remediation plans to be finalized and approved by July 2013. Bid process for works to be initiated by June and contracts assigned by November 2013. Detailed timelines are provided in Annex III. NPRPS and other studies to be completed by new timelines. This will enable disbursements to get back on schedule. |
| Limited technical capacity at MOEF | Project Management Consultant firm were to be hired in the MOEF. But the process was terminated due to administrative reasons; CPCB has been incorporated into project team | MOEF will enhance the Technical Evaluation Panel with 2-3 additional experts by end March 2013. MOEF will also hire 2 international consultants on a retainer basis by July 2013. |
| Poor contract management | This has caused delays in some of the contracting processes; Also results in delays in product deliverables | Project team has developed a tracking tool, which will be updated regularly and sent to Bank. Business standards for review of documents and comments have been established. |
| Long process of obtaining inter-agency agreements and commitments | Land owning authorities have to commit to and agree to pre-requisites and conditions for long-term management and compliance with pollution prevention measures of remediated sites. | APPCB has already obtained the necessary commitment from the stakeholders. WBPCB has also commenced the process, but the details need to be clearly defined and agreed to. MOEF will meet with and get the agreements from senior state government officials |

7. **Component-wise status:** Progress of various components, compliance to legal covenants, social and environment safeguards, and accountability aspects (financial management, procurement and governance) are summarized below, and the details are given in Annexes III – V.

V. Component 1: Strengthening Environmental Institutions: Building Capacity for Remediation (US\$ 16.74 Million)

8. The mission rates implementation of this component as Satisfactory, as detailed below:

Sub-component 1.a. National Program for the Rehabilitation of Polluted Sites (NPRPS):

9. The three baseline studies ((i) preparation of NPRPS (ii) development of methodologies and (iii) carrying out the inventory of polluted sites, for the development of the NPRPS) were commissioned by MOEF in March 2012. Multiple rounds of technical discussions have been held with the consultants along with experts from Technical Evaluation Panel (TEP), Central Pollution Control Board (CPCB) and some state Pollution Control Boards (PCBs). All three consultants have completed and submitted revised reports of the first three tasks, after incorporating Bank's and MOEF's comments on the earlier versions. They have also started regular meetings and Videoconferences to ensure coordination between the three assignments.

The mission reiterates MOEF's concern with regard to the six month delay in delivery of reports and it has been agreed that the remaining tasks will be done in closer consultation among all parties and reviews will be undertaken more frequently, with feedback being given expeditiously. It has been agreed that the studies will be completed by September 2013. This will provide MOEF about 20 months to process the NPRPS through Government of India's internal procedures and clearances.

Sub-component 1.b. Environmental Compliance Assistance Centers

10. The West Bengal ECAC, which had been created under USAID-ACEAN² funding has now been reactivated under the project and sector-specific information dissemination and capacity building activities (workshops, inter-state study tours etc) have been initiated over the past 6 months. Considerable funds have been spent on renting premises and procuring equipment and furniture for the ECAC. The ECAC has organized a Technology Fair and workshops with relevant industries on Foundry, Textiles, Lead acid, Electroplating and Sponge Iron sectors over the past 6 months and plans to organize sessions on Coal Tar Distillation and Food Processing sectors in the first quarter of 2013. Interactive sessions with Banks and Financial Institutions and workshop on "Beyond Environmental Regulatory Compliance and Sustainability" are also planned. However, despite all the activities being undertaken, the mission is concerned that the ECAC is functioning without full-time staff and a detailed long-term strategic Action Plan.

11. The consultancy for the development of business strategy of the ECAC has been commissioned, which is expected to be completed by April. The methodology being proposed by the consultants was discussed in detail during the mission. The assignment will support the development of a customized information database for different categories of industries, recommend strategies to provide business incentives for cleaner technologies and prepare a plan for establishing a technological bridge. The final output will be a detailed Business Strategy and Feasibility Plan for an autonomous ECAC with recommendations for institutional arrangement and staffing. It has been agreed that WBPCB will take urgent action to hire the necessary staff for the ECAC and develop a detailed Action plan upto June 2013, until the Business strategy is finalized and ready for implementation.

12. AP has commissioned the consultancy for the development of the business strategy for its ECAC and extensive consultations have been held with industry representatives and other stakeholders. The Business Strategy defines a menu of services as per industry needs and willingness to pay, while institutional structure and manpower models are being designed. Once the draft recommendations have been submitted by March 2013, the APPCB will have to make the decision whether an ECAC should be established in their state. The project can support the establishment of the ECAC and the initial activities until the ECAC becomes self-sustaining.

Sub-component 1.c. Institutional Capacity Building of State Pollution Control Boards

² Asian Environmental Compliance and Enforcement Network (AECEN) is a regional network established to promote improved compliance with environmental and legal requirements, with support from the United States Agency for International Development (USAID).

13. *Laboratory Strengthening:* APPCB has completed procurement of 4 packages of equipment, most of which have been commissioned and installed. The technicians have been trained by the manufacturers/distributors and they have started testing of samples. APPCB is in process of refurbishing its existing laboratory as per the optimal specifications, following OSHA³ standards. The mission was informed that the equipment will be packed up during the refurbishing process and store them safely until the new lab is ready. APPCB will also prepare the monitoring indicators format which will help quantitative evaluation of utilization rate and economics of operating and maintaining their own equipment instead of outsourcing.

14. WBPCB has procured some of equipment, while others are still in process and expected to be completed by June 2013. The mission reiterated that the equipment needs to be more effectively utilized to test samples which have been collected from the detailed investigation being undertaken at the two sites. This will also facilitate capacity building of laboratory staff.

15. *Training:* Two training activities have been planned for FY13. The one on “Operation, maintenance and closure of MSW landfills” to be arranged by WBPCB has been planned for May 2013, while APPCB is organizing the training on “Use of modern tools to identify legacy sites and innovative remediation technologies for contaminated sites” which is to be held in April. A study tour to learn about sophisticated sample collection and testing, policy implementation and land-use arrangements and new remediation technologies is being organized by APPCB to be held in June. The agencies were urged to meet the timelines agreed during the mission to ensure that these activities will be completed within FY13.

16. As per PAD requirements, MOEF needs to establish a network of SPCBs for information dissemination on good practices and remediation technologies and also for launching national training programs for strengthening the planning, monitoring and enforcement capacity of SPCBs in states with priority sites. Further discussion is needed to see how this network is to be established, given the existing institutional arrangement between SPCBs and CPCB. MOEF has agreed to discuss this further with the CPCB and develop a plan of action for further discussion with states and the Bank by May 2013.

17. *Studies:* WBPCB has initiated 4 sector studies related to pollution management and cleaner production over the past 6 months whose status are detailed in the table below:

Table 3

| | |
|--|---|
| Assessment of 5 contaminated sites in naphthalene and mercury industrial clusters in West Bengal | Ownership includes public sector and privately owned sites and large areas with numerous industrial installations, having a complex pollution history, predating HW Rules. WBPCB has initiated discussions with owners to obtain written commitment for financing the remediation activity, when the remedial plans are finalized. The study is expected to be completed by June 2013 |
| Hazardous waste inventORIZATION and Characterization | Contract signing delayed, activity started in January 2013 and to be completed by November |
| Sector Study – Tannery | |
| Sector Study – Sponge Iron | First inception report received in January 2013 |

³ Occupational Safety and Health Administration, US Dept of Labor

18. APPCB is in process of commissioning studies on inventorization of Municipal solid waste, Hazardous and electronic waste. The first two studies should commence by March 2013, while the one on e-waste will be initiated by May.

VI. Component 2: Investments in Priority Remediation and Environmental Improvements in orphan hazardous waste sites and municipal dumpsites (Estimated cost including contingencies: US\$ 52.80 Million).

19. Progress of this component has been slower than expected due to the challenging and complex nature of the activities and the limited capacity in this field. However despite the external constraints, the activities have not ceased or slowed down and the mission rates this component as Satisfactory, as detailed below:

20. The detailed investigation studies of three pilot sites have been completed, while one is still underway. For the project to implement this component satisfactorily, the remediation works must commence by the 3rd quarter of 2013, so that they can be completed by end of project life. This requires that remediation designs be finalized and the bidding process started by June 2013. Current status of the sites is presented below, while technical details are provided in Annex III.

Site A: Noor Mohammad Kunta Lake (NMK), AP

21. The detailed investigation study of the area has been completed and the consultants have developed and submitted a menu of remedial options with detailed costing and long operations and maintenance requirements. The consultants had also defined pre-conditions required for the implementation and continued sustainability of remediation activities, which are to be implemented by other stakeholders, which include the land-owning and development authorities and the Industrial Association. All the prerequisite actions have been completed, as required and commitments have been made for those activities which have to be implemented over the longer-term. APPCB has proactively sought to depute engineers from Irrigation and other department who will provide expert support with quality assurance and certification of engineering aspects during remediation works. Details of these actions and agreements are provided in Annex III-A. GoAP has also initiated the formation of a NMK Lake conservation committee with local representatives, NGOs and other stake holders.

Site B: Remediation of old municipal dump in Kadapa District, AP

22. The detailed investigation and proposed remedial options have been completed. Based on the comments from MOEF and Bank, the consultants have finalized the closure and containment plan. APPCB has since submitted the final three remedial plans for both NMK Lake and Kadapa to their state steering committee on the first week of February. The mission was informed that the construction of one cell of the new landfill has commenced, which will have a lifetime of about 3-4 years. The new landfill will be operational by May 2013, while the remediation works are expected to commence by November 2013.

Site C - Remediation of old municipal dumpsites adjacent to East Kolkata Wetlands, WB

23. The consultant firm has completed and submitted the detailed site investigation and draft remedial plans. The mission sent detailed comments and agrees with the WBPCB's observations on the proposed remedial options. The report needs to be strengthened with regard to details of the site investigations and the proposed remedial options need to be evaluated in detail and recommended. Detailed comments that were discussed during the mission have been provided in Annex IV.

24. A Memorandum of Agreement has been signed between WBPCB and Kolkata Municipal Corporation in April 2011 which formalizes the hand-over of the 11 hectare site and also the KMC's consent for the proposed remediation activities. However the adjoining 23 hectare area remains an active dumpsite, which is also expected to reach full capacity in the next 2-3 years. The KMC has not been able to procure land for an alternative sanitary landfill which raises the question with regard to the environmental sustainability and practicality of going forward with the project's smaller adjoining pilot site. WBPCB will need to get an agreement from KMC with regard to the development of a long-term Management Action plan for the entire Dhapa landfill site, including addressing the socio-economic issues of people dependent on the dumpsite and a commitment to implement this Action Plan within a specific time-period. The mission and MOEF reiterated that without this commitment from KMC by May 2013, it may not be worthwhile going forward with the Dhapa containment plan.

Site D: Remediation of 7 chemically contaminated sites in Hooghly district, WB.

25. Based on preliminary investigations, the consultant team identified 27 areas of potential concern in the 18km² study area, in addition to the original 7 identified in the project. Chromium is the primary contaminant of concern, along with varying traces of other metals like mercury, zinc, copper, etc. The consultants prioritized the sites based on a social and environmental risk based assessment (including population density and nature of and dependence on land use). The final list of 15 priority sites was determined by clubbing those with the highest TCLP⁴ figures and highest SPR⁵ linkages and sensitivity risk sites together. (details provided in Annex III). These have been grouped into 11 sites for which the consultants will undertake detailed investigation studies and develop remedial action plans. Given the critical timeline of the project, this activity must be completed and finalized by June 2013, after which the bid process for works will commence. Further discussions will need to be held over the next few months to address issues related to the remaining sites which are not being investigated, completion of ESIA reports and budgeting for the additional 8 sites.

VII. Component 3: Project Management

26. The mission rates implementation of the Institutional issues as Moderately Satisfactory, due to the slow pace of hiring technical experts and lack of progress is strengthening the Technical Evaluation Panel (TEP).

27. As recommended in last mission, MOEF has revised the project team and included CPCB as core technical members. This cooperation is mutually beneficial as it addresses the need for technical expertise for the project and allows knowledge sharing and program support to the national program for remediation funded under the National Clean Energy Fund. However, the MOEF needs to hire additional technical expertise, needed for supporting them in the review of the NPRPS study reports, the state remediation plans and other capacity building activities such as developing training programs and modules. It was agreed that the MOEF will hire international experts on a retainer basis to provide this support. MOEF will also

⁴ Toxicity characteristic leaching procedure (TCLP) is a soil sample extraction method to determine if a waste is characteristically hazardous.

⁵ Source-pathway-receptor (SPR) pollutant linkage allows risk assessment to demonstrate whether a pollutant linkage is significant and could lead to significant harm through unacceptable intake of pollutant.

invite other national technical experts to be a part of the TEP, in addition to the current membership. Both these activities are to be initiated immediately.

28. The mission expressed concern at the poor institutional arrangements and structure of the Project Management Unit at WBPCB. There has been a recent change of Project Director and reshuffling of some of the responsibilities among existing staff. The absence of one designated individual who has the decision-making capability is hindering effective management and coordination of all project activities. Likewise, the ECAC has no fulltime designated staff, nor a focal point/coordinator who manages it with a strategic vision and longer term action plan.

29. A TEP meeting is to be organized by MOEF in early March to review the proposed remediation plans for the two AP sites. MOEF will then organize the Project Oversight Committee meeting in March 2013 to approve the AP plans and the annual project plan for FY14.

Safeguards

VIII. Environment

30. The Dhapa environmental assessment report has been received and commented upon by the Bank. While the baseline reports for the other 3 sites have been received, reports detailing the environmental impacts of the proposed remedial activities and associated mitigation and management plans are still pending. The complete EA and EMP reports along with documentation of stakeholder consultations for Dhapa and the two AP sites are now on critical path and must be received by end February 2013. The mission rates Environment component as **moderately satisfactory**

IX. Social & Communication:

31. Overall progress on the social safeguards has been extremely slow since the last mission and the mission downgrades the rating to **moderately unsatisfactory**. The scope of the social management plan including Resettlement action plan, communication plan and livelihood restoration plan was clarified during the mission. While the social and communication staff are in place at both APPCB and WBPCB, the consultation strategy and communication plan are substantially delayed. These are to be prepared and finalized by March 2013.

32. It was agreed that the project would identify a key idea that would form part of all its communication and outreach activities. This could be based on concepts of clean or pollution-free growth, improving quality of life for citizens through clean up and remediation activities, and partnerships with industry for clean growth. Thus, the focus of the communication activities would extend to ECAC, which would form a core component of the WBPCB's long term vision and strategy. In WBPCB, the social consulting firm will be responsible for developing and implementing the communication strategy, which will focus on four communication activities - publication of quarterly newsletters in Bangla and English from March 2013, development of project literature such as brochures and pamphlets on various aspects and activities of the project, and detailed documentation, including visual where feasible, of the ongoing stakeholder consultation process.

33. The mission discussed the issue and methodology for accounting for the numbers of ragpickers in Dhapa, Kadapa and KIE sites. This activity needs better management and the mission requested that the two PCBs submit the data by March 2013.

34. It was agreed that both PCBs would begin process documentation to ensure that processes and lessons from the project are well recorded to be shared with other similar initiatives in the future. The importance of maintaining the records of all the stakeholder consultations and its disclosure through project websites in the respective states was reiterated. The PCBs also need to take steps to make the complaint/feedback mechanisms effective and report the progress on the same as part of periodic progress reports. The mission urged the WBPCB to improve coordination and internal communication among the technical and social team members.

X. Procurement:

35. The mission reviewed the procurement status vis-à-vis the procurement plan of each of the three implementing agencies and adherence to agreed procedures by various agencies engaged in the process. No major issues of non-compliance were observed. A Procurement Post Review (PPR) was also conducted during the mission.

36. The APPCB was advised to carry out procurements with the support from the Procurement Specialist for the project and not assign the same to another unit. The mission requested clarity on the role and activities of the Procurement specialist at WBPCB, as it seems like the work has been getting done by the accounts staff. Contract management at WBPCB needs strengthening and the mission expressed concern regarding delays in contract implementation for various consultancies. It is recommended that the technical team expedite the process of review of the deliverables under various consultancies.

37. The mission advised the implementing agencies to publish latest approved procurement plans and award of contract information on respective websites. The implementing agencies have updated the respective websites to include the contact details of grievance handling authority. Each of the agencies has agreed to send the status of the revised procurement plan with the details of the procurement.

38. The mission assigns this component as **Moderately Satisfactory** due to (i) delay in completing the procurements as planned (ii) delays in contract implementation and (iii) partial non-compliance to Bank's mandatory disclosures. Details of the assessment of the procurement for the project have been provided in Annex IV.

XI. Financial Management

39. The project has taken action to resolve some of the financial management issues identified in the previous review mission. These include (i) appointment of statutory auditors by both PCBs (ii) appointment of finance head by APPCB; and, (iii) submission of acceptable annual audit report for financial year 2011-12 by all there implementing agencies. The MOEF has disclosed the audit report of FY 2010-11 on the project website and the project steering committee in both states have endorsed the annual accounts of FY 2010-11. Constraints and delays have not been noticed in the transfer of funds by MOEF to the state PCBs. The MOEF has made an adequate budget provision to implement the planned project activities for

FY 2013-14 and the project is also regular in the submission of consolidated interim unaudited financial reports to the Bank.

40. Going forward, for smooth implementation of project activities, the mission urged APPCB to swiftly follow up with the state finance department and ensure that the budget provision for the state share of 15% for all the four financial years (i.e. from FY 2010 to 2014) is made in the state budget of FY 2013-14 and the funds are received into the project bank account. MOEF should provide all the requisite support to APPCB to bring this long outstanding matter to a closure. Similarly, it is recommended that WBPCB follow-up with the state finance department and make certain that the state contribution of 15% for FY 2013 is received into the project bank account and ensure that appropriate provisioning for the state contribution of FY 2014 is made in the annual state budget of FY 2013-14.

41. The mission rates this component as **Satisfactory**.

XII. Status of Loan/Credit Conditions and Covenants

The Table below presents the compliance status related to the covenants applicable to project implementation.

| Covenant | Status |
|--|---------------|
| Establish and maintain a Project Oversight Committee throughout the period of project implementation | Complied |
| Designate and maintain throughout the period of project implementation, a Project Director, who shall be responsible for the effective and timely coordination and implementation of project activities at the central level and provide guidance to the PIUs to be established in WB and AP | Complied |
| Ensure that the Project's activities are consistent with the POM; | Complied |
| Ensure that the Project Director shall have adequate decision-making authority required for the effective, efficient and timely implementation of project activities | Complied |
| Project Covenants: | |
| MOEF will establish and retain during project implementation a financial management cell at the central level with a finance professional with qualifications acceptable to the Association. | Complied |
| Submission of quarterly consolidated IUFRRs within 45 days of the close of the quarter | Complied |
| Annual consolidated audited financial statements; and summary of external auditor's observations along with compliance reports on the audits conducted at MOEF, APPCB and WBPCB to be submitted within six months of the closure of the financial year. | Complied |

42. The mission discussed the Governance and Accountability Action Plan and noted that the actions identified in each of the sections above address many of the issues and risks currently being faced by the project.

XII. Project Restructuring

43. The mission discussed the need for restructuring with MOEF and the two state PCBs and agreed that the key changes would include:

- Revision of the Result Framework to define monitorable and more relevant indicators
- Amendment of some activities and financial re-allocations, if required
- Revision of project completion date, if deemed necessary
- Change in project name

44. Both the state PCBs have expressed that the increase in the dollar value against rupee affects the cost of the various components and consequent budgeting. APPCB has requested increase in cost against the procurement plan of some of the project components.

45. A formal request for restructuring was received from the DEA in November 2012. The mission shared a format for developing the Results Framework and agreed that MOEF and two PCBs will establish arrangements to track performance against outcome indicators included in the Framework. The MOEF will also prepare a project review report for MTR and a draft restructuring proposal, in consultation with APPCB and WBPCB and send to the Bank by mid May 2013.

XIV. Agreed Next steps and Mission

46. The next formal review mission will be a Mid-Term Review and Restructuring mission, and is scheduled for June-July 2013. Activities to be undertaken within the next six months are detailed in Annex II.

ANNEX I
List of Persons Met

Ministry of Environment and Forests

Dr. V. Rajagopalan, Secretary
Mr. Ajay Tyagi, Joint Secretary/Chairman of CPCB (Project Director)
Dr. Chandni, Director
Mr. R.B. Lal, Deputy Director
Mr. R.K. Gupta, Procurement Consultant
Mr. G. Rambabu, Assistant Environmental Engineer
Mr. R.S. Mishra, Accounts Officer

Central Pollution Control Board

Mr. Vinod Babu, Sr. Environment Engineer,
Mr. Rambabu, Environment Engineer

Department of Economic Affairs

Mr. Sanjay Garg, Director (MI)

Government of Andhra Pradesh

Mr. M. Samuel, Special Chief Secretary, Environment, Forests, Science & Technology
Mr. B.S.S. Prasad, Special Secretary (Environment), Department of Environment, Forests, Science & Technology

Andhra Pradesh Pollution Control Board

Ms. Janaki R. Kondapi, Chairperson
Mr. Sanjay Kumar, Member Secretary (Project Director)
Dr. K.V. Ramani, Joint Chief Environment Scientist
Mr. N.V. Bhaskara Rao, Sr. Environment Engineer
Mr. A. Surendar Raj, JCEE
Mr. I. Raghunatha Swamy, Sr. Environment Engineer
Mr. T. Rajendra Reddy, Sr. Environment Engineer
Mr. S.S.S. Murali, Environment Engineer
Mr. W.G. Prasanna Kumar, Social Scientist
Mr. Y. Atchuta Ramayya, Procurement Specialist
Mr. D. Prasad, Monitoring Evaluation Specialist,
Ms. K. Sudha, AEE,
Ms. Sudha Poleni, SCA,

Government of West Bengal

Mr. Trilochan Singh, Additional Chief Secretary

West Bengal Pollution Control Board

Prof. Binay K. Dutta, Chairman
Mr. D. Charkaborty, Member Secretary (Project Director)
Dr. Tapas Kumar Gupta, Chief Engineer
Mr. Ujjal.K. Mukhopadhyay, Chief Scientist
Mr. Debanjan Gupta, Scientist

Mr. S.K. Adhikary, Sr. Environment Engineer
Mr. S.K. Khamrui, Finance & Accounts Manager
Ms. Sarmishta Kundu, Environment Engineer
Ms. Nupur Sengupta, Assistant Environmental Engineer
Mr. Subhasis Paul, Finance & Accounts Manager

ANNEX II
List of Agreed Actions

| Agreed Actions | Responsibility | Original target date for action in previous AM | Target Date | Status/Comments/Next Steps |
|---|----------------|--|------------------|---|
| NPRPS Tasks 3 to be reviewed and finalized | MOEF | | Feb 2013 | |
| Complete the process of hiring experts in hazardous waste and municipal solid waste | MoEF | August 31 | April - May 2013 | In process: It has been agreed that international consultants will be hired on retainer basis |
| Strengthen TEP membership | MOEF | | Feb-March | |
| Organize next POC meeting | MoEF | | | March 2013 |
| Complete training activities | AP and WB | | Delayed | In process; Two training activities to be initiated asap and completed by June 2013 |
| Revise sections of Project Operations Manual to include change in PIU structure | All | August 31 | May 2013 | In process |
| Develop system for electronic network for information dissemination for SPCBs through NIC | MoEF | | May 2013 | To be initiated by MOEF with CPCB |
| | | | | |
| Form NMK Lake conservation committee | GoAP | December 15 | 15 June 2013 | In process |
| Count rag pickers in KIE and Kadapa and make plans of alternate livelihood | APPCB | | In process | To be completed by 10 March 2013 |
| Finalize consultation plan and commence consultations | ABPCB; WBPCB | August 15 | March | Delayed from last mission |
| Upload all project developments and monitor grievances | APPCB; WBPCB | August 15 | March | In process since last mission; Needs to be expedited |
| Finalize ECAC business strategy and agreement on way forward | APPCB | | End March | |
| Complete EMP and lab refurbishment | APPCB | | July 2013 | |
| Prepare a monitoring | APPCB | | July 2013 | |

| | | | | |
|---|-----------------------|--------------|--------------|--|
| indicators format for lab functioning | | | | |
| Agree on major prerequisite actions with key stakeholders for Hooghly site | WBPCB | | June 2013 | Initiated since last mission; needs more detailed discussions |
| Obtain support for certification of engineering aspects | WBPCB | November 30 | May | Delayed; should be expedited immediately |
| Agreement with KMC for long-term plan | WBPCB | | March 2013 | Initiated since last mission; needs more detailed discussions |
| Review the issue of rag pickers in Dhapa and explore the option of alternate livelihood | WBPCB/ consultants | September 30 | March 2013 | Delayed; should be expedited immediately |
| Install display boards at strategic locations in pilot sites | WBPCB | September 15 | April 30 | WB has indicated that this is not feasible as the boards get stolen right away. Another method of communication is being devised |
| Agree on timelines with 5 industry owners on financing of remediation | WBPCB | September 30 | May 2013 | Initiated since last mission; needs more detailed discussions |
| Finalize roadmap and sequential action plan for ECAC | WBPCB | | Feb 2013 | To be developed for Jan – June 2013 |
| Complete ECAC staffing | WBPCB | | April 2013 | |
| Evaluation report and Restructuring plan | MOEF | | End May 2013 | |

Details of Procurement and FM actions are provided in their respective Annexes

ANNEX III

Timeline for completion of remediation activities

For NMK Lake and Kadapa sites:

1. Review of Draft Plans by MoEF and TEP – February 2013
2. Final Plans, contract document preparation and ESA - March, 2013
3. Review of ESA by Bank and disclosure - April, 2013
4. Tendering for works - May, 2013
5. Contract Award - December 2013 / January 2014
6. Completion of works - March, 2015.
7. Post remediation Monitoring - from April, 2015

For Dhapa dumpsite:

1. Review of Draft Plans by MoEF and TEP - April, 2013
2. Final Plans, contract document preparation and ESA - May, 2013
3. Review of ESA by Bank and disclosure - June, 2013
4. Tendering for works - July, 2013
5. Contract Award - February / March, 2014
6. Completion of works - March, 2015
7. Post remediation Monitoring - from April, 2015

For Hooghly

1. Review of Draft Plans and stakeholder commitments by MoEF and TEP - June, 2013
2. Final Plans, contract document preparation and ESA - July, 2013
3. Review of ESA by Bank and disclosure - August, 2013
4. Tendering for works - September, 2013
5. Contract Award - March / April 2014
6. Completion of works - July, 2015.
7. Post remediation Monitoring - from August, 2015

ANNEX IV
Technical Notes

Hooghly Preliminary Investigation

Based on the Social and Environmental risk evaluation, the consultant team provided the following consolidated risk matrix for the 27 areas of potential concern (hotspots) :

| | | | | |
|----------------------------|---------------|--|---|---|
| Socio-Economic Risk | High | | | 4. Drum Cleaning Unit 5. Shentracon Chemicals Limited 12. Fortune Furnitech 13. Sheela Foam 14. Sasmalpara Dump 15. Dipendra Sasmal's House Approach Road (Baidyabati) 16. Padmabati Colony Abandoned Dump 1 (Baidyabati) 17: Padmabati Colony Abandoned dump 25. Appayan Hotel Dump 27. Indotan Chemicals* |
| | Medium | | | 7. Sarkar Weighbridge 8. Hooghly Alloy and Steel 9. Ganesh Steel and Alloy |
| | Low | 2. Balaji Technomech 3. Vacant Land, Chakundi 10. Misrilall Mines 22. Bholu Baba Corrugated Box 26. Ashalata Brickfield | 1. Nezone Tubes 18. Minu Computer Weighbridge 20. Sada Shiv Sakti Exim 23. Steel Cracker Unit II 24. Sonar Bangla Hindu Hotel | 11. Shree Krishna Timber 19. Zenith Timber Products 6. Om Forging 21. Pashupati Seohung |
| | | Low | Medium | High |
| Environmental Risk | | | | |
| | | *Socio-economic field assessment not performed in interior of premises, risk is estimated The originally identified hot spots are highlighted in Bold text in the matrix above | | |

Subsequently, it was agreed with WBPCB and the consultants that the following 11 sites (spots) are to be taken up for detailed investigation :-

| Sl. No. | Site Nos. | Site Names | Remarks | Distance between two clubbed sites |
|---------|-----------|------------------------------------|-----------------|------------------------------------|
| 1 | 25 | Appayan Hotel | - | - |
| 2 | 24 | Sonar Bangla Hindu Hotel | - | - |
| 3 | 21 | Pashupati Seohung | - | - |
| 4 | 19,20 | Zenith Timber and Sada Shiv Shakti | 2 spots clubbed | 65m, E to W |
| 5 | 18 | Minu Computer Weighbridge | - | - |
| 6 | 16,17 | Padmabati Colony Dump 1 and Dump 2 | 2 spots clubbed | 105m, E to W |

| | | | | |
|----|-------|---|-----------------|-------------|
| 7 | 14,15 | Sasmalpara Dump and Dipendra Sasmal's house | 2 spots clubbed | 80m, E to W |
| 8 | 12,13 | Fortune Furnitech and Sheela Foam | 2 spots clubbed | 130m |
| 9 | 11 | Sree Krishna Timber | - | - |
| 10 | 8,9 | Hooghly Alloy and Ganesh Steel | 2 spots clubbed | 93m |
| 11 | 7 | Sarkar Weighbridge | - | - |

Ashalata Brickfield and the vacant land in Chakundi were part of the originally identified seven sites but these sites are not being proposed for detailed investigations. The brickfield is far from the identified 11 spots and can be avoided at this stage to prevent cost escalation and moreover the owner who is aware of chromium waste dumping at the site can be made to bear the cost of investigation and remediation separately, if required. The Chakundi land has been found to pose low environmental and social risk.

Two chrome chemical manufacturing units - Indotan Chemicals and Shentracon Chemicals Ltd. (closed) - identified by the consultant as spots having high environmental as well as social risk potential have been left out because of low TCLP results. These are the potential sources of the chromium bearing waste responsible for the contamination in Hooghly and if required the Board may direct these units to conduct such detailed investigation in and around their factories separately at their own expense. A few other units have also been omitted like the drum cleaning unit at Gumodanga where the contamination is not due to chromium waste and M/s Om Forging where the environmental risk is not very high. The other units have been omitted because of low environmental and social risks.

Dhapa Containment and Closure Report

Introduction:

Kolkata city generates about 3,500 tonnes per day of municipal solid waste, which is dumped on the Dhapa Municipal Dumpsite to the South-East of the city. The dumpsite covers an area of approximately 70 acres of land.

Six options were considered for the closure solution:

- Option 1: Do nothing
- Option 2: Simplified closure concept
- Option 3.1: Reduced infiltration and passive gas control
- Option 3.2: Reduced infiltration and gas treatment
- Option 4: Reduced infiltration with leachate collection and treatment and passive gas handling
- Option 5: Impermeable cover and passive gas control

The most favorable solution is chosen based on a scoring system and a general assessment of the alternatives, which is not explained in this chapter. The Bank recommends that a (simplified) matrix containing all six options and the relevant factors (costs, leachate generation, minimization of environmental impact, complexity etc. in a rating system (e.g. ranging from ++ to --, or from 0 to 5) should be developed to facilitate decision making. The options should be summarizing a table using a unified rating system, including:

- Cost/benefit
- Land use
- Environmental impact
- Social impact
- Monitoring, aftercare and maintenance
- MSW2000 (and other regulatory requirements)
- Risk factors.

The construction cost for the selected option (Option 4) is estimated to Rs 314 million, including the mitigation measures (monitoring and 30 years aftercare) Rs. 385 million. Minimum costs are estimated at 270 million INR, maximum costs 501 million INR. The cost estimate should be based on the modeling of the waste body based on a topographical survey of the current waste body and a proposed new shape and footprint of the closed dump site. The size and the final location of the footprint have already been determined by KMC, and the final shape of the dumpsite will be more or less the same for all options (Annex A, p. 12). This could/should be calculated more accurately already at this stage and used as a basis for the cost estimate.

The chapter only deals with costs, benefits are omitted. The benefits of this option should be described briefly, e.g. in terms of reduced contamination of open water bodies by leachate, reduced impact on the main aquifer, etc., and compared to others. Ideally, there should be a summary table comparing costs and benefits of all the options considered in a rating system (e.g. ranging from ++ to --, or from 0 to 5).

The cost estimate calculates on the basis of 300,000 m³ of waste to be excavated and 100,000 m³ to be segregated at a sorting plant. In other places in the report, the total waste volume to be excavated is numeralised at 200,000 m³

The transformation of the area into a green area for recreation purposes (park) or into a small wildlife biotope is feasible and can be agreed with. The report states that the vegetation on the site should be a mix of grass areas (to maintain views from the site) and shrubs/trees. Whilst grass and shrubs are acceptable, it is not recommendable to plant trees, as trees thrown by storms and tropical cyclones is likely to damage the cover surface, promote erosion, and increase O&M costs. To keep vegetation low and prevent trees from growing, sheep, goats and cattle should be allowed to graze on the area. These animals will also compact the soil surface and close smaller holes (rats, mice, etc.). Pigs should be kept off the area, as they tend to dig up the surface in search of food, and cause increased O&M costs. The site should be fenced and monitored to prevent illegal waste dumping, as it is a common phenomenon around the world that people dump waste on covered landfills.

The report proposes annual sampling for monitoring aftercare and maintenance from a total of 5-6 shallow wells, 3 deep wells and analysis for parameters according to MSW2000 rules plus some site specific parameters such as BOD, COD, ammonia, chloride, TDS etc. It is recommended to test for the proposed parameters quarterly during the first year, during year two and three bi-annually in all wells, and then to reduce the monitoring to fewer wells and a few lead parameters, which should be determined after the third year of monitoring. The report recommends monitoring of waste settling utilising monitoring points such as concrete poles. Settling should also be monitored by visual observation and documentation of settling marks, slope slumps and erosion phenomena, especially after the monsoon season bi-annually. In case of damages, the surface needs to be repaired asap.

The chapter on Environmental laws and regulations should contain all the relevant aspects that are needed by the permitting authorities. These should be identified and their concrete requirements listed, and references made to the parts of the Containment and Closure Plan where the requirements are fulfilled or in which the acceptability of non-compliance with regulations is discussed. Ideally, these requirements have already been discussed with the respective authorities. It should be clarified that/why the non-compliance is acceptable for the environmental authorities. Other issues to be included in this chapter should be land ownership, as well as occupational health and safety.

The report states that 8,750 m³ of recyclables can be recovered. According to the Containment and Closure Options Report it is assumed that there is no glass or metal in the waste. The only materials considered for recycling is plastics. Due to the storage inside the waste dump, only low quality recyclable plastic can be expected. Due to contamination by landfill leachate the recyclables requires decontamination (washing) so as not to pose a health hazard to staff in recycling plants. In addition, removal of recyclable waste to external receiver would cause higher costs (100 Rupees/m³) than re-disposal on site (75 Rupees/m³). Although not recycling the plastics etc. would only save approximately 2,800 Euros, it would also require less organizational effort, and would not require water and energy for washing. It is recommended only to separate inert materials from the waste from the raw waste recovered from the dump site, to minimize health and safety risks to workers handling the recyclables along the value chain. Also, as the recyclables need to be handled on site, and in untreated condition constitute a health hazard to workers, and need to be cleaned requiring water and energy, it is not recommended to go for the recycling option. Besides the fact that the recycling option is 33% more expensive than the re-filling option, an unknown amount of contaminated washing water from treatment of recyclables will have to be re-infiltrated into the waste dump site, adding to the current quantity of leachate.

The consultants assume that the drainage layers can be produced by inert material sorted from the waste by screening and washing. This would save considerable costs that would otherwise accrue for the procurement of the respective materials from local quarries. Another advantage would be that the additional traffic for transporting the materials (46,500 m³ or 3,200 truckloads of 15 m³ each) through the neighboring communities would not occur. The inert 8-50 mm materials will need to be washed before transport to the dumpsite for installation of the drainage layer. Washing would require water and energy, with the water eventually to be re-infiltrated into the landfill.

The estimated time frame for sorting and treatment of 100,000 m³ is 9 months, resulting in a necessary capacity screening capacity of 11,000 m³ per month (423 m³ per day, 53 m³/hour).

There are certain risks involved in applying this method:

- 1 Not enough inert material can be recovered from the waste, resulting in the necessity to acquire additional materials from nearby sources, and thus in additional costs.
- 2 The amount of water needed for washing is not specified. Depending on the amount of washing water needed, a water treatment plant should be considered to minimize the quantity of contaminated water being re-infiltrated to the dump site. The process of washing should be described and calculated in more detail.

The implementation schedule states that the tender documents are planned to be completed March 15, 2013, with a tendering period including economically and technically evaluation of bids of 2-2.5 months and selection of contractor in June 2013. The total construction period is assumed to be 15 months, including a break of three months for the monsoon season in 2014. The implementation strategy does not include an examination and approval period by the regulatory authorities. This should be included and the timelines revised.

The dumpsite is located in a RAMSAR area and creation of a small wildlife biotope is an obvious solution. The wildlife biotope should be in accordance with the requirements of the long-term stability, not the other way round. It is rather preferable to have a green habitat with vegetation and soil compaction controlled by cattle, sheep and goats than a biotope that is inaccessible and cannot be monitored/repared. Slope steepness should not exceed 1:3 (H:L), which complies with international standards.

The cost estimates for implementation of the leachate treatment plant are described as very rough and based on Western European prices. Amounts are attempted adjusted for Indian price level by reducing costs for construction and installation works. It remains unclear what the basis of the other cost estimates is. The cost estimates should be more precise and e.g. based on the Schedule of Rates for Building Works of the Public Works Department of the Government of West Bengal⁶ or other local/regional sources.

NMK LAKE

1 Lake profile

Water column 0.3 to 4.0 m ; • Sludge 0.1 – 0.3 m (in general) ; Clay with pink dyes 0.1 to 0.2m
Original clay with gravel; Dark layer underneath, oil smell

2 Findings of Detailed investigation:

| Site | Area | Contaminants of Potential Concern (COPCs) | Components of concern (CoC) confirmed |
|------|---|---|---------------------------------------|
| KIE | Topsoil open areas | heavy metals, PAH, PCB, TPH | Heavy metals: Cu, Pb, Zn, TPH |
| | Topsoil polluting industries (textile factory, lead | heavy metals, TPH, BETX | Cr, Cu, Pb, Zn, TPH, BETX |

⁶ http://www.pwdwb.in/html/pwd_schedules.php

| | | | |
|---------------------------|-------------------------|---|----------------------------------|
| | smelter, drums storage) | | |
| | Groundwater | heavy metals, TPH, BETX, chlorinated solvents | Ba, Cr, Hg, Zn, BETX |
| Open drains | Sediment | heavy metals, OCB, PAH, PCB, TPH | metals (Cr, Cu, Pb, Zn), TPH |
| | Surface water | heavy metals, TPH | metals (Cr, Cu, Pb, Zn), TPH |
| Stagnating waters /swamps | Sediment | heavy metals, OCB, PAH, PCB, TPH | metals (Cr, Cu, Ni, Pb, Zn), TPH |
| | Surface water | heavy metals, TPH | |
| Lake NMK | Sediment | heavy metals, PAH, PCB, TPH, BTEX | metals (Cd, Cu, Pb), TPH, BTEX |
| | Surface water | heavy metals, TPH | no elevated concentrations |
| Solid waste dump STP | Soil | heavy metals, PAH, PCB, TPH | heavy metals (Cd, Ni) |
| | Groundwater | heavy metals, TPH, BETX, chlorinated solvents | no elevated concentrations |
| Plains Open drain | Sediment | heavy metals, PAH, PCB, TPH | metals (Cr, Pb), TPH |
| | Surface water | heavy metals, TPH | no elevated concentrations |
| Groundwater Plains | | heavy metals, TPH, BETX, chlorinated solvents | Heavy metals: Hg |

3. Prerequisite Actions identified by the Consultant:

| |
|--|
| <p>Effective drainage of industrial and domestic effluent discharges in the KIE:</p> <ul style="list-style-type: none"> • Clean all existing drains, lined and unlined • Clear all drainage culverts • Construct effective (unlined) drainage ditches along all roads in the KIE as to ensure that all plots have a drain nearby to connect for discharge (after pre-treatment) |
| <p>Pre-treatment of industrial effluents:</p> <ul style="list-style-type: none"> • Inform all plot owners and users of the requirement to ensure effective pre-treatment of effluents, including effluents quality standards • Inform all plot owners and users of the requirement to construct suitable connections to the nearest drain in the KIE (as per August 2012) • Follow-up on the installed pre-treatment systems and points of connection to the drains |
| <p>Discharge of all effluents of the KIE to the STP:</p> <ul style="list-style-type: none"> • Block the open connection (under the railway) of the current open area where effluents are gathered (nearby the sewage pumping station) • Ensure a closed direct connection of sufficient capacity (<u>upgrade existing line and</u> |

pumps) between the sewage pumping station and the STP

- Drain all wet/swampy places in the KIE
- Explore the possibility of connecting this external drain to sewage system under road NH-7 or other alternatives

4. Actions to be taken by each agency:

a. Andhra Pradesh Industrial Infrastructure Corporation (APIIC)

- To co-ordinate with NGOs for placement of municipal solid waste (MSW) collection bins so as to place them at strategic points.
- To co-ordinate with industries and GHMC for collection and transfer of MSW for further treatment and disposal.
- To prepare a plan of action to strengthen the existing drainage system and to cover the entire area of the KIE with drainage system.
- To submit a plan of action for the proper collection and disposal of hazardous waste. APPCB will provide necessary support for this activity.
- The Zonal Manager (Shamshabad) APIIC, to appraise these points to the higher officials of APIIC and arrange a meeting with the officials of APPCB and APIIC to address above issues.
- To have a joint visit of APIIC, APPCB and the consultants.

b. Hyderabad Municipal Development Authority (HMDA)

- To immediately take-up the joining of the 2nd drain and the remaining part of the 1st drain to the STP.
- To repair / strengthen the existing closed pipe line for complete collection of the sewage and for treatment in the STP.
- To ensure regular operation of STP and to meet the outlet standards.
- To decide end use of the lake and to augment the STP to meet the bathing standards or Irrigation standards based on the end use of the lake.

c. Greater Hyderabad Municipal Corporation (GHMC)

- To have an agreement with the APIIC for transportation and disposal of the MSW collected by them

d. Industrial Association: To work in co-ordination with APIIC for:

- collection and disposal of HW
- collection of and disposal of MSW
- provision of proper drainage system within the KIE
- Provide information as per the format circulated by APPCB / Consultants for preparation of sustainable waste management plans.
- To work with APPCB, APIIC, NGOs and consultants for conducting awareness programs.

e. NGOs

- To submit a proposal for creating awareness and developing a system of collection, segregation and disposal of MSW
- To co-ordinate public awareness meeting along with APPCB
- To prepare a detailed plan for communication material along with the consultants and APPCB, which will be utilized during the awareness programs.

5. Proposed Remedial Options for NMK Lake

| Potential Options | Proposed options for final consideration |
|--|--|
| <ul style="list-style-type: none"> • Dredging • Dry excavation • In-situ treatment • Capping • On site treatment (bio beds, washing, immobilization) • Off site treatment • On-site disposal (geo tubes, technical landfill) • Off-site disposal | <ul style="list-style-type: none"> • Dredging and dry excavation • On site disposal (geo tubes, technical landfill) • On site treatment (bio beds, washing, immobilization) |

ANNEX V
Procurement

1. Procurement Plan :

The mission reviewed the procurement status vis-à-vis the procurement plan of each of the implementing agencies, i.e. MoEF, APPCB, WBPCB. Each of the implementing agencies have agreed to send the status of revised procurement plan with details of number of packages for which contract has been awarded along with value with respect to the agreed procurement plan.

2. Status of Procurement :

APPCB :

| | Procurement Method | No. of Packages Planned | No. of Packages Awarded | No. of Packages Pending |
|-------------|--------------------|-------------------------|-------------------------|-------------------------|
| Goods | ICB | 12 | 11 | 1 |
| | NCB | 0 | 0 | 0 |
| | Shopping | 22 | 22 | 0 |
| Consultancy | | 7 | 4 | 3 |
| Works | | 3 | 0 | 3 |

WBPCB :

| | No. of Packages Planned | No. of Packages Awarded | No. of Packages Pending |
|-------------|-------------------------|-------------------------|-------------------------|
| Goods | 68 | 26 | 42 |
| Consultancy | 22 | 9 | 13 |
| Works | 4 | 0 | 4 |

MoEF :

| | No. of Packages Planned | No. of Packages Awarded | Remarks |
|-------------|-------------------------|-------------------------|---------------|
| Consultancy | 3 | 3 | PMC - Dropped |

3. Procurement Post Review (PPR) :

Bank conducted Procurement Post Review (PPR) for FY13 for APPCB and WBPCB during the mission. The PPR reports and the risk mitigation action plan shall be shared with respective implementing agencies by end of February 2013. There were no major non-compliance observed during PPR. APPCB was advised to carry out the procurements with support from the Procurement Specialist for the Project and not assign the same to another unit.

4. Procurement Disclosures :

The mission noted that the implementing agencies partially complied with the requirement of mandatory disclosure of procurement information. The mission advised the implementing agencies to publish latest approved procurement plans and award of contract information on respective websites.

5. Complaint Handling :

The implementing agencies have updated the respective websites to include the contact details of grievance handling authority.

6. Procurement Capacity :

The mission observed that the implementing agencies have adequate Procurement staff. However, in WBPCB, the mission observed that the Procurement Specialist hired for the Project has not played any role in discharging procurement duties under the Project. All the procurement activities are being done by the Accounts Staff. Therefore, the mission has advised WBPCB to assess the requirement of the Procurement Specialist and send their recommendations on the same to Bank.

APPCB and WBPCB will be starting the process of Procurement of Works for which the respective implementing agencies do not have adequate contract management capacity. Therefore, the mission discussed various options and recommended to have a staff deputed from PWD or Irrigation Department, who have adequate contract management experience.

7. Delays in Procurement :

The mission expressed concern regarding delays in contract implementation for various consultancies awarded by WBPCB. The mission recommended the technical team to expedite the process of review of the deliverables under various consultancies.

8. Status of Agreed Actions during last mission:

| Sl. | Agreed Actions | Action to be taken by | Date | Status |
|-----|--|-----------------------|----------------------------|---------------------|
| 1. | Status of awarded contracts with value for each category (Goods, Works, Consultancy) vis-à-vis the procurement plan | MoEF, APPCB, WBPCB | By first week of July 2012 | Completed |
| 2. | Updated Procurement Plan shall be submitted for Bank's review | MoEF, APPCB, WBPCB | By first week of July 2012 | Completed |
| 3. | Bring on board staff with contract management experience | APPCB, WBPCB | By Oct/Nov 2012 | Not started |
| 4 | Uploading of procurement disclosures including procurement plan and contact details for complaint handling, on respective websites | MoEF, APPCB, WBPCB | End of July 2012 | Partially completed |
| 5. | Procurement Training of new Procurement staff | APPCB, WBPCB | By end of July 2012 | Completed |

| | | | | |
|----|------------------------------------|--------------------|-----------------------|-----------|
| 6. | List of Contracts for PPR for FY13 | MoEF, APPCB, WBPCB | By end of August 2012 | Completed |
|----|------------------------------------|--------------------|-----------------------|-----------|

9. **Agreed Actions :**

| Sl. | Agreed Actions | Action to be taken by | Date |
|-----|---|-----------------------|---------------------------------|
| 1. | Status of awarded contracts with value for each category (Goods, Works, Consultancy) vis-à-vis the procurement plan | APPCB, WBPCB | By End of January, 2013 |
| 2. | Updated Procurement Plan shall be submitted for Bank's review | MoEF, APPCB, WBPCB | By second week of February 2013 |
| 3. | Bring on board staff with contract management experience | APPCB, WBPCB | At the earliest |
| 4. | Uploading of procurement disclosures including procurement plan and contract award details on respective websites | MoEF, APPCB, WBPCB | By second week of February 2013 |
| 5. | Share PPR FY13 report with Action Plan with the implementing agencies | World Bank | By end of February 2013 |

10. **Procurement Rating :**

The mission reviewed the progress on procurement vis-à-vis the procurement plan and adherence to agreed procedure by various agencies engaged in the process and assigns a “MS (Moderately Satisfactory)” rating to procurement due to (i) delay in completing the procurements as planned, (ii) delays in contract implementation, and (iii) partial non-compliance to Bank's mandatory disclosures. The procurement rating shall be reviewed over next six months vis-à-vis the agreed actions and progress of procurement. The procurement risk at this stage continues to be rated as Moderate.

ANNEX VI
Financial Management

The mission expressed concern regarding delays in contract implementation for various consultancies awarded by WBPCB. The mission recommended the technical team to expedite the process of review of the deliverables under various consultancies.

Budgeting & Funds Flow: The MOEF has proposed for an annual budget provision of Rs 700.00 million to implement the project activities for financial year 2013-14 which represents 85% of the project cost to be financed by the Bank. The budget provision made by MOEF for the financial year 2013-14 is adequate to meet the fund requirements for implementing the project activities to be carried out jointly by MOEF, APPCB and WBPCB. The MOEF since project inception has transferred Rs 206.016 million & Rs 146.056 million into the project bank accounts of APPCB and WBPCB respectively. There have been no delays noticed in the transfer of funds by MOEF to the respective state pollution control boards.

State Government contribution: The Bank team has noted that the Andhra Pradesh has not made the budget provisioning for the state contribution of 15% in the State budget of FY 2010-11, 2011-12 and 2012-13. This signifies a lack of commitment by the state towards this project. The state share is presently being contributed by APPCB from the Board's existing reserves. Till December 2012, APPCB has contributed Rs 15.519 million as against the required contribution of Rs 36.355 million, resulting in a shortfall of Rs 20.836 million. This matter was addressed in the previous aide memoires but no firm action has been undertaken. With likely increase in the project activities, the Bank team has suggested APPCB to swiftly follow-up with the state finance department and make certain that adequate budget provisioning for the state contribution, including required for FY 2013-14, is made in the annual state budget of FY 2013-14 and the funds are received into the project bank account.

For the State of West Bengal, the provision made in the state budget of FY 2012-13 is not sufficient to address the state share of 15%. It has been agreed that an immediate follow-up will be made by WBPCB with the state finance department and necessary budget re-appropriation will be made to ensure that the required funds i.e. Rs 11.82 million are received into the project bank account. In addition, it has been agreed with WBPCB that necessary follow-up with the finance department will be made to ensure that the adequate budget provisioning to finance the state share of FY 2013-14 expenditures is made in the annual state budget of FY 2013-14.

Disbursement: The project has disbursed an amount of USD 7.832 million (including Designated Account Advance of USD 4.851 million) representing 12.09% of the fund allocation. The below table depicts the details of the funds approved and disbursed under the IDA and IBRD components:

| Financing source | Allocation | Disbursement | Allocation | Disbursement |
|------------------|-------------|--------------|-------------|--------------|
| | SDR Million | SDR Million | USD Million | USD Million |
| IDA 4755 | 25.700 | 1.934 | 39.612 | 2.981 |
| IBRD 7924* | 16.315 | 0.000 | 25.147 | 0.000 |
| DA Advance | - | 3.147 | - | 4.851 |

| | | | | |
|--------------------------|---------------|--------------|---------------|--------------|
| Total | 42.015 | 5.081 | 64.759 | 7.832 |
| % Disbursed including DA | | 12.09% | | 12.09% |
| % Disbursed excluding DA | | 4.60% | | 4.60% |

*Excluding front end fees of US\$0.063 million

Exchange rate as of Feb 01, 2013: 1SDR=1.541 USD (approx)

Staffing: The staffing arrangements for this project are adequate. The FM consultant is in place in MOEF and the finance cell in AP and WB pollution control boards are headed by experienced finance managers and supported by accounts officers / assistants. In West Bengal, the position of one accounts officer/assistant is vacant and the Bank team has been apprised that the appointment will be made by April 30, 2013.

Accounting and Reporting: A review of the financial management records of MOEF, APPCB and WBPCB were carried out during the mission. The PCBs are maintaining adequate records to support the expenditures incurred under the project. The financial records are regularly updated, supported with payment vouchers/invoices and bank reconciliation is being carried out on a monthly basis. There were no significant accounting and internal control weaknesses identified during the review. The APPCB and WBPCB are regular in the submission of financial reports to MOEF. The annual budgets are presently not integrated into the accounting software of APPCB and WBPCB. The mission team has recommended the states to introduce the budget element in the accounting systems which will facilitate effective monitoring of actual utilization vis-à-vis budget.

The APPCB and WBPCB have placed the annual accounts of FY 2010-11 in the Project Steering Committee meeting held during the year (i.e. July and August 2012 respectively) and the same were endorsed. The Bank team has advised the finance team of AP and WB to continue this practice and make certain that the annual audited accounts of FY 2011-12 is also put before the Project Steering Committee meeting for approval.

The MOEF is also regular in the submission of quarterly interim financial reports (IUFRRs) to the Bank. The financial report for the quarter ended December 2012 was shared during the mission and the same was endorsed for reimbursement. The mission team has advised MOEF to maintain a component/category-wise register and advance register in the project management cell to effectively record and monitor the expenditures incurred under this project.

Internal Audit: The AP and WB PCBs have internal audit systems in place and the internal audit is being carried out by an independent firm of chartered accountants appointed by the Board. The internal audit report for financial year 2011-12 of the APPCB indicates that the audit coverage was limited, and the project transactions are not covered under this audit. We have therefore suggested APPCB to initiate steps to increase the scope of internal audit during the appointment of FY 2012-13 auditors and ensure that the expenditures incurred under this project are also covered in the audit.

The WBPCB has shared the internal audit report for the financial year 2011-12 and there were no significant issues reported by the auditor for the project. The internal audit for the financial

year 2012-13 will be commenced soon and it has been agreed that the internal audit report will be shared with the Bank on receipt.

External Audit: The AP and WB PCBs have appointed the statutory auditors and the audit report for FY 2011-12 were shared with the Bank before the due date of September 30, 2012. The audit report for the expenditures incurred by the MOEF was shared with the Bank recently (albeit with delay). There were no significant accountability and internal control issues identified by the auditor in these reports. The Bank team will share its response with the project on the audit report review in the form of a letter.

ANNEX VII

Intermediate Results Indicators

| Project Outcome Indicators | Baseline | YR1 | YR2 | STATUS |
|---|-----------|---|--|--|
| 1.1 Methodological framework for risk assessment developed as enabling framework for implementation of the NPRPS | Nil | i) Detailed studies to define policy and legal framework including analysis of best international practices initiated; ii) Remediation and cleanup standards initiated | i) Detailed studies to define policy and legal framework including analysis of best international practices completed ii) Remediation and cleanup standards developed iii) Completed study on economic analysis of avoidance of social cost by undertaking remediation | Detailed studies in process and to be completed by November 2013. Indicator ii will be developed in year 4. Indicator iii needs to be reassessed |
| 1.2. Human resources and organizational capacity for undertaking remediation of HW and old dumpsites strengthened in pilot states | Nil | 15 officials in SPCBs trained in remediation & post monitoring of sites | 40 technically qualified staff in SPCBs trained in analysis of data, remediation technologies, and monitoring of land fills | 30 staff from all States and 20 staff from project states have been trained in remediation options. More training to be provided in year 3. |
| 1.3. Disseminate good practices through knowledge dissemination events | Nil | i) 4 sector specific workshops and seminars held by WB ECAC and WBPCB ii) WB ECAC website launched iii) Quarterly newsletter and annual report published by WBECAC | 25 percent of industries aware of good practices as measured by their participation in the workshops/ dissemination of guidelines WB ECAC Newsletter and annual report | Sector specific workshops, WBECAC website and newsletters have been launched. Indicator of year ii needs to be measured |
| 1.4. GAAP milestones are met | Nil | APPCB and WBPCB create a project web site linked to their websites | Regular reporting on implementation of project activities | Complied |
| 2.1. Four area based pollution remediation pilots implemented in WB and AP | 0 percent | Detailed engineering studies commissioned | i) Detailed engineering studies completed; ii) Contractors hired | Hiring of contractors has been delayed to year 3 |
| 2.2. Measurable reduction of pollution hazards at two HW legacy sites | Nil | Establish the current environment profile of the area | Establishment of monitoring program | Not yet due; indicator will be reassessed |
| 2.3. Measurable improvements of the environmental conditions around the old dumpsites | Nil | Establish the current environment profile of the area | Establishing ground and surface water monitoring system | In process; indicator will be reassessed |
| 2.4. Post remediation | Nil | | | Not yet due |

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| after care monitoring systems in place at the four sites | | | | |
| 2.5. EMP and Social safeguards measures effectively implemented on four project sites | 0 percent | 20 percent of rag pickers on 2 MSW sites trained in alternative livelihoods | 40 percent of the rag pickers on 2 MSW sites trained in alternative livelihoods | Delayed; can be implemented after remedial plans are completed. Will be done in year 3 |
| 2.6. Local authorities and neighboring communities involved and support remediation and closure of dumpsites | No community awareness; no multi stakeholder mechanism | Communities around the pilots sites including NGOs broadly approve remediation plans | In each of 4 sites on community members / CSO /NGO volunteers to take part in the local multi-stakeholder monitoring mechanism | Complied |
| | | | | |