

AFRICAN DEVELOPMENT BANK GROUP



SOUTH AFRICA

MEDUPI POWER PROJECT

COMPLIANCE REVIEW OF THE PROJECT: FIRST MONITORING MISSION REPORT OF THE INDEPENDENT REVIEW MECHANISM (IRM) ON THE IMPLEMENTATION OF THE MANAGEMENT UPDATED ACTION PLAN

CRMU DEPARTMENT
November 2015



The Independent Review Mechanism

Implementation of the Updated Management Action Plan for the Compliance Review of the MEDUPI Power Project, South Africa

First Monitoring Mission Report

November 2015

TABLE OF CONTENTS

List of Abbreviations	i
1. INTRODUCTION	1
1.1 Climate Change and Related Environmental Issues	3
1.2 Local Environmental Issues Related to Air and Water	3
1.3 Consultation with the Community and Cultural Rights	5
2. SUMMARY OF UPDATED ACTION PLAN	5
3. IRM MONITORING TEAM FINDINGS	6
3.1 Monitoring of the CEMP Implementation	6
3.2 Conduct of Project Supervision Missions	10
3.3 Regional Impact Assessments	11
3.4 Compliance with the Integrated Water Resources Management Policy	13
3.5 Public Consultation with the Communities	16
3.6 Desecration of Graves and other Heritage Issues	20
4. SUMMARY OF FINDINGS	21
5. CONCLUSION AND NEXT STEPS	25
APPENDIX A: MANAGEMENT ACTION PLAN, UPDATED, SEPTEMBER 2014.....	26
ANNEX B: <u>L</u>IST OF PEOPLE MET DURING THE IRM MONITORING MISSION	41

LIST OF ABBREVIATIONS

AFDB	African Development Bank Group
CDM	Clean Development Mechanism
CEIF	Clean Energy Investment Framework
CEMP	Construction Phase Environmental Management Plan
CRMA	Climate Risk Management and Adaptation Strategy
CRMU	Compliance Review and Mediation Unit
CTF	Clean Technology Fund
DEA	South African Department of Environmental Affairs
DMR	South African Department of Mineral Resources
DPE	South African Department of Public Enterprises
DWA	South African Department of Water Affairs
ECSIA	Environment, Climate, and Social Impact Assessment
EIA	Environmental Impact Assessment
ESA	Environmental and Social Assessment
ESIA	Environmental and Social Impact Assessment
EUR	Euros
FGD	Flue Gas Desulfurization
GHC	Greenhouse Gas
Hg	Mercury
IPCC	Inter-Government Panel on Climate Change
IWRMP	Integrated Water Resource Management Policy
MCWAP	Mokolo-Crocodile Water Augmentation Project
MYPD	Multi Year Price Determination
NERSA	National Energy Regulator of South Africa
NO _x	Nitrous Oxide/Nitrogen Dioxide
OEMP	Operational Phase Environmental Management Plan
RISP	Southern Africa Regional Integration Strategy Paper
RMC	Regional Member Country
SO ₂	Sulphur Dioxide
PAR	Project Appraisal Report
PM ₁₀	Particulate Matter including Dust
ZAR	South African Rand

1. INTRODUCTION

The objective of this Project Monitoring Report, as requested by the Boards, is to assess progress made by Management in achieving compliance with Bank policies and procedures in the Medupi Power Project through completion of the Action Plan. This review is based in part on documentation provided by Management, in particular the supervision reports by Bank staff over the last three years subsequent to the Boards adopting the Management Action Plan, and in part on a field-based review by the IRM monitoring team in 10-17 May 2015. This monitoring report builds upon the desk review of Management supervision reports by IRM, prepared in November 2014.¹

The request for the original compliance review was submitted by two South African nationals (the “Requestors”). After authorization on 15 July 2011 by the Boards of the Bank, the IRM Panel of Experts (“Panel”) reviewed four of the six instances of non-compliance that were alleged by the Requestors. The review was conducted by the Panel pursuant to the Operating Rules and Procedures of the Independent Review Mechanism adopted 16 June 2010.

The Medupi Power Project consists of the construction of a 4,764 MW coal-fired base load power plant in Lephalale, Limpopo Province, South Africa – the fourth largest coal-fired power plant in the world. The Boards of Directors of the Bank Group approved a loan, not to exceed the aggregate sum of EUR 930 million and ZAR 10.63 billion, for the supply and installation of six boilers and turbo-generators for the project on 25 November 2009. According to the Project Appraisal Report (PAR), the total cost of the power project from all financing sources at that time was estimated at EUR 11.19 billion (UA 10.18 billion).

The Project is in the midst of a transition from the construction phase to the operational phase. The start-up of the first 794 MW generating unit was delayed for several years, but has in the last few months begun with the testing of the boilers and synchronization with the distribution system. With the plans now calling for start-up of subsequent units on a 12-month cycle, the construction phase of the generating units is estimated by Eskom to be completed in 2021, and the construction of the flue gas desulfurization units by 2027. The importance of that date is that the full environmental and social effects, especially with regard to air and water quality, will not be discernable until all units are operating, initially without and later with FGDs, and thus compliance with Bank and national standards cannot be determined until the late 2020s. Nevertheless, having one generating unit in start-up phase status is of significant value to Management and the IRM monitoring process to review the issues at the core of the existing Construction Environmental Management Plan as well as the pending Operational Environmental Management Plan.

¹ Independent Review Mechanism, Implementation of the Updated Action Plan for the Independent Compliance Review of the Medupi Power Project. South Africa: Medupi Power Project. Desk Review. November 2014.

The Boards approved² this IRM monitoring mission in early 2013 with the following commitments, among others, by the IRM and Management:

- *Objective of IRM monitoring: The IRM monitoring will focus solely on the implementation of the updated Management Action Plan, as included in Appendix A of this document. The aim is to assure the Board that the updated Action Plan is implemented, and the project is in compliance with the applicable Bank's policies and procedures.*
- *Process and timelines of IRM monitoring: At the end of each project supervision mission, Management will provide IRM with a copy of its supervision report which shall contain the status of implementation of the updated Management Action Plan. Management will provide evidence to support its conclusions concerning relevant actions it has undertaken. IRM monitoring team will consult and coordinate its activities with Management.*
- *IRM monitoring will start with the desk review of the project supervision reports prepared by Management. IRM will report its findings to the Board on progress achieved in the implementation of the updated Management Action Plan.*
- *The IRM monitoring mission to South Africa will take place, as directed by the IRM Rules, and take into account the findings in Management's supervision reports on the implementation of the updated Management Action Plan. During its field mission to South Africa, the IRM Monitoring team will meet with the Borrower, National Authorities, and the Requestors. The team will visit the project site and affected communities.*
- *The IRM Monitoring team will share its findings with Management and Requestors for further clarifications before submission of its monitoring report to the Boards.*

The desk review requested by the Boards was delivered by the IRM in November 2014, immediately following the update from Management on implementation of the Action Plan (completed in September 2014). The field mission by the Monitoring Team occurred, in consultation with the government on timing, on 10-16 May 2015. The draft report with findings was then shared with Management and Requestors for fact-checking and their comments were taken into consideration.

With the successful completion of this first monitoring activity, the Boards is invited to approved the conclusion of this report to enable the IRM to further monitor the implementation of the Updated Management Action Plan.

The Original Request and IRM Compliance Review

A brief summary of the findings of the IRM compliance review in 2011 follows as a reminder of the context in which the Management Action Plan was proposed, adopted, and now being implemented.

² ADB/BD/WP/2012/12/Add.1/Rev.2, 13 February 2013.

1.1 Climate Change and Related Environmental Issues

With regard to climate change, the Requesters' concerns related to:

- (a) The Bank's compliance with the promotion of a "clean sustainable energy sector;"
- (b) The adequacy of the social and environmental studies done regarding the assessment of cumulative impacts; and
- (c) The linkages between this project and the Bank's and Borrower's approaches to climate change. Management noted that the Bank did not have a corporate policy that seeks to replace support to power generation through conventional fossil-fuel based sources with clean and renewable energy solutions. Instead, it has endorsed a clean energy investment framework aimed at increasing overall energy access in the African Continent while at the same time trying to shift the balance in favor of clean energy and low carbon development options, given the Continent's vast renewable resources including hydro-potential, geothermal, wind and solar. The Panel determined that the Bank's policies on energy and environmental assessments -- 1994 Energy Sector Policy, Environmental and Social Assessment Procedures for African Development Bank Public Sector Operations (2001); Environmental Assessment Guidelines; and Policy on the Environment (2004) -- were applicable to these issues in Medupi, a Category 1 project.

The Appraisal Report presented to the Boards in November 2009 noted that South Africa was already the 11th largest emitter of greenhouse gases in the world, and was likely to rise in this global ranking as a result of Medupi and other planned coal-fired power stations. The discussion in the Technical Annexes of the ESIA included the climate change dimensions of Medupi, without any reference to the applicable Bank policies or strategy papers such as the Climate Risk Mitigation and Adaptation Strategy (2009) (CRMA). Thus, neither the Appraisal Report nor its Annexes describe any steps that the Bank had taken to ensure that this complicated coal-fired project was compliant with the full range of applicable Bank policies. The criteria of the CRMA were never cited in the documentation with analysis of the project, despite the Bank's obligation to "mainstream" the CRMA in all operations.

1.2 Local Environmental Issues Related to Air and Water

The requesters complained that "communities living near the Medupi plant will bear the burden of hidden costs in terms of health impacts from air pollution, elevated sulfur-dioxide (SO₂) levels, and mercury residues in their water, air and land; constrained access to water; and livelihood impacts from degradation of land and water in the largely agrarian area."

In terms of air pollution, Management indicated in the ESIA that the major potential impacts of the project on environmental quality and health would arise from the emissions of Sulphur Dioxide (SO₂), Nitrous Oxide (NO) and Nitrogen Dioxide (NO₂) and particulate matter, including dust (PM₁₀ is the South African standard). The Management noted that new technologies to control

emissions in order to mitigate the likely impacts on environmental quality were expected to be installed after each unit in Medupi has been operational for six years. The Panel identified the uncertainties underlying installation of Flue Gas Desulphurization equipment (FGD) as being:

- (1) The adequacy of the water supply to this water-intensive technology; and (2)
- (2) The management of the waste, primarily gypsum, produced by the technology.

The Panel noted the importance of multi-year monitoring and supervision, since the real test of compliance on this issue is not during the construction phase – rather, the Bank will have to ensure implementation during the operational phase when the issue of FGD scrubber installation will have to be addressed.

In terms of water access, concerns were raised about stresses from the construction and operation of the power plant. Management acknowledged that there will be increased demands for water in the area, and that the borrower expects to meet its water needs from two planned water projects and the boreholes the borrower should develop. The water management issues create significant challenges for the success of the project and compliance with Bank policies. There is already a negative balance (use over current availability) in water, and current planned usages will exacerbate this situation as operation commences. The situation could be further aggravated both by natural causes (climate change and declining river flow) and by manmade causes (a decision to install wet scrubbers in the Medupi project to control SO₂). The latter eventuality would more than double the water needs for the Medupi plant, but some form of desulfurization process is required for compliance with Bank policies.

With regard to land and water degradation, Management contended that the Project will not have significant impacts on the quality of the land and water in the project area. Degradation can take many forms in such a project. While the waste ash is designed to be minimally liquid and a lining will be installed between the Medupi ash dump and the soil, there remains the risk that the ash dump could leach into the ground and contaminate the local water supply, and a dried surface could be carried away as an air pollutant. The ESIA classifies this possibility as “high risk” on this project. In addition, the FGD technology, if installed, generates two major waste streams. It generates waste water that can only partially be recycled; the remainder has to go somewhere. It also produces massive quantities of gypsum, of which little can be absorbed by the gypsum market in southern Africa.³ Disposal of gypsum on the site around Medupi can by itself create serious fluoride pollution. Evidence of water and land degradation, if it occurs, will not be clear until the power plant is operational. The role of Bank supervision missions at that time will be crucial for ensuring the compliance of the project with Bank policies.

³ It should be noted that similar FGDs are being installed at the very large Kusile coal-fired power plant ahead of Medupi, and its output of gypsum will clearly absorb any possible market for derivative products such as gypsum board.

1.3 Consultation with the Community and Cultural Rights

The Requesters stated that “[t]he Bank failed to consider community consultations and participation processes in the assessment of the project, and that local communities, who live close to the power plant were subjected to removals and the desecration of ancestral graves, which they say demonstrated a gross violation of their cultural and human rights.” The response from Management argued that the community consultations were extensive, conducted during the environmental and social impacts assessment process in line with both South Africa’s law and the Bank’s requirements.

The Panel’s concern arose from direct conversations with community members, nearly all of whom raised inadequate consultation as one of their primary concerns about the project. The assertions of lack of knowledge about the consultations were most emphatic in the case of the representatives of the Maropong community (the nearest town) and of the traditional leadership in the project area. These communities include the poorest and most disadvantaged people in the project area. This discrepancy in descriptions about the borrower’s efforts at public participation raised important questions about the methods used by the borrower to engage in public participation. For instance, the Panel noted that neither of the languages used to inform people about the public consultations (English and Afrikaans language newspapers) nor the languages of the written submissions (English and Afrikaans) are the language (Sotho) spoken by the majority of people in the area.

The topic of gravesites on the land where Medupi was being built was also inflammatory for community opinion. The project developer identified only two “formal” grave sites, but the Requesters and community members maintained that unmarked graves were scattered throughout the project area. The Resettlement Policy requires the Bank staff to pay careful attention to the needs of disadvantaged groups who may not have formal title to land but may attach a special significance to particular pieces of land. There was nothing in the record to indicate that the borrower engaged in consultations with the local community about either the existence of unmarked or symbolic graves or land claims. This has been confirmed by a review in 2015 by new consultants looking at the quality of heritage reviews done in developing the project⁴ -- that a cursory Phase 1 inspection of the site was done and thus most grave sites were overlooked.

2. SUMMARY OF UPDATED ACTION PLAN

Management provided to the Boards and to IRM the “Update 3 on the Progress in Implementing the Action Plan Approved by the Board for the Medupi Power Project for Independent Compliance Review,” in September 2014.⁵ The report includes records of supervision missions undertaken by

⁴ Medupi Power Station Project – Eskom. Phase 2 Heritage Impact Assessment Review of Previous Heritage Assessment Reports for Medupi Power Station including Action on Graves Found at the Site Lephalale, Limpopo Province. 1st Draft Report. Heritage Consultants. 2 February 2015.

⁵ See Appendix A.

management, steps taken to implement the Action Plan, including specific issues such as monitoring data on water quality, air quality, waste management, spill management, hazardous substance management, and potable water management. Management also provided the IRM with supplementary documentation about construction progress at Medupi, particularly briefing materials generated by the project developer, Eskom. Finally, the IRM requested some documentation referenced in the Update 3 that would provide greater detail of steps taken to fulfill the Action Plan.

Management concluded that it “is satisfied with the progress being made in implementing various elements of the Action Plan.” Specific aspects of Management findings are assessed in the next section of this report.

3. IRM MONITORING TEAM FINDINGS

The Team spent six days in South Africa, with time divided between consultations in Pretoria with government representatives and civil society, and in the Lephalale/Marapong area in Limpopo Province, where the Medupi Power Project is under construction. The latter involved extensive consultation with Eskom officials, with community leaders, and with other local stakeholders. The Team also reviewed carefully all of the documentation provided by Management and the Borrower, and information from public sources.

3.1 Monitoring of the CEMP Implementation

Air quality monitoring

Key Issue: Risk to Public Health due to Emissions.

Action Plan 2.1: Continuous monitoring of Construction Phase Environmental Management Plan (CEMP) and compliance with the requirements of the various licenses to be issued under the CEMP.

Findings of the Monitoring Mission: Key steps remain to meet the requirements of the Action Plan. Broad concerns remain about the quality and comprehensiveness of the air monitoring systems. The real test of this action plan element will come with the onset of actual operations at the plant, projected to start with the first unit later in 2015.

Management relies on Eskom reports for the monitoring of air emissions. Management reports that Eskom is monitoring the Construction Phase Environmental Management Plan and that the implementation of this plan is in compliance with the requirements of the various DEA licenses to be issued under the CEMP. Eskom submits regular quarterly progress reports to the Bank as well as to DEA. The supervision reports – and the progress report on the Action Plan implementation – state that deterioration of air quality, whenever it exceeded the agreed norms, is due to “low level

sources such as domestic fuel combustion, agricultural activities, motor vehicles emissions, dumps and mining activities”. The Monitoring Team could obtain no comprehensive and independent data to support this assertion, even though the Team was shown the air monitoring site in Marapong and witnessed the trash burning that apparently occurs periodically within some meters of the instrument housing. It was also said that an auto repair shop within 20 meters of the data collection site caused spikes in readings when spray-painting occurred. This analysis of the distortions is anecdotal rather than systematic.

The site for the current air monitoring system is clearly one issue that has not been addressed. The sampling site could be moved to a site less subject to disruption, or more than one site could be opened in Marapong to be able to confirm whether spikes are highly localized or not. When authorities were asked why the site was not moved elsewhere in Marapong, to avoid the data-contaminating effects from the informal settlements that have grown up, the answer focused on security of the current site.⁶ The Team found that answer unpersuasive, as alternative sites could be identified providing clearer results to inform all stakeholders on this issue.

Moreover, the Team also identified a need, in advance of Medupi becoming operational, to explore strengthening of baseline data with additional collection sites where the deterioration of air quality (air pollution) can be better tracked and allocated to ambient sources, existing coal mining and power plants (such as Matimba or the Grootgeluk mine) or to future emissions from the Medupi Power Project. First, multiple data points would help to strengthen the empirical evidence for tracking air quality before and after the onset of operations at Medupi. Secondly, such a step would also serve to increase the trust of community residents and stakeholders in the air quality monitoring system as the dialogue on this issue becomes more intensive in future years.

The Team found considerable skepticism among civil society about the reliability of current air quality data provided by Eskom. The Bank could improve public understanding of the data and confidence in the air monitoring systems, if it were to request real-time posting of monitoring results on a public website, whether managed by the government or by Eskom. At the present time, members of the public have to make a written request for the data, with delays and bureaucratic hurdles impairing the flow of information that is supposed to be “public” in nature. Modern best practice for such emission data is to post it on a readily accessible website as it comes in and then create venues in which to discuss its significance. A recent adoption of this model

⁶ WHO has analyzed this issue, indicating the current location of the measuring site to be inappropriate for most uses: “In order to present air quality that is largely representative for human exposure, urban measurement characterized as urban background, residential areas, commercial and mixed areas were used. Stations characterized as particular “hot spots” or exclusively industrial areas were not included, unless they were contained in reported city means and could not be dissociated. This selection is in line with the aim of capturing representative values for human exposure. The location of hot spots, often measured for the purpose of capturing the cities’ maximum values, and industrial areas, were deemed less likely to be representative for the mean exposure of a significant part of a city’s population. “Hot spots” were either designated as such by the original reports, or were qualified as such due to their exceptional nature (e.g. exceptionally busy roads etc.).

See http://www.who.int/phe/health_topics/outdoorair/databases/AAP_database_methods_2014.pdf?ua=1

practice is in Beijing, China.⁷ Public understanding would also be enhanced if oversight of the air monitoring were done by an independent reporting entity or with more intensive oversight from DEA. Civil society effectively doubts that DEA is in a position to independently verify the quality of data on this issue.

The Monitoring team also found little attention given to building stronger understanding of the connection between air monitoring and the health status of potentially affected populations. Recurrent complaints are expressed by residents of the area about the impact of the construction on the health of vulnerable populations, especially young children and the elderly. The incidence of asthma and other respiratory diseases can be driven by many factors, and will likely become more controversial when Medupi becomes operational and the SO₂ emission levels rise rapidly. WHO has identified South Africa as a particularly difficult environment in which to establish causation for respiratory problems, given the extensive incidence of tuberculosis and HIV co-infection.⁸ It would be in the interest of the local population, of Eskom, of the government, and of the Bank that the strongest possible baseline for the sources of respiratory illnesses is established before the onset of operational sources at Medupi, and that a system of ongoing health monitoring be established that would collect data specifically on respiratory diseases which could be correlated with or caused by air quality deterioration. Given the possible contribution from PM₁₀, as a result of the first operations at Medupi, of the ash pit, and of the massive coal reserve stockpile, to respiratory problems, the data are already in peril from multiple sources. Resolving this issue to allay public anxieties is a natural partnership between Eskom and several government agencies, including DEA and the Department of Health.

The Monitoring Team was briefed on and saw potential in the comprehensive modeling embodied in the Integrated Resource Plan at the Department of Energy, which includes broad-scale health effects of power choices along with many other factors. This work appears to be focused at the national level, along with occasional dives into the understanding of a regional situation. But the methodology could assist in the evaluation of concerns in the Waterberg air basin if adequate resources were allocated to achieve collection of the necessary data. The Bank should consider expanding its sources of information on this issue beyond the limited response from Eskom and the DEA in order to reduce the risk to public health and the fears that will come with operation of Medupi.

Flue Gas Desulfurization (FGD) Units Installation

Management's report notes that key decisions remain to be made on the issue of SO₂ emissions, in order to achieve conformance with South African standards for such emissions. Eskom provided

⁷ The data for all parts of Beijing are available on the web at <http://aqicn.org/city/beijing/>.

⁸ http://www.who.int/gard/countries/demonstration_project_south_africa/en/

a social and environmental briefing to Management in June 2013⁹ that reports on the plans for installation of FGD (pages 17-18) without any suggestion of a delay. Eskom then submitted an application to the government in 2014 for a postponement of the application of air quality standards for Medupi emissions of SO₂,¹⁰ and it was granted by the DEA on 13 February 2015.¹¹

The Monitoring Team met with the National Air Quality Officer and examined the Eskom application and letter of approval from the DEA. The principal arguments for delay of installation of the FGDs were that they were intended, under the prior license, to be put in place six years after first operation of each of the six units during a normal maintenance cycle. Since the overall construction of the units has been delayed by years, the postponement of FGDs could, it was argued, be delayed from 2020 to 2025. The decision also argued that, even with the onset of incrementally increasing operation of the plant, the local impacts of SO₂ emissions would not exceed South African standards for an existing power plant.

Public stakeholders continue to disagree with the strategy of a slow installation of FGDs. The contrast with the Kusile coal power plant, being constructed in parallel and with the FGDs installed at the same time, is stark. The constraint has not been technological for Eskom, although it is frequently pointed out that the installation at Kusile will be a first for Eskom. There are lessons that can hopefully be applied to Medupi. For the latter, there are also special challenges, such as the quality of the limestone available to be applied in the FGDs. Civil society, according to interviews with the Monitoring Team, has frequently asked why the FGDs could not be installed at Medupi as they are being included in Kusile construction. The issue has not been taken up by Eskom or government. Multiple sources confirmed to the Monitoring Team that the major constraint at Medupi is financial. The cost quoted to the Monitoring Team by the FGD project leaders was ZAR 32 billion – a rising number that has escalated significantly with each release of another estimate. The responsible Departments consulted by the Team acknowledge that the FGDs will eventually be installed, even if on a delayed basis, owing to the requirements of South African environmental laws and the covenants on the borrowings from the AFDB and the World Bank. But the financing plan is not yet in place. And for the full suite of FGD units to be installed, it is recognized that additional water will need to be accessed – according to plan, from the Crocodile River diversion. But no final decision have yet been made to construct that phase 2 of water supply augmentation, as is described below in Section 3.4. Until the financial commitment has been made to the project itself as well as the water supply, the ability of the Bank to ensure implementation of the borrower's commitment on this key emission issue remains at risk.

⁹ Eskom, Medupi Power Station Project, Social and Environmental Powerpoint Briefing. By Emile Marell, 27 June 2013.

¹⁰ Eskom. Summary Document. Applications for Postponement of the Minimum Emissions Standards (MES) for Eskom's Coal and Liquid Fuel-Fired Power Stations. February 2014

¹¹ Letter dated 13 February 2015 from Dr. Thuli Mdluli, National Air Quality Officer, DEA, to Eskom Sustainability Division. RE: Application for Postponement of Compliance Time-Frames with National Environmental Management.

The next step is completion and release for public comment of the scoping document for the Environmental Impact Assessment of the FGD project, due in July 2015, according to Eskom. In order to meet the amended deadline of 2025 for the FGDs installation, official sources stated that Eskom would need to make the formal decision to move forward by early 2017. Thus, Bank supervision will need to be even more engaged on this issue for at least two more years in order to have confidence that the project is on track.

3.2 Conduct of Project Supervision Missions

Action Plan 2.2: Reporting on the status of implementation of the project as follows:
2.2.1 Project Quarterly Progress Reports submitted to the Bank; 2.2.2. Frequency of Bank supervision missions; 2.2.3 Update of the Operational Phase Environmental Management Plan (OEMP)

Findings of the Monitoring Mission: The supervision of the Action Plan implementation by Management should be reinforced as the power plant enters the operational phase. Issues that have not been fully resolved during construction will require much more rapid responses given the impact on people and the environment from an operating plant. There is special concern that the OEMP is not yet in final completed form despite the impending full operation of unit 6. The Team disagrees with the Update finding that “Following the June 2014 supervision mission, Management is satisfied with the progress being made in implementing various elements of the Action Plan.” Much greater urgency should be attached to addressing all of the Plan elements.

Bank Management receives the reports required by the project agreement, with a particular focus on the Construction Phase Environmental Management Plan (CEMP). The reports are enhanced by the onsite monitoring of the CEMP activities by the independent environmental officer required by the DEA license for construction of the project. This arrangement for onsite monitoring and Bank Management supervision missions will presumably continue through the end of this construction phase – estimated to be at least through 2021. Additional construction delays cannot be ruled out.

Work remained to be done on the OEMP for the operational phase set to begin in 2015 with the startup of the first unit. The Bank supervision mission in June 2014 concluded that the completed OEMP should be available for the next mission supervising the Action Plan, but it now turns out that will not occur until June 2015. So the Monitoring Team was only able to review a draft that was clearly not in final form.¹² That should cause concern to Bank Management, since Unit 6 is

¹² Medupi Power Station, Limpopo Province. Environmental Management Plan (EMP) for Operation and Maintenance. Revision 1. March 2014. Prepared for Eskom Holdings SOC Ltd. Prepared by Savannah Environmental (Pty) Ltd.

on the verge of becoming operational. This issue was raised by Management in its Action Plan update of June 2013, when it stated that “Eskom is currently in the process of updating the OEMP to include specific conditions of the Atmospheric Emission License (AEL). It is expected that the updated OEMP will be ready within 6 months before commissioning of the 1st unit when Eskom will duly avail a copy to the Bank.” Clearly Bank Management did not keep Eskom to that commitment, since the first unit is within weeks of becoming operational. This may be an indication that 12 months between supervisory visits for review of the Action Plan is inadequate in meeting the needs for information by the Boards.

While Management states that it carefully tracked each element in the Boards-approved Action Plan, the IRM Monitoring Team concluded that the quality of supervision and implementation of the Plan would be served by stronger attention to the underlying community concerns. For instance, the Action Plan’s intention of establishing collaborative ties with community leadership has failed. In such a case, it would make sense to include governance specialists in supervision missions that occur more frequently. At a substantive level, establishing transparent data systems might reassure stakeholders that the Bank is, in fact, carrying out the commitment of the Boards. Much reliance in supervision was placed on analysis by Eskom officials instead of adding the social and environmental expertise from Bank staff to dig into the significance of the data, and to proactively release all of the relevant data. This issue deserves special attention as the project moves into the operational phase. The community will need reassurance about the actual effects of Medupi emissions on the air and water in their lives.

3.3 Regional Impact Assessments

Action 3.1: Conduct further Regional Assessment of Coal Based Energy Projects between South Africa and Botswana to build on the work already done.

Findings of Monitoring Mission: This task was delayed by several years, but has clearly not been completed. Management alleges that is now apparently making some progress. Meeting the requirements of the Action Plan will depend on the published results of the consultant. Separately, more attention needs to be given to the immediate region of the Medupi development in order to manage the cumulative effects on both air and water.

Management reported that the required Regional Environmental and Social Assessment (RESA) study to be undertaken with the two Governments shows progress. Some steps have reportedly occurred, including the selection of a consultant firm and the creation of an institutional structure bridging the two countries to ensure smooth implementation.

Progress has been very slow. The monitoring team was unable to meet with the consultants undertaking the cited study, and thus, the Team cannot provide judgment on the Joint Advisory

Committee and Joint Technical Committee, the value of the analysis of cumulative effects reportedly done in March 2012, the existence of the emission inventory for SO₂, NO_x, PM, or the draft baseline assessment report for air quality scheduled for June 2014, and the dispersion modeling. It is evident, in any case, that the work is well behind schedule and needs to be accelerated in order to drive strategic planning before further commitments are made for large-scale industrial, mining, and power generation facilities in the region in question. Unfortunately, the work will now be too late to include in the Medupi OEMP. Management, in its June 2013 Update on the Action Plan stated “The recommendations from this study will also inform the measures to be included in the updated Medupi OEMP.” That cannot now happen, since the study was only contracted out in March 2014 and is still collecting data.

The Monitoring Team also interviewed government departments and other stakeholders about other examples of work underway on the cumulative effects of development in the region in which Medupi is being built. For the DEA, they cited a limited mandate and a lack of adequate funding to do more work in the region. Expectations were raised among many stakeholders when the Waterberg region, including Lephalale, was declared to be a priority area of concern about air pollution.¹³ The resources for analysis and action have gone elsewhere.

Nevertheless, some stakeholders are moving ahead. For example, the Lephalale Development Forum, considered by many a relatively dynamic organization in the last few years has brought together farming, industrial, commercial, and governmental interests to catalyze consideration of balanced development reflecting resource constraints in the area.

Similarly, regional planning for water resources in the area, particularly the Mokolo River, is very limited, focusing on traditional supply and demand rather than the full ecological health and sustainability of all water resources incorporating alternative economic drivers. When the DEA was asked about the possibility of such regional planning for water, the problem again was that of resources combined with a mandate focused on enforcement of site-specific violations at the expense of long-term planning. Curiously, new studies are being conducted that provide better understanding of the ecological values of the river,¹⁴ but there are few local stakeholders taking up these issues inherent in Bank policy. Any future Bank investments impinging on these air and water resources needs to find a way to rectify these strategic shortfalls.

¹³ The Medupi Power Station falls within the Waterberg-Bojanala National Priority Area, declared a priority area in terms of Section 18(1) of NEM:WA on 8 March 2013, under correction notice GN 154.

¹⁴ See, for instance, Testing a Methodology for Environmental Water Requirements in Non-perennial Rivers. The Mokolo River Case Study. Report to the Water Research Commission. By MT Seaman, M Watson, MF Avenant, AR Joubert, JM King, CH Barker, S Esterhuyse, D Graham, ME Kemp, PA le Roux, B Prucha, N Redelinghuys, L Rossouw, K Rowntree, F Sokolic, L van Rensburg, B van der Waal, J van Tol & AT Vos. Centre for Environmental Management, University of the Free State. WRC Report No. TT 579/13. November 2013.

3.4 Compliance with the Integrated Water Resources Management Policy

Action Plan 4.1: Follow up with DWA on status of the Mokolo-Crocodile Water Augmentation Project (MCWAP-2) and development of the effluent re-use and groundwater use.

Findings of the Monitoring Mission: Progress has been made as promised on the Phase 1 augmentation of water from the Mokolo Dam to support operations at Medupi. It is much less clear how much progress has been made on Phase 2, given the need to identify long-term users and the Phase 2 water link with the timing of FGDs installation.

Management noted that Eskom had been granted the required Water Use License for the MCWAP1/Mokolo Dam Phase 1. It declared that progress was being made towards the implementation of the MCWAP2.

The Monitoring Team confirmed that Phase 1 of the augmentation program is almost fully constructed. DEA described the civil works as complete, with the final testing and adjustments expected in the next few months. The current projections from the DEA of water use in the area indicate that Phase 1 will be sufficient for household needs where piped water is supplied, along with the water needs of Medupi for operation of the six units when constructed. There was also a general view that Phase 1 would supply sufficient water for two or three of the FGD units when installed, but Phase 2 would be needed for the remaining FGDs.

With regard to Phase 2, the Team found that limited progress had been made. Interviews with key government agencies described shifts in the plans for financing Phase 2 going forward, and these financing rules make it more difficult to initiate the project. In brief, the project can be launched only when potential users of the water make binding take-or-pay commitments to specific quantities. While some argue that having clarity of government policy is progress, it also makes it unlikely that Phase 2 will be undertaken in the near future. As of the present time, only Eskom is currently in discussion to make that commitment, with other potential mining and power projects in the area on hold. For Eskom, the requirement has been postponed by five years with the DEA decision in 2015 to delay the deadline for FGD installation. As a result, Phase 2 is also effectively on hold. Unless Phase 2 is undertaken, there will be no water for 3-4 of the FGD units, and thus threatening compliance of the project with Bank agreements.

Action Plan 4.2: Follow up on the DEA, DMR, DWA and DAFF Task Team decision on the sand mining issues.

Findings of the Monitoring Mission: After unnecessary delays, the suspension of sand mining in the Mokolo has been a positive step, but the community is impatient about receiving answer with regard to rehabilitation of the damaged areas of the river and of stronger analysis/planning for long-term sustainability of sand mining.

An intergovernmental Task Team with leadership from the Department of Mineral Resources and the DEA was established to address the issues of sand mining and potential damage to the Mokolo River, and commissioned studies on site-specific issues to inform its decisions. It suspended all current mining licenses for sand from the Mokolo in the vicinity of Lephalale. The DEA indicated that they had also stepped up enforcement against illegal sand miners in the area since the Investigation Report of the IRM.

The Monitoring Team reviewed progress on this issue with the DEA and Eskom, and went on site to examine ongoing damage to the Mokolo River. There did not appear to be any sand mining underway, and local residents confirmed that the suspension of licenses appeared to be working. That could be expected, since the civil works are completed at Medupi and the demand for sand has almost disappeared.

The DEA agreed that the scope of their studies is quite limited – primarily to specific sites where there had been complaints and enforcement actions. Neither their mandate nor their resources allow for a more comprehensive review of the Mokolo as a long-term resource. It also appears unlikely that provision for rehabilitation of the river will be made – most comments indicated a preference for “letting nature take its course.” Eskom has not changed its position about having no responsibility for adverse environmental impacts of the sand mining operations for supplies to Medupi. Because the principal harmful effects of the sand mining are either on farmers or on the overall ecological balance in the area, little attention is paid to this adverse development. The government departments have only site-specific authority to rehabilitate the river and limited capacity to take a sustainable development perspective.

While it is a positive step that sand mining has stopped, there remains a need for intensive study of possible rehabilitation at the severely damaged sites, and for the long term, a fresh look at steps to be taken for a sustainable approach to all requirements in the river basin that includes cumulative effects over time. This will be increasingly urgent as the time for civil works associated with the FGDs comes closer and demand for sand escalates rapidly at Medupi. It is thus urgent that the Bank encourage DEA to step in to:

- (1) Address past damage; and
- (2) Proactively prevent further damage in the future to communities and farmers who have already been hurt by the past irresponsible sand mining practices in the area.

Action Plan 4.3: Develop a monitoring program of surface and groundwater for the operation phase based on the conditions of the water use licenses and include it in the OEMP.

Findings of the Monitoring Mission: The construction phase appears to have been a success in avoiding damage to the underlying water quality in the Medupi area. The operational phase is pending and will require much stronger oversight, given the massive storage and disposal activities just launched at the site. Fulfillment of this element in the Action Plan will be tested by the final version of the OEMP, with augmented groundwater test sites, and the actual, expanding operations of the power plant.

As with air quality monitoring, it will be essential to have in place robust water monitoring systems before operational status is reached. There is ongoing concern about the quality of ground water, both specific to this area and to the fact that Medupi is located in a water-stressed, drought-prone region. The statement made in the progress report that the quality of groundwater is generally poor is not well supported by the supervision report, and provides an inadequate basis for tracking present and future impacts from Medupi. Eskom states that “a better understanding of groundwater conditions at the site will also help to determine whether the current monitoring programme is sufficient”. Management’s Update stated that Eskom would be adding additional monitoring boreholes in order to establish a clearer baseline and to be prepared for possible pollution blooms around the periphery of the property.

DEA has taken on active responsibility for the water quality issue, but has not yet allayed community concerns. The water staff members at DEA are represented at the EMC meetings, and have a presentation scheduled at the June 2015 EMC meeting. Heretofore, community residents have taken their complaints about water to the municipal authorities, and apparently received little satisfaction.

Unfortunately, the Monitoring Team was unable to obtain any information at Medupi about the needed additional testing sites. The Team agrees with Management that they are needed, not just because the current data is inadequate, but because the potential load on the groundwater has risen radically. One has to cite the significant risk from two major developments in recent months:

- (1) The creation of a coal stockpile on the property as a result of “take or pay” provisions in the supply contract with Exxaro. The plant authorities stated that the stockpile would be equivalent to an eight-month supply of coal for the Medupi plant when completed. The stockpile is largely an unintended consequence of the delay in construction, and the decision that it was best to take the coal under the binding contract and look for a use sometime in the future; and

- (2) The plan to dispose of the gypsum resulting from the FGDs beginning in 2021 in the ash pit along with the ash. The viability of this approach to protecting the groundwater depends on a system of lining the pits that the Eskom authorities acknowledged was new to them, and that their uncertainty as to whether it would work was underlined by a decision to only line part of the pit and see if the system works. In that case, the risks for non-compliance with Bank policies are clear, and close supervision of the issue by supervision missions and real-time data flows are essential.

It should be added that the viability of the gypsum disposal system will be reviewed as part of the EIA being drafted for the FGD project as commissioned by Eskom and noted in the Management Update report. The installation of the FGDs is the subject of a separate project being launched by Eskom, rather than being integral to the original Medupi project. The Bank, even if it is not involved in the financing of the FGD project, will need to remain engaged in order to ensure completion of this element of the Action Plan dealing with air and water quality.

3.5 Public Consultation with the Communities

Action Plan 5.1: Expand the functions of the Medupi Central Information Office (MCIO) to also serve as a center where grievances can be reported and where Eskom can gain feedback from communities on the project activities.

Findings of the Monitoring Mission: The Medupi Central Information Office (MCIO) has turned out to be an ineffective local grievance mechanism thus far.

Management reported that the function of the Medupi Central Information Office was expanded to serve as a center where grievances can be reported as well as where Eskom can receive feedback from communities on project activities.

The Monitoring Team, through interviews and the visit to an information office, found that its alleged function as the institutional core of the project-based grievance mechanism was not fulfilled. The only interest of the community in the MCIO and the four satellite offices is in seeking jobs. There is no acceptance by the community of this entity as a grievance mechanism. While Eskom staff dedicated to stakeholder relations have been trained to handle grievances, the MCIO and its satellite offices are largely functioning as a job bank – and in that sense are disappointing to the community, since more people are being laid off as redundant as are being hired. The shift to sophisticated equipment installation as the focus provides few opportunities for locals to be hired.

Furthermore, to make the local grievance mechanism work, the public needs to be informed effectively, in multiple languages, that complaints can be posted in MCIOs and some evidence needs to be established that complaints received are followed up. The structure has been put in

place, including linkages between the offsite MCIOs and the onsite stakeholder relations office, but insufficient attention has been given to proactive thinking for operational effectiveness.

Action Plan 5.2: Enhance participation of Ward Councilors in Environment Monitoring Committee (EMC) meetings by assisting them with transportation to the meetings.

Findings of the Monitoring Mission: This Action Plan element has not succeeded to date, even though a positive step has been taken by choosing meeting sites for the EMC closer to the people. But even that has not solved the challenge of non-participation by the Councilors.

Eskom was said to be facilitating enhanced participation of local communities, including Ward Councilors, in the Environmental Monitoring Committee meetings. In addition to that approach, the chairperson of the EMC recommended holding EMC meetings in various locations convenient to the Councilors and for the public to attend. This was adopted and broader participation occurred. But in fact the Councilors do not attend the meetings. There is no apparent interest among the Councilors in Lephalale or Marapong in the environmental issues or for using the EMC to address other issues. This was confirmed at a meeting organized by the Monitoring Team with seven of the Lephalale Councilors, who delegated all participation to the sole staff member of the Municipality tasked with “environmental matters,” with a particular focus on trash collection.

The Bank and Eskom need to focus on two steps for this element of the Action Plan: in the short term, to identify alternative approaches to interfacing with the communities; and in the long term, to develop a stronger sense of stakeholder ownership in the two Councils in order to bring them on board with the EMC. For instance, the membership of the EMC has been expanded to include the Lephalale Development Forum (LDF) two years ago; in turn, the LDF has created five working groups on local economic development, infrastructure and housing needs, social needs and challenges, labour and skills development requirements, as well as environmental sustainability challenges. The EMC is also considering adding SANCO, a national civic organization with strong roots in many local areas.

Action Plan 5.3: Develop a mechanism for Councilors to report back to communities and vice versa.

Findings of the Monitoring Mission: The original design of this Action Plan has not been successful, but alternative approaches have been tried, among which the most successful has been the Environmental Monitoring Committee. These should be pursued, even while maintaining the long-term goal of developing a bridge-building function for the Councilors to the communities.

Management reported that the EMC was implementing a communications strategy to broaden community liaison, participation and engagement. For instance, as part of the communication strategy, ward councilors have an opportunity to report back to communities and also receive feedback from them.

This, of course, has not succeeded, since no Councilors attend the EMC meetings. As with the prior element, the Bank should press for a two-track approach that would build alternative channels in the short term while still pressing for a strong interface with the Councils in the long-term. Management holds out hope for other approaches to raising environmental issues with the community, such as expansion of the Eskom-NGO Forum, public meetings with translation in traditional languages, and development of educational materials. The Monitoring Team explored each of these options.

The Eskom-NGO Forum, which addressed issues of national energy policy rather than focusing on Medupi, was created at the behest of former Eskom CEO. It was part of an initiative from the top level of Eskom to spark a more informed dialogue among stakeholders over the long-term choices faced by South Africa in the energy sector. It almost died in 2013 as a result of the NGOs' perception that Eskom hired security services to spy on them. It was revived in 2014 by a mutually-agreed agenda negotiated by an external facilitator. Its success in 2014 (acknowledged by a wide range of participants from both Eskom and NGOs) was attributed to the CEO and to the facilitator of the Forum, who worked collaboratively with NGOs to develop in-depth discussion of key issues. These "deep-dive" workshops covered a range of topics: energy planning in February, compliance in March, water issues in April, climate change in June, technologies and research in July, and externalities and pricing in August. The Forum, however, then ceased meeting, and may not have a future given the changes in Eskom leadership and the termination of the contract of the facilitator. Whether or not it is re-established is only marginally relevant to Medupi, since the principal NGO participants were those focused on national policies rather than problem projects.

The question of public meetings organized either by the EMC or another convening organization has reached a crossroads as well. The existence of the EMC is a requirement under the construction license given to Eskom, and Eskom has given notice that it will, at a minimum, be given a new scope and amended membership if it continues. The proposed design for the EMC under the draft OEMP is deficient such as very limited membership, and token allocation of two seats, one each for a community representative from Lephalale and Marapong. In order to capitalize on the positive steps taken by the current EMC, the membership should be expanded, it should be given enhanced functions, retain an independent chairperson, and include the local voices of those with fresh approaches to a "green economy." Finally, it should be noted that the EMC is not intended to be a substitute for the ineffective "grievance mechanism." Bank Management needs to engage in forward thinking to:

- (1) Recognize the important value of the EMC and find ways to sustain it operating at arms-length from Eskom; and
- (2) Increase its effectiveness by expanding its membership.

Finally, the Monitoring Team had discussions about the educational outreach from Medupi staff into the schools and various forums in the nearby towns to increase interest in and improved practices for the environment. The work should be commended, particularly the accomplishments of the environmental management staff at Medupi along with the independent environmental officer's staff. The pilot efforts to date should be institutionalized in the OEMP as a long-term service by Eskom to the community where it has made an investment commitment for decades to come.

Action Plan 5.4: The EMC to finalize and implement its Communications Strategy to create awareness about its functions and activities.

Findings of the Monitoring Mission: While the EMC is improving its communications strategy, and should continue to do so, this Action Plan element should be seen by Management as a valuable “learning opportunity.”

While Management properly credits the EMC Chairperson with driving the improved communications outreach to the community (such as including simultaneous translation into all locally-relevant languages at meeting), current required action misses the point about community engagement: namely, that there is no final strategy because the approach to communications has to be adjusted constantly to reflect the rapid changes underway throughout this area. The community is not homogeneous, and the process of engaging with each segment requires a tailored approach and identification of key leadership elements.

Lessons can be learned from the communications task for both Medupi and other future Bank operations. When the FGDs are installed at Medupi beginning in 2021, the large-scale civil works will create a renewed need for labor and more collaborative relations with the community. One estimate provided to the Team was that FGD construction would increase the labor force by 4000 in all grades. By way of comparison, less than 1000 employees will be needed to operate the plant when operational. There is also a need to develop better tracking information on how it has carried out its operations and plans to do so in the future. The community has been massively affected by the presence of such a national-scale infrastructure project, and will continue to experience major impacts in the completion of construction, start-up and operational phases.

3.6 Desecration of Graves and other Heritage Issues

Action Plan 6.1: Engage Marapong community to reach an understanding and closure on the issue.

Findings of the Monitoring Mission: Management should be commended for getting this issue back on track towards resolution, with the hiring of qualified consultants to carry out a Phase 2 analysis of this issue. Closure, however, will only come with the development of mutually-agreed and tailored resolutions for affected families along with expeditious implementation. Attention from future supervision missions will need to be intensive to be confident that progress will continue to be made.

This issue, which involves traditional populations far more widespread than from Marapong, was highlighted in the compliance investigation by the IRM owing to the apparent willingness of Management to accept the premature closure of the issue by Eskom after a cursory phase one review of visible graves. Because most of the project development process, including the EIA and related consultations, had done little to include the traditional communities and their leaders, the project overlooked those people and their cultural heritage. In May 2014, at the instigation of the DEA and with leadership shown by the EMC, a task team was created with representation from the traditional chiefs, Eskom, key government departments, and those from the local communities with substantial claims that their ancestors were buried on the property now occupied by Medupi. Given the significant amount of fact-finding to be done by an independent authority, a firm was hired to review all that had transpired on this issue.¹⁵ Its conclusion was that the first review of these issues was inadequate to the task in shortchanging legitimate claims from local traditional peoples. The Monitoring Team did not receive a response from Eskom or the Bank about lessons to be learned from the inadequacy of the first survey of cultural sites. A second report based on extensive interviews and research is now to be written with all the facts about graves and proposals to address the families' concerns. That second report is modestly delayed as new family claims are uncovered.

While the Monitoring Team was on site, the Team organized a meeting of the three major chiefs along with families that have claims of grave sites. The consultant team conducting the heritage assessment also attended and presented to all attendees the status of their investigation in great detail. Different families had different proposals for addressing their sense of loss, such as the construction of a collective memorial where rituals might be carried out on a periodic basis, obtaining access to the plant site so occasional visits could be made to locations where family

¹⁵ Medupi Power Station Project – Eskom. Phase 2 Heritage Impact Assessment Review of Previous Heritage Assessment Reports for Medupi Power Station including Action on Graves Found at the Site Lephalale, Limpopo Province. 1st Draft Report. Heritage Consultants, 2 February 2015.

members are buried, provision of compensation where the power plant has built over the specific grave sites, and other ideas. The consultants concluded that there is no single way to redress the sense of loss, but did develop a list of options, tailoring responses to individual cases in order to bring closure to the sense of trespass by the project.

At the meeting, the chiefs asked for respect for the people who had inhabited the land and whose heritage was different from those who displaced them. It may be that the chiefs will need to be empowered to ensure lasting respect for the role of their peoples in the history of the community, and to ensure an appropriate memorial is built on the site. This might be accomplished through the establishment of a liaison or advisory committee involving traditional leaders to provide an ongoing bridge between the project and the original people. There is concern among the leaders and the families that they attend many meetings, but see no actions. Implementation of the recommendations of the consultants will require follow-up by the Bank, by Eskom, and by the relevant South African government agencies. ESKOM in particular may need to take decisions on how the sensitive issues arising from the unsatisfactory original handling of the graves situation can be rectified quickly.

Bank Management should be commended for fostering a more constructive approach to this issue. But supervision will be needed more than ever for the process of bringing full closure to this issue in a comprehensive and sensitive way. Decisions recommended by the heritage consultants will need support, and implementation that depends on Eskom and the community will need Bank leadership to ensure implementation. During the upcoming supervision missions, this issue should figure prominently for the Bank staff members in consultations with Eskom and the government, and the missions should be sure to include specialists in cultural heritage rights.

4. SUMMARY OF FINDINGS

The findings of the mission are summarized in the following Table.

Table 1: Summary of the findings of the Monitoring Mission

No.	Issue	Follow-up activities (Management Action Plan)	Findings of the Monitoring Mission:
1	Monitoring of the CEMP Implementation (Air Quality Monitoring)	Risk to Public Health due to Emissions - Action Plan 2.1: Continuous monitoring of Construction Phase Environmental Management Plan (CEMP) and compliance with the requirements of the various licenses to be issued under the CEMP.	Key steps remain to meet the requirements of the Action Plan. Broad concerns remain about the quality and comprehensiveness of the air monitoring systems. The real test of this action plan element will come with the onset of actual operations at the plant, projected to start with the first unit later in 2015.
2	Conduct of Project Supervision Missions	Action Plan 2.2: Reporting on the status of implementation of the project as follows: 2.2.1 Project Quarterly Progress Reports submitted to the Bank; 2.2.2. Frequency of Bank supervision missions; 2.2.3 Update of the Operational Phase Environmental Management Plan (OEMP).	The supervision of the Action Plan implementation on an annual basis by Management should be reconsidered as the power plant enters the operational phase. Issues that have not been fully resolved during construction will require much more rapid responses given the impact on people and the environment from an operating plant. There is special concern that the OEMP is not yet in final completed form despite the impending full operation of unit 6. The Team disagrees with the Update finding that “Following the June 2014 supervision mission, Management is satisfied with the progress being made in implementing various elements of the Action Plan.” Much greater urgency should be attached to addressing all of the Plan elements.
3	Regional Impact Assessments	Conduct further Regional Assessment of Coal Based Energy Projects between South Africa and Botswana to build on the work already done.	This task was delayed by several years, but has clearly not been completed. Management alleges that is now apparently making some progress. Meeting the requirements of the Action Plan will depend on the published results of the consultant. Separately, more attention needs to be given to the immediate region of the Medupi development in order to manage the cumulative effects on both air and water.

No.	Issue	Follow-up activities (Management Action Plan)	Findings of the Monitoring Mission:
4	Compliance with the Integrated Water Resources Management Policy.	Action Plan 4.1: Follow up with DWA on status of the Mokolo-Crocodile Water Augmentation Project (MCWAP-2) and development of the effluent re-use and groundwater use.	Progress has been made as promised on the Phase 1 augmentation of water from the Mokolo Dam to support operations at Medupi. It is much less clear how much progress has been made on Phase 2, given the need to identify long-term users and the Phase 2 water link with the timing of FGDs installation.
		Action Plan 4.2: Follow up on the DEA, DMR, DWA and DAFF Task Team decision on the sand mining issues.	After unnecessary delays, the suspension of sand mining in the Mokolo has been a positive step, but the community is impatient about receiving answer with regard to rehabilitation of the damaged areas of the river and of stronger analysis/planning for long-term sustainability of sand mining.
		Plan d'action 4.3 : élaborer et inclure dans l'OEMP un programme de suivi des eaux superficielles et souterraines requises pour la phase d'exploitation, basé sur les conditions relatives aux permis d'utilisation de l'eau.	The construction phase appears to have been a success in avoiding damage to the underlying water quality in the Medupi area. The operational phase is pending and will require much stronger oversight, given the massive storage and disposal activities just launched at the site. Fulfillment of this element in the Action Plan will be tested by the final version of the OEMP, with augmented groundwater test sites, and the actual, expanding operations of the plant.

No.	Issue	Follow-up activities (Management Action Plan)	Findings of the Monitoring Mission:
5	Consultation with the Communities	Action Plan 5.1: Expand the functions of the Medupi Central Information Office (MCIO) to also serve as a center where grievances can be reported and where Eskom can gain feedback from communities on the project activities.	The Medupi Central Information Office (MCIO) has turned out to be an ineffective local grievance mechanism thus far.
		Action Plan 5.2: Enhance participation of Ward Councilors in Environment Monitoring Committee (EMC) meetings by assisting them with transportation to the meetings.	This Action Plan element has not succeeded to date, even though a positive step has been taken by choosing meeting sites for the EMC closer to the people. But even that has not solved the challenge of non-participation by the Councilors.
		Action Plan 5.3: Develop a mechanism for Councilors to report back to communities and vice versa.	The original design of this Action Plan has not been successful, but alternative approaches have been tried, among which the most successful has been the Environmental Monitoring Committee. These should be pursued, even while maintaining the long-term goal of developing a bridge-building function for the Councilors to the communities.
		Action Plan 5.4: The EMC to finalize and implement its Communications Strategy to create awareness about its functions and activities.	While the EMC is improving its communications strategy, and should continue to do so, this Action Plan element should be seen by Management as a valuable “learning opportunity.”
6	Desecration of Graves and other Heritage Issues.	Action Plan 6.1: Engage Marapong community to reach an understanding and closure on the issue.	Management should be commended for getting this issue back on track towards resolution, with the hiring of qualified consultants to carry out a Phase 2 analysis of this issue. Closure, however, will only come with the development of mutually-agreed and tailored resolutions for affected families along with expeditious implementation. Attention from future supervision missions will need to be intensive to be confident that progress will continue to be made.

5. CONCLUSION AND NEXT STEPS

This report is being submitted to the Boards as requested. As provided for in the Rules of the IRM, monitoring such progress is integral to ensuring compliance with the policies and procedures of the Bank, and providing the affected stakeholders with the assurance that the Bank takes seriously its social and environmental commitments. The decision of the Boards in February 2013 stated that “The IRM Monitoring mission to South Africa will take place within 12 months following Management’s submission of the Report on the implementation of the Updated Management Action Plan to the Boards.”

The IRM considers the Monitoring mission a useful practice as the generating units in Medupi come on line. The IRM will include additional annual monitoring missions in its forward-looking work plans which it will undertake on the basis of the methodology approved by the Boards of Directors at their 13 February 2013 meeting and summarized on Page 2 of the present report (ADB/BD/WP/2012/12/Add.1/Rev.2, 13 February 2013). The IRM looks forward to assisting the Bank to ensure compliance with Bank policies and to enable the Medupi Power Project to become a model for responsible power development in Africa.

APPENDIX A: MANAGEMENT ACTION PLAN, UPDATED, SEPTEMBER 2014

AFRICAN DEVELOPMENT BANK GROUP



**UPDATE 3 ON THE PROGRESS IN IMPLEMENTING THE ACTION PLAN APPROVED BY
THE BOARD ON THE MEDUPI POWER PROJECT FOR INDEPENDENT COMPLIANCE
REVIEW**

September 2014

LIST OF ABBREVIATIONS

AEL	Atmospheric Emission License
AfDB	African Development Bank
AQMP	Air Quality Management Plan
CEMP	Construction Phase Environmental Management Plan
CRMU	Compliance Review and Mediation Unit
CSI	Corporate Social Investment
CSOs	Civil Society organizations
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DMR	Department of Mineral Resources
DWA	Department of Water Affairs
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMC	Environment Monitoring Committee
FGD	Flue Gas Desulphurization
GoRSA	Government of the Republic of South Africa
HIA	Heritage Impact Assessment
IRM	Independent Review Mechanism
JAC	Joint Advisory Committee
JTC	Joint Technical Committee
LEDET	Limpopo Department of Economic Development, Environment and Tourism
LiHRA	Limpopo Heritage Resources Agency
MCIO	Medupi Central Information Office
MCWAP	Mokolo and Crocodile River Water Augmentation Project
MES	Minimum Emission Standards
OEMP	Operations Phase Environmental Management Plan
ONEC	Energy, Environment and Climate Change Department
ORQR	Quality Assurance and Results Department
RESA	Regional Environmental and Social Assessment
RoD	Record of Decision
SAHRA	South Africa Heritage Resources Agency
SO ₂	Sulfur dioxide
TORs	Terms of Reference
WUL	Water use License

1.0 Introduction

Following complaints from two Requestors which were registered for compliance review by the Compliance Review and Mediation Unit (CRMU) in 2010, the Board, in July 2011 approved a compliance review of i) the alleged non-compliance by the Bank to its own climate change and clean energy development commitments; (ii) alleged inadequacy of environmental studies especially the analysis of health risks linked to Sulphur dioxide (SO₂) and mercury emissions and associated cumulative impacts and constrained access to water; and (iii) the alleged lack of adequate consultations with communities in the project area including on matters related to alleged desecration of ancestral graves. Following submission of a Compliance Review Report by the Independent Review Mechanism (IRM) Experts and Management's response on the Medupi Power Project, the Board approved, in February 2013, an Action Plan detailing actions for follow up by Management and Eskom to bring the project into compliance with applicable Bank policies which were a subject of the request. Management committed to using its regular supervision missions to monitor the status of the implementation of the Action Plan.

In line with that commitment, Management undertook another supervision mission, jointly with the World Bank, over the period 17-27th June 2014 and has prepared this third update detailing progress on Implementation of the Action Plan as informed by this supervision mission. This follows an initial submission of a Board Information Note in September 2013 and a subsequent second update on the Action Plan implementation following the supervision mission of November 2013.

This third progress update, compiled jointly by the Results and Quality Assurance Department (ORQR) and the Energy, Environment and Climate Change Department (ONEC) has been prepared to comply with the IRM Rules of procedure, which among others, provide that Management shall submit to CRMU copies of reports on the progress of implementation of any Management Action Plan submitted to the Boards and any monitoring reports on such implementation to the Boards or the President, as the case may be, for consideration, as often as required and in any event not less than once a year. The update highlights further progress that has been made by Eskom, and the Medupi Project in particular, to implement the Action Plan since the last supervision mission conducted over the period 12-19th November 2013. This update does not therefore seek to override the earlier submissions but simply provides further information on progress and actions that Eskom and the Medupi Project continue to take in implementing the IRM Action Plan together with other components of the project Construction Environmental Management Plan (CEMP) and licensing and authorization conditions.

This update has benefited from presentations made by Eskom and various agencies involved in the Medupi Project which provided status reports on the progress on various aspects including those relevant to the IRM Action Plan. The update also benefitted from the June 19-20th 2014 site visit and tour of the Medupi Power Plant to inspect a number of environmentally sensitive project components currently under construction, including, among others, the excess coal stockyards, the ash disposal site, waste collection yard, as well as the main raw water reservoir. The update has also been enriched by meetings with Departments of Public Enterprises, Environment, Water Affairs, the Chairperson of the Environment Monitoring Committee (EMC) and Earth Life Africa.

Following the June 2014 supervision mission, Management is satisfied with the progress being made in implementing various elements of the Action Plan. In line with the Bank support for use of country systems for environmental and social compliance and enforcement, Management notes the good level of

coordination between and among various Government and provincial agencies on follow up of various environmental and social aspects of the Medupi Power Project. Key elements of this national oversight and coordination include involvement of various national agencies notably the Department of Environmental Affairs (DEA), Department of Water Affairs (DWA), South African Heritage Resources Agency (SAHRA), Limpopo Heritage Resources Agency (LiHRA) and the Limpopo Economic Development, Environment and Tourism Department (LEDET) on various compliance issues. For instance on the issue of graves, a task team including DEA, SAHRA, LiHRA, Eskom and community representatives (Mr. Lazarus Seodisa and Mrs. Magoai Ntebogeng) has been set up to follow up on the issue and is to appoint an independent consultant to under the Heritage Impact Assessment (HIA).

Eskom and the Environmental Control Officer (ECO) as well as other relevant Government agencies continue to monitor implementation of the Construction Environmental Management Plan (CEMP) and other license and authorization conditions. The fact that the project retained its ISO 14001 certification based on its continued conformity to ISO 14001 certification requirements is testimony to these efforts. Progress on the specific Action Plan items and related actions observed and reported during the mission are detailed out in the subsequent narrative below.

2.0 Key issue: Risk to Public Health due to Emissions

2.1 Required Action (A): Continuous monitoring of Construction Phase Environmental Management Plan (CEMP) and compliance with the requirements of the various licenses to be issued under the CEMP.

2.1.1 Monitoring of the CEMP implementation

As required by the Record of Decision issued by DEA for the Medupi Project, Eskom continues to monitor various elements of the CEMP, including ambient air quality in and around the Marapong environs near Matimba power plant. Baseline ambient air quality data collected over the quarter October–December 2013, indicated compliance with national emission standards for a majority of the parameters monitored, with only two hourly exceedances for Nitrogen dioxide [ppb] and one for SO₂ [ppb] recorded, indicating that the Matimba power station emissions have little or no influence on air quality in the Marapong environs. These two parameters did not, however, record exceedances in the subsequent quarter January–March 2014, with the only exceedance being recorded once in the quarter being the daily PM₁₀ [mg/m³] standard.

Eskom and the independent Environment Compliance Officer (ECO) continue to monitor and implement other aspects of the CEMP and license and authorization conditions. Related actions observed and reported during the mission included, among others:

- All coal stockyards, including the strategic and excess coal stockyards and the ash dump are fully lined to avoid any possibility of contamination of underground water. The coal stockpile liner that developed problems was being replaced with a concrete base, further demonstrating Eskom's commitment to ensure measures are taken to prevent future ground water contamination once the plant becomes operational.
- Construction of the clean and dirty water dams has been completed as support infrastructure for the project's zero discharge policy.

- Continuous noise monitoring by contractors has reported no exceedances in last months.
- Dust monitoring continues across 20 dust monitoring stations with no exceedances of the National Dust Control Regulations recorded.
- An improvement in Lost Time Injury Rate (LTIR) from 0.17 in 2013 to 0.15 in 2014 was reported against a target of 0.36.
- The ECO continues to closely monitor project compliance to environmental and social requirements and issues monthly environmental reports highlighting various incidents of non-compliance for action by the relevant contractors. Inadequate waste management was among the major issues raised by the ECO reports for corrective action. Sample monthly reports submitted by the ECO for the period April–June 2014 are attached.
- The Water Use License (WUL) amendment application for changes to dams and Excess Coal Stockyard (ECSY) and ash dump have been submitted for approval.
- The EIA for the dams (Ash dump/ECSY) is underway with the final report submitted to DEA for approval and authorization is expected in early July 2014.

2.1.2. Compliance with the New Emission Standards

As an integral part of the air emissions management for the Medupi Power Station, the project was designed to retrofit the Flue Gas De-sulphurization (FGD) technology during the first general overhaul of the respective generating units, six years after the commercial operation of each respective unit. However, because of the anticipated delays in FGD installation schedule occasioned by the delays in the plant construction and commissioning schedules, Eskom, in March 2014, applied for postponement of its plant compliance with the Minimum Emission Standards (MES) published by the DEA in April 2010 on account of the fact that before installation of the FGD technology, the Medupi power plant will not be able to comply with SO₂ emission standards in April 2015 and will not comply in April 2020 for most of its power plant. Eskom has informed Management that its application for postponement of compliance to the MES is being handled by the DEA. The MES have two broad requirements, which are limits for ‘existing plants’, (which come into effect in 1 April 2015), and more stringent ‘new plant’ limits, which must be complied with by 1 April 2020. For Medupi, both sets of standards apply.

In the meantime, Eskom has finalized preparing the scope of work and Terms of Reference (TORs) for conducting a comprehensive Environmental Impact Assessment (EIA) which will consider the environmental and social impacts of various aspects of the FGD system. Eskom’s Board has also approved the development budget for the FGD project and project development is underway. Based on the current construction schedule for Medupi, FGD installation would start in 2021 for Unit 6 and 2023 for Unit 1. Given the delays in commissioning of generating units, Eskom has submitted a revised FGD progress report with a revised schedule, as required by the project agreement. Depending on the actual completion dates for the units, the six units would emit unabated SO₂ emissions for a maximum of one year for a conservative schedule, or up to three years for an optimistic schedule. However, Eskom has plans for an interim reduction of SO₂ emissions, including through the use low Sulphur coal during the first six years of generation. This would result in Medupi achieving SO₂ emissions that are below the “existing plant” SO₂ limit of 3,500 mg/Nm³ prior to the installation of FGD. Management is to be kept updated on further details on the feasibility of obtaining this lower sulfur content coal and assured delivery studies, among others. Eskom will also be studying other technical solutions for an interim reduction of SO₂ emissions prior to the

installation of the FGD systems at Medupi and agreed to share the results of the study with the funding agencies by end-September 2014.

Because the approval of the project was contingent upon the project having to comply with the Government of the Republic of South Africa's (GoRSA's) emission standards, Management advises that Eskom's application seeking postponement for Medupi power station from application of new stringent Minimum Emission Standards (MES) will require close collaboration and open communication between the financiers and Eskom to ensure that the process and outcomes are in conformance with the applicable regulations and highest standards of environmental sustainability. Management will continue to closely monitor progress on this issue.

2.1.3 Ground water monitoring

Eskom also continues to monitor ground water quality at six pairs of boreholes at the Medupi site, which are located mostly on the periphery of the site with average groundwater levels between 5-23 meters below ground level, with ground water quality results from sampling in September 2013 (as results of sampling done during April 2014 were not available) indicating no change from previous baseline results which showed marginal to poor water quality not suitable for human consumption. Eskom reports that many bore wells dry up during the dry season and recharge only during the rainy season. There is no indication that construction of Medupi is impacting the groundwater quality, which is generally poor (particularly in MBH04S) due to natural causes. Eskom considers monitoring of pre-operational groundwater quality essential for future impact assessments and therefore wants to continue monitoring the inactive boreholes. Management agrees with Eskom's plans to reinstate the inactive monitoring boreholes and drill additional ground water monitoring boreholes to generate a comprehensive baseline before the operational phase of the project.

2.2 Required Action (B). Reporting on the status of implementation of the project as follows:

2.2.1 Project Quarterly Progress Reports submitted to the Bank.

The project continues to submit quarterly progress reports on schedule, with the last submission being for the quarter January – March 2014 (attached). In addition to the quarterly progress reports, the ECO continues to submit monthly Environmental Compliance Reports detailing compliance actions taken and issues for follow up by relevant contractors on the project.

2.2.2 Frequency of Bank supervision missions

The Bank has continued to conduct its supervision missions on schedule with the very last one conducted over the period 17-27th June 2014 and informed the preparation of this report. A separate Aide memoire for the mission has been prepared and details other project issues, over and above those relevant to the IRM Action Plan.

2.2.3 Update of the Operations Phase Environmental Management Plan (OEMP)

During the June mission, it was reported that Eskom will provide a comprehensive update on status of the OEMP during the next supervision mission.

3.0 Key issue: No Regional Impact Assessment

3.1 Required Action: Conduct further Regional Assessment of Coal Based Energy Projects between South Africa and Botswana to build on the work already done.

During the June Mission, the DEA presented progress on the Regional Environmental and Social Assessment (RESA) study to be jointly undertaken by the Governments of Botswana and South Africa. The study aims at assessing the potential cumulative economic, social and environmental impacts of coal-fired power generation stations and coal mines along their common border over the next 20 years and recommend specific management measures for mitigating or curtailing the negative impacts and enhancing the benefits. The results of the study are also expected to inform the Air Quality Management Plan (AQMP) for the Waterberg-Bojanala National Priority Area and build on the existing Waterberg Environmental Management Framework (EMF) of the Waterberg area.

The RESA has been designed to focus on the following issues: air quality impacts on human health and safety; impacts on surface and ground water resources; economic, social, climate change and biodiversity impacts as well as impacts on the cultural and heritage resources. The study will also recommend policies for mitigating or reducing adverse impacts and enhancing the benefits; and identify parameters for long – term monitoring.

This far, the following milestones have been achieved under the RESA initiative:

- A consultant (Mott McDonalds) to undertake the RESA study was selected in March 2014,
- An institutional structure to guide and ensure the smooth implementation of the RESA study has been established drawing representation from institutions from the two countries and comprising a Joint Advisory Committee (JAC) for policy level interaction and guidance, a Joint Technical Committee (JTC) for technical level issues and a secretariat established in both South Africa and Botswana to coordinate administrative and logistical support for the study. Agencies and Departments represented on the RESA Joint Advisory Committee and Joint Technical Committee (JAC/JTC) include the Departments of Environmental Affairs, Water Affairs, Energy, Mineral Resources, Health, Water, Eskom, Chamber of Mines and Council for Geoscience. The JAC/JTC has also recommended that other government departments be invited to serve on the JTC, including the Department of Agriculture, Forestry and Fisheries; Department of Social Development; Department of Economic Development; Department of Cooperative Governance and Traditional Affairs; Department of Rural Development and Land Reform and the Chamber of Mines of South Africa.
- Analysis of cumulative impacts was completed in March 2012,
- Emission inventory for SO₂, NO_x and PM has been completed,
- A draft baseline assessment report for air quality in the region is soon to be completed by end of June involving air emissions inventory covering various sources including, among others, residential fuel burning, mining sources, vehicle emissions, and biomass burning (using aerial photography). This baseline assessment will be facilitated by data collected from the air quality monitoring stations of DEA, Rustenburg, Eskom, Sasol and NWP. The importance of establishing the baseline air quality was emphasized as it would make it possible to evaluate impacts attributable to the Medupi project once it becomes operational.

The study will also involve dispersion modeling which is to be completed by mid-June (Industrial, mining, domestic & biomass burning).

4.0 Key issue: Compliance with the Integrated Water Resources Management Policy

4.1 Required Action i): Follow up with DWA on status of the Mokolo-Crocodile Water Augmentation Project (MCWAP-2) and development of the effluent re-use and groundwater use.

During the June mission, the DWA communicated that following the debottlenecking step 2, which was achieved on 13th October 2013, the Department of Water Affairs (DWA) is now in position to supply all water needs of Medupi Power Project (without FGD) upon commissioning as well as to other Mokolo and Crocodile River (West) Water Augmentation Project 1 (MCWAP1) water users.

It was further reported that Phase 1 of the Mokolo Crocodile Water Augmentation Project (MCWAP 1) will start delivering water in January 2015 and will meet the needs of the six generating units and three FGDs. Phase 2 is awaiting final approval of the water pipe size for the bulk raw water transfer scheme from Crocodile River to the Lephalale area by the Department of Water Affairs on August 15, 2014. Based on this date, the construction schedule indicates award of construction contract in May 2016 and completion by February 2020. Water from this phase would meet the water requirements of the last three FGD units, which would be installed during 2022-2023. The mission requested DWA to inform the funding agencies of the decision.

With regard to MCWAP2, once funding strategy is confirmed by the Fiscal Liability Committee of the National Treasury (expected by 1st August 2014), project sizing could be finalized and the Minister of Water and Sanitation can approve the project scope which will trigger commencement of final design activities.

Other key milestones reported included:

- Completion of the pump station at Mokolo dam expected 22nd September 2014,
- Completion of pipeline to Medupi expected 7th January 2015,
- The EIA for MCWAP2 is to commence soon (1st July 2014) and is to be completed by 30th June 2015. However, scoping for this study has already been completed to identify the specialist studies required as part of the EIA. However, MCWAP2 was still contingent upon commitment by off-takers since signed Water Supply Agreements are required before funding can be secured.

4.2 Required Action ii): Follow up on the DEA, DMR, DWA and DAFF Task Team decision on the sand mining issues.

With regard to the sand requirement for completion of works, the main civils contractor currently has 2304.53 m³ at Batch plant A and 21012.21m³ at Batch Plant B, making a total of 23316.74m³ of river sand. This material was acquired when it was legally available more than a year ago. Two batch plants have also already been decommissioned due to the decreased need for concrete (only re-access work remains) and no additional sand needs to be purchased. If the need arises in future of additional mass concrete works, the main civils contractor will look into other options of obtaining batched concrete from external sources.

A discussion with officials from DEA Enforcement Division indicated that currently all sand mining operations have been stopped with 31 sand miners issued with compliance notices to cease all operations. A working group forum comprising relevant Government departments has also been established with a task force dedicated to specifically look into the issue of sand mining and plans a blitz inspection to assess the status and impact of sand mining operations along the Mokolo River and as part of further enforcement action to address any illegal sand mining activities that may still be ongoing. The working group, in consultation with LEDET, also plans to commission an assessment of the impact of sand mining operations on, among others; the river ecology, water balance issues and draft TORs for the assessment have already been prepared. The report of the assessment is expected by August this year.

To ensure that the sand mining operations are in compliance with national requirements, Management recommends that Eskom follows up on the outcome of the Inter-Ministerial Task Force set up to handle the issues of sand mining considering that it is important to ensure that sand mining operations linked to Eskom's requirements comply with national legal requirements. It was also important for Eskom to take interest to establish what damage may have occurred to private properties, quality of water and to the river in general as a consequence of sand mining activities which have been linked to Eskom sand demand over the last 2-6 years.

4.3 Required Action iii): Develop a monitoring program of surface and groundwater for the operation phase based on the conditions of the water use licenses and include it in the OEMP.

As reported during the previous Action Plan update, the project does have a monitoring matrix as part of its ISO 14001 EMS that includes parameters and frequency of testing required to monitor ground and surface water quality. This will continue once Generation takes over.

In addition, Eskom is currently in the process of expanding the groundwater monitoring network to include additional monitoring points at potential pollution sources such as the coal stockyard, workshops and ash dump/excess coal stockyard. The conceptual modelling has been completed by the specialist, whose recommendation has been submitted to the Department of Water Affairs for acceptance prior to installation.

5.0 Key issue: Inadequate Public Consultation with Communities

5.1 Required Action (i): Expand the functions of the Medupi Central Information Office (MCIO) to also serve as a center where grievances can be reported and where ESKOM can gain feedback from communities on the project activities.

Consistent with the reports received during the November 2013 mission, the functions of the Medupi Central Information Office (MCIO) and the five satellite offices (Seleka, Marapong, Thabo Mbeki Area, Abbotspoort and Shongoane) continue to provide community liaison and handling of community related issues and procurement information. The MCIO continues to serve as the first point of contact and for dissemination of project information to various stakeholders including but not limited to, suppliers, local media and the public in general, including providing regular responses to general queries, and facilitation of local labor recruitment, and receiving complaints on various issues such as dismissals, which are recorded in the issues logs. These centers also continue to provide Eskom with the opportunity to get feedback from communities on the project activities through community meetings, notice boards, popular public platforms, and bulk SMS facility.

Management has also taken note of the interrelatedness in the activities of the various Medupi outreach initiatives (MCIO, EMC, CSI, and Medupi Leadership Initiative (MLI) on Employment/Training programs) and recommended that these various teams working at Medupi (EMC, CSI, and Employment/Training) take stock of how they can provide information to the community in an integrated manner and make use of the various avenues established. In this regard, and considering the importance of these outreach initiatives in creating awareness about project activities, Management upholds the recent mission recommendation that the CSI team be invited to make a presentation at the EMC meetings, particularly on the issues of health monitoring; job creation and other social investments currently underway.

5.2 Required Action (ii): Enhance participation of Ward Councilors in Environment Monitoring Committee (EMC) meetings by assisting them with transportation to the meetings.

As an independent organ set up to guide and monitor environmental management for the Medupi project, the EMC continues to explore appropriate ways to ensure effective participation of local community representatives and Councilors in its activities. To overcome the challenge of access to meetings, the EMC now holds regular public meetings as an integral part of its regular EMC quarterly sessions and in locations within reach of community representatives. Examples include the 11th March 2104 public meeting held at the Traditional Council Offices, Shongoane and another held on 10th June 2014 at Marapong.

5.3: Required Action (iii): Develop a mechanism for Councilors to report back to communities and vice versa.

The Medupi project has employed a number of mechanisms to ensure that communities are informed and engaged on project related issues that may affect them. These mechanisms include, among others;

- The EMC which holds regular meetings on a three tier arrangement where members begin with a site visit, followed immediately by the regular EMC meeting and subsequently followed up the next day with a public meeting to give opportunity to the communities in surrounding areas to participate. The last meetings were held on 10th December 2013, 23rd January 2104 (special meeting on air quality to discuss, among others, Eskom's application for postponement of compliance to air emission standards), 11th March 2104 (public meeting at the Traditional Council Offices, Shongoane) and 10th June 2014 at Marapong.
- These EMC meetings have also solicited participation of Civil Society Organizations (CSOs) such as Earth Life Africa and Greenpeace and have provided opportunity for increased interaction with regulatory authorities such as DEA, DWA, LEDET, LIHRA and Lephalale Local Municipality (LLM) which attend as observers. Management urges Eskom to continue engaging with civil society to regularly share information on progress with respect to their environmental and social commitments and regulatory requirements.
- As recommended during the previous mission, Eskom has also enhanced its proactive engagement with civil society through establishment of Eskom-NGO forum that meets quarterly with the major international and local NGOs to discuss key environmental issues and share information on progress with respect to various environmental commitments and regulatory requirements.

- Within the framework of implementing the EMC Strategic Framework developed in 2013, the EMC has also developed education and awareness materials and has supported the environmental and anti-litter campaign in Lephalale Municipality. The EMC has also enhance public participation through holding public meetings in rotation between Marapong and Shongoane with interpretation services now available at each Public Meeting. Feedback forms are distributed at each meeting and local press articles are published to enhance visibility of the EMC and its activities.

5.4: Required Action (iv): The EMC to finalize and implement its Communications Strategy to create awareness about its functions and activities

As confirmed by Ms. Tanya Venter, the EMC Chairperson, the EMC's role with its 12 members has evolved to include facilitation of communication and cooperation among local stakeholders, Eskom, local municipal authority, Department of Environment Affairs, Department of Water Affairs and other local government agencies represented through local Councilors and village chiefs. The mission was informed that over the last 2 years the EMC has organized more than 30 meetings including public consultation meetings, and is now considered as a convenient platform to raise and objectively discuss key environment and social issues relating to Medupi project and beyond. Within the framework of the EMC Communication Strategy:

- The EMC announces its meeting through local newspapers. On average it organizes 4-5 meetings every year plus 4 public consultation meetings at different locations within the impact zone of Medupi project. There is room to improve participation of local people, and to utilize the satellite centers established in local communities for provision of information about the EMC. Local councilors, have participated in the meetings, and translation to local language has been provided.
- EMC's credibility is enhanced by the fact that it is led by an independent Chairperson, which has given authority to examine and provide recommendations within the scope of Medupi project. Most issues raised at the EMC relate to employment opportunities or skills enhancement, which is beyond the scope of its mandate. Eskom will invite its executive in the next EMCs to make presentation on Corporate Social Responsibility activities.
- Presence of DEA, often represented through Environmental Compliance Officer (for Medupi), and representatives of provincial government has resulted in follow up environment issues that are beyond the physical boundaries of the Medupi project, such as sand mining issue in upstream stretches of Mokolo river.
- EMC prepares minutes of the meeting with clear actions, the progress of which is examined on the first day of the subsequent EMC meeting.
- Key environmental issues include issues related to Water supply for FGD; Postponement of compliance with new emission standards and its impact on community living in Marapong; and degradation of river due to sand mining.
- EMC has organized special public meetings in last 6 months to discuss specific subjects (as above), inviting experts and relevant government department to hear the concerns directly and provide response. For example, a special EMC public meeting was organized on 13 August, 2013 to discuss sand mining issues, where presentation were made by senior officials of the Department of Water Affairs, and further actions were agreed to be taken up in order to address the concerns raised. Similarly a special public consultation meeting was organized on the Grave Heritage issues (raised by some community members), where the DEA agreed to follow up the recommended actions. A presentation highlighting key elements of the communications Strategy was availed to the Bank for Information.

6.0 Key issue: Desecration of Graves and Land Claims

6.1 Required Action: Engage Marapong community to reach an understanding and closure on the issue

The DEA, the South Africa Heritage Resources Agency (SAHRA), Eskom and the Lephalale Municipal Government have continued to engage with the affected community in Marapong with a view to seek closure on the outstanding matters on the issue of graves. The DEA reported that an all-inclusive meeting took place on 29 May, 2014 at the African Development Bank (AfDB) premises in Pretoria chaired by the DEA. Present at the meeting were the AfDB, DEA, representatives of the affected families, SAHRA, LiHRA, NCC and the ECO for the Medupi project, Eskom Medupi, and officials from Eskom Head office. The meeting sought to establish an agreed plan of action which will facilitate reaching a closure on the matter in a way agreeable to all parties.

Based on the recommendation from SAHRA, an agreement was reached that a heritage assessment process should be followed whereby terms of reference shall be developed and an independent consultant hired to carry out another Heritage Impact Assessment (HIA). The meeting further agreed that a task team be put in place led by DEA with membership from SAHRA, LiHRA, Eskom, Families' Representative(s) and the Medupi ECO. The following actions were endorsed by the meeting:

- a. Heritage Impact Assessment (HIA) be undertaken on Eskom owned land related to the footprint of Medupi to validate the complaints lodged, at Eskom's cost.
- b. DEA play the role of coordinating the process to undertake the heritage assessment.
- c. A task team made up of representatives from DEA, SAHRA, LiHRA, Eskom, Medupi ECO and Families' representative(s)) draft a scope of work for the HIA. The project ECO will be part of the task team and they will be afforded an observer status.
- d. Task team to meet on the afternoon of 10 June 2014 (after the public Medupi EMC) to draft the scope of the HIA.
- e. SAHRA and LiHRA to draft an initial scope of work and circulate before 10 June so that this can be used as the basis for finalizing the scope of work.
- f. LiHRA, with assistance from Medupi Eskom, to engage with Families to ensure appropriate representative(s) to sit on Task Team are identified.
- g. Eskom Medupi to determine the commercial process and provide feedback on expected process and timeframes at the meeting of 10 June.

The Draft scope of work shall be presented by 26 June 2014 and the Independent Consultant shall commence with the study by 30 August, 2014. The study is expected to be undertaken over a period of 3 months and the report shared with all interested parties by November, 2014.

Management remains committed to working closely with Eskom, SAHRA, LiHRA, and the Lephalale Municipality in engaging Marapong Community to reach an understanding and reach closure on the issue of the gravesites.

7.0 Conclusion

With the overall completion of construction of the plant expected to be December 2017, and with the start of commercial operation of the last Unit in September 2018, 3½years behind the original scheduled completion date, Management observes that the progress detailed above in addressing the issues in the IRM Action Plan has in no way been affected by the plant construction delays since the Action Plan items under current implementation address environmental and social issues relevant to the Construction phase Environmental Management Plan. Management continues to receive regular monthly updates from the Environmental Control Officer which is testimony of the continued oversight by the DEA to ensure that Eskom is compliant with national requirements and license conditions as the construction phase progresses. Through close supervision by the ECO and Medupi's own dedicated team of environmental and social staff, areas identified as requiring corrective action are identified for timely remedial action.

Management commends Eskom for continuously looking for opportunities to enhance engagement with stakeholders regarding its activities and associated impacts (both positive and negative), such as the establishment of a high level "Eskom-NGO Forum" in early 2013 to allow a more structured and regular engagement with, amongst others, environmental Non-Governmental Organizations (NGOs). Management considers this important in broadening outreach on project related and broader development issues that concern CSOs and the public in general.

Management also acknowledges Eskom's efforts to reach out to the communities through its Corporate Social Investment (CSI) programs, the Medupi Leadership Initiative (MLI) and other initiatives that provide training for skills development, employment creation and empowerment of youth and women in project areas in and around the Medupi Project area as well as provide social amenities through the Social Infrastructure Rehabilitation programs (such as rehabilitation of Seleka Hall and Traditional Offices; Olifantsdrift Primary School; and Intereleng Creche, among others. The provision of a Medupi Paediatric bus has enabled primary school children in and around the Medupi project site to access health care services which include eye testing and provision of spectacles to school children, general health and dental care for children in primary schools around Medupi power station in Seleka, Abbotspoort, Shongoane and Marapong.

Annex 1

List of People Met

Eskom

1. Mr. Roman Crookes, Medupi General Manager
2. Ms. Judy Raphael, Funding Execution Treasury
3. Ms. Sincedile Shweni, Funding Execution, Treasury
4. Ms. Gertrude Molokoane, Loan Management Treasury
5. Ms. Marna Botes, Loan Management Treasury
6. Ms. Emile Marell, Environmental Manager, Medupi Power Plant
7. Mr. Ernest Dlamini, Project Manager, Majuba Rail Project
8. Ms. Esther Appleyard, Environment, Majuba Rail Project
9. Mr. Dave Lucas, Environmental Specialist
10. Mr. Anville Rhode, Manager: Environment & Assurance
11. Mr. Michael McBride, Senior Advisor, Financial Evaluations
12. Mr Alistair Kennedy, Construction, Medupi Power Station Project
13. Mr Gerhard Venter, Unit Delivery Manager, Medupi Power Station Project
14. Mr Quinton Symms, Project Manager (Boiler), Medupi Power Station Project
15. Mr Piter Bresler, Control and Instrumentation, Medupi Power Station Project
16. Mr Antonie Coetzee, Control and Instrumentation, Medupi Power Station Project
17. Mr Riem De Beer, Project Engineering Manager, Medupi Power Station Project
18. Ms. Paula Benites
19. Mr. Y Singh
20. Ms. Deidre Herbst
21. Mr. Leomard Vo Walt
22. Mr. Ian Midgley
23. Mr Bernard Petlane
24. Mr K. E langerman
25. Mr. J Bore
26. Mr. Keith London

National Treasury

27. Mr. Henry Malinga
28. Mr. Mothushi Moifo
29. Mr. Themba Zulu
30. Ms. Nandi Mkungwana

Department of Public Enterprises

31. Mr Lesego Molatlhwe

Department of Environmental Affairs

32. Mr. Stuart Mangold, Senior Policy Advisor: Africa and Bilateral Engagements

Department of Water Affairs

- 33. Mr. Ockie van den Berg, Chief Engineer: Options Analysis North
- 34. Mr Jaap

ECO

- 47. Susan Slabbert, Lead Environmental Control Officer

Limpopo Heritage Resource Authority

- 48. Donald Lethole, LIHRA Manager
- 49. Noel Nemauluma, LIHRA Committee Member

ANNEX B

LIST OF PEOPLE MET DURING THE IRM MONITORING MISSION

I. MEETING AT TREASURY DEPARTMENT

Treasury Department Representatives

1. Nandi Mkunqwana, DD, Treasury
2. Victor Luvhengo
3. Marna Botes

II. MEETING AT THE DEPARTMENT OF PUBLIC ENTERPRISES

Department Representatives

- | | |
|-----------------------|----------------------|
| 1. Mrs Andretta Tsebe | Director Energy, DPE |
| 2. Reluflhe Nicholas | DPE |
| 3. P. Ndou | DPE |
| 4. A. Ramyhylu | DPE |

III. MEETING AT MINISTRY OF ENVIRONMENTAL AFFAIRS

Representatives of the Departments of Environmental Affairs, Water Affairs and ESKOM

- | | |
|------------------------|---|
| 1. David Lucas | Corporate Specialist, ESKOM |
| 2. Werner Esson | OEA |
| 3. Phillemon Shibambo | Act Deputy Director, Enforcement, DEA |
| 4. Migel Adams | CD Enforcement, DWA |
| 5. Thuli Mdluli | Chief Director, DEA |
| 6. Sabelo Malaza | Chief Director, IEA, DEA |
| 7. Ockie van den Berg | Acting Director: Options, Integrated Water, DWA |
| 8. Ian Midgley | Chief Consultant PED (Water), ESKOM |
| 9. Sonmbog Bapela | DD, DEA |
| 10. Victor Naobeni | DD, National Treasury |
| 11. Wiseman Rikhotso | DD, DEA |
| 12. Felicia Sono | Senior Advisor, Environmental Management, ESKOM |
| 13. Nketu Lesjane | DD, DEA |
| 14. Gilbert Mosyppe | Policy Analyst, Int. Gov., DEA |
| 15. Milicent Sdomans | Director, SID |
| 16. Mohil Singh | Environment, ESKOM |
| 17. Ms Geronde Molokwa | Loan Management, ESKOM |

IV. MEETING WITH CIVIL SOCIETY ORGANIZATIONS

Civil Society Organizations

- | | |
|------------------|--|
| 1. Ferrial Adam | 350 Africa |
| 2. Nicola King | 350 Africa |
| 3. Melita Steele | Greenpeace |
| 4. Godfrey Phiri | Right to Know Campaign (R2K) |
| 5. Martha Mokate | South Africa Electricity Crisis Committee (SECC) |

V. MEETING AT THE MEDUPI POWER PLAN

Staff from ESKOM, Medupi Power Station Project

- | | |
|---------------------------|--|
| 1. Mr Alistair Kennedy | U5-1 Construction Manager |
| 2. David Lucas | Corporate Specialist |
| 3. Mr Emile Marell | Environmental Manager |
| 4. Mr Dovhani Mudzielwana | Senior Advisor, Environmental Management |
| 5. Ms Susan Slabbert | Lead Environmental Control Officer |
| 6. Ms Kerry Symms | Acting HSE Manager |
| 7. Mr Patrick Seloba | Senior Advisor, Stakeholder Management |
| 8. Ms Geronde Molokwa | Loan Management |

VI. MEETING AT LIMPHALALE MUNICIPLITY

Counsellors

- | | |
|----------------------------|----------------------|
| 1. Louisa Shongwe, LLM | Counsellor |
| 2. Massela Eim, LLM | Counsellor |
| 3. France Mawai, LLM | Counsellor |
| 4. Christina Matshaba, LLM | Counsellor |
| 5. Joyce Monyemoratha, LLM | Counsellor |
| 6. William Muklokowa, LLM | Counsellor |
| 7. Hlapa Joshua, LLM | Manager, Environment |

Staff from ESKOM

- | | |
|----------------------------|--|
| 8. Dave Lucas | Corporate Specialist |
| 9. Mr Emile Marell | Environmental Manager |
| 10. Mr Dovhani Mudzielwana | Senior Advisor, Environmental Management |

11. Geronde Molokwa	Loan Management
12. Ms Susan Slabbert	Lead Environmental Control Officer
13. Mr Patrick Seloba	Senior Advisor, Stakeholder Management

VII. MEETING WITH LOCAL COMMUNITIES AT MEDUPL, DAY 2

Traditional Leaders, Stakeholders

1. LM Langa,	Chief ABBOTSPPOORT
2. Monene Johanen,	Counsellor ABBOTSPPOORT
3. Ms Caroline Hlako	Council Member, Seleka Traditional Council
4. Mr James Moloantoa	Council Member, Seleka Traditional Council
5. Mr Daniel Molefe	Council Member, Mokuruanyane Traditional Council
6. Mr Johannes Monene	Council Member, Mokuruanyane Traditional Council
7. Mr Mackson Majadibodu	Council Member, Shongoane Traditional Council
8. Ms Anna Motshegoa	Council Member, Shongoane Traditional Council
9. Mr Dr KL Seodisa	Representative, Marapong Aggrieved Families
10. Rosinah Rasereka	Pensioner, Pretoria
11. April Selema	Pensioner, Marapong
12. James Lebudj,	Ranger MSKRAA, Marapong
13. Reuber Kekara	Ranger MSKRAA, Marapong
14. Martha Magliscis	Marapong
15. Susan Slabbeite	Lead ECO, NCC
16. Kara K.R.	Family Representative
17. Annie Tshoke	Pensionaire, Pretoria
18. Catrina Liwala	Pensionaire
19. Steven Sibanyarr	Marapong
20. Norah Magwai	Pensionaire
21. Mutai Magwai	Chiarperson for women Marapong
22. Caroline Molokoanne	Pensionaire Marapong
23. Josiphina Mushegwai	Pensionaire Amaspool

Family Representatives

24. Sinon-Mogotsi,	Family Representative, Marapong
25. Francina-Malcau	Family Representative
26. Mr DS Letsebe	Representative, Marapong Aggrieved Families
27. Mr Steven Tibenyanne	Representative, Marapong Aggrieved Families
28. Mr Kekana	Representative, Marapong Aggrieved Families

Others

29. LP Molokomme	Administrative officer SELEKA Trad. C.
30. E.M. Masryane	Seka Trad. C.
31. SD Leola	Petionnaire

- | | |
|--------------------|---|
| 32. Matodzi Sicidi | Head Consultant and project manager Mbozho Consulting |
| 33. Edward Matenga | Senior Archaeologist, Mbozho Consulting |

VIII. OTHER MEETINGS

Individual stakeholders

1. Ms. Susie Brownlie, Consultant, Via Tele Conférence
2. Requestors

Representative of WRP Consulting Engineers (PTY) LTD

1. **Mr. Manie Maré, Divisional Director - WRP Consulting Engineers (Pty)Ltd**
2. Mr. Pieter van Rooyen

Chairperson of the Environment Monitoring Committee

1. Ms. Tanya Venter

Limpopo Heritage Resources Agency

1. Mr. Donald Sithone
2. Mr. Matodzi Silidi

IX. STAFF FROM THE AFRICAN DEVELOPMENT BANK WHO JOINED THE PANEL IN MOST OF THE MEETINGS

- | | |
|------------------------|---|
| 1. Mr Engedasew Negash | Manager for Energy Division, East and Southern Africa |
| 2. Mr Noel Kulemeka | Chief Socio-Economist |
| 3. Mr Farai Kanonda | Chief Investment Officer |