



MOOI MGENI TRANSFER SCHEME PHASE 2 (MMTS-2)

[DEA Reference Number: 12/12/20/220]



MONTHLY ECO REPORT



MAY 2011



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TABLE OF CONTENTS

TITLE AND APPROVAL PAGE	I
TABLE OF CONTENTS	II
LIST OF ACRONYMS & ABBREVIATIONS	V
1 INTRODUCTION	1
2 ECO MONITORING SESSIONS FOR MAY 2011	3
2.1 Monitoring Event 05 – 06 May 2011	3
2.1.1 Overview	3
2.2 Monitoring Event 06 – 12 May 2011	4
2.2.1 Overview	4
2.2.2 Summary of Monitoring Categories	5
2.3 Monitoring Event 07 – 20 May 2011	5
2.3.1 Overview	5
2.3.2 Summary of Monitoring Categories	6
2.4 Monitoring Event 08 – 24 May 2011	7
2.4.1 Overview	7
2.4.2 Summary of Monitoring Categories	8
2.5 Monitoring Scores for May 2011	8
2.6 Issues and Complaints	9
3 SELECTED PHOTOGRAPHIC RECORDS FOR MAY 2011	11
4 NON COMPLIANCE AND INCIDENT REPORTING	16

5	PROPOSED AMENDMENTS TO EMP	16
6	CONCLUSIONS	17

LIST OF TABLES

TABLE 1: ISSUES RECORDED FOR MAY 2011	9
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LIST OF FIGURES

FIGURE 1: SUMMARY OF MONITORING CATEGORIES AND CONFORMANCE (12 MAY 2011)	5
FIGURE 2: SUMMARY OF MONITORING CATEGORIES AND CONFORMANCE (20 MAY 2011)	6
FIGURE 3: SUMMARY OF MONITORING CATEGORIES AND CONFORMANCE (24 MAY 2011)	8
FIGURE 4: TCTA SUMMARY OF WEEKLY MONITORING SESSIONS FOR MAY 2011	8

LIST OF ACRONYMS & ABBREVIATIONS

CEMP	Construction Environmental Management Plan
DEA	Department of Environmental Affairs
EM	Environmental Monitor
ECO	Environmental Control Officer
EO	Environmental Officer
EM	Environmental Manager
EMP	Environmental Management Plan
MMTS-2	Mooi Mgeni Transfer Scheme Phase 2
TCTA	Trans-Caledon Tunnel Authority
RoD	Record of Decision

1 INTRODUCTION

Nemai Consulting was appointed as the independent Environmental Control Officer (ECO) for the Trans-Caledon Tunnel Authority (TCTA) for the Mooi-Mgeni Transfer Scheme Phase 2 (MMTS-2) project.

The ECO functions in terms of environmental compliance monitoring is to systematically monitor the processes and activities required for the implementation of the Environmental Management Plan (EMP) and the conditions in the Record of Decision (RoD). The EMP for the construction of the Spring Grove Dam wall was approved by the Department of Environmental Affairs (DEA) on 03 May 2011.

Weekly environmental monitoring sessions are carried out. The environmental monitoring report serves as an overview of how TCTA is complying with the Construction Environmental Management Plan (CEMP) and the conditions of the RoD for the construction of the Spring Grove Dam wall. The monitoring questions have been generated from the approved CEMP. This yielded a monitoring sheet with items that should be monitored on site. The items are broken down by aspect within each stage. A summary of the breakdown of the monitoring sheet is included below:

General Requirements:

- Management Requirements;
- Administration;
- Environmental Education and Awareness;
- Construction;
- Materials;
- Water Quality;
- Air Quality;
- Noise;
- Community Engagement;
- Archaeology and Cultural Sites;
- Vegetation;
- Fauna;
- Traffic;

- Safety and Security;
- Waste; and
- Rehabilitation

A Conformance Score, an Impact Score and a Penalty Score is given to each monitoring item. The Conformance Scores are measured on a scale from 1 to 5 where 1 indicates that a specific task was not achieved; 2 indicates that a specific task was 20% complete; 3 indicates that a specific task was 50% complete; 4 indicates that a specific task was 80% complete and 5 indicates that a specific task was 100% complete.

The Impact Scores are measured on a scale from 1 to 3 where 1 indicates that the impact is low and mitigation is not needed / mitigatory measures should be maintained; 2 indicates a medium impact where mitigation should be considered and 3 indicates a high impact where mitigation is compulsory.

The Penalty Scores are measured on a scale from 0 to 3 where 0 is not applicable / impact or non-conformance occurred in an area of low environmental significance; 1 is moderate where the impact or non-conformance occurred in an area of moderate environmental significance and 1% is deducted from the total conformance score; 2 indicates a high impact or non-conformance that occurred in an area of high environmental significance and 3% is deducted from the total conformance score; 3 indicates a very high impact or non-conformance that occurred in an area of very high environmental significance and 5% is deducted from the total conformance score.

'Not applicable' answers relate to those aspects of the construction that have not yet started or are not applicable to the contract under consideration.

Graphs are produced for each stage of the CEMP and requirements during construction and post construction activities. These graphs indicate a summary of the monitoring categories. Each monitoring category is allocated a percentage score. The higher the score, the better the conformance. Complete conformance will result in a 100% score. Graphs indicating the summary of the weekly monitoring sessions will be produced on a weekly basis, and are reproduced in the monitoring report.

This document serves as the monthly ECO Report for May 2011, and presents a compilation of the key findings of the weekly ECO monitoring events that were conducted on the following dates:

- 06 May 2011;
- 12 May 2011;
- 20 May 2011; and
- 24 May 2011.

2 ECO MONITORING SESSIONS FOR MAY 2011

2.1 Monitoring Event 05 – 06 May 2011

2.1.1 Overview

A site inspection to monitor compliance against the conditions of the authorisation took place on 06 May 2011. The inspection was attended by Tshepiso Molaba (BKS), Ryan Phelan (Group 5), Kogi Govender (TCTA) and Roxana Le Roux (Nemai Consulting).

It was noted that DEA had approved the EMP for the construction of the Spring Grove Dam wall on 03 May 2011 and that construction had commenced thereafter.

Areas of non compliance, in terms of the RoD, were as follows:

- TCTA to develop a detailed search, rescue and relocation plan for all red data, protected and endangered species, medicinal plants, heritage resources and graves to be completed and approved prior to construction commencing on site;
- TCTA to develop a detailed relocation plan for people living in the dam basin;
- TCTA is to inform DEA of the change in project scope, provide details on the plant relocation plan for site establishment, provide confirmation of no prospecting rights within the study area, notify DEA if any conditions of the authorisation cannot be met, provide details of the ECO, confirm change in frequency of the EMC meetings, and written confirmation on the acceptance of conditions of the RoD;
- All staff, contractors and sub-contractors to be familiar with or be made aware of the RoD contents; and
- Revised EMP does not map the access roads to the individually owned sites and there is no search and rescue plan for the site establishment phase or the subsequent project phases.

Note that there was no graph to include to indicate the summary of monitoring categories, as this was the first monitoring session following the approval of the EMP.

2.2 Monitoring Event 06 – 12 May 2011

2.2.1 Overview

A site inspection to monitor compliance against the conditions of the authorisation and the approved EMP took place on 12 May 2011. The inspection was attended by Tshepiso Molaba (BKS), Ryan Phelan (Group 5), Donovan Henning (Nemai Consulting) and Roxana Le Roux (Nemai Consulting).

Environmental Activities on site included amongst others:

- Dust abatement measures were implemented, which included watering of access roads and haul roads using a water tanker to minimize dust pollution;
- Drip trays were used for machinery to prevent soil contamination;
- Heritage area on site was demarcated and 'No Entry' sign was erected, and Amafa was notified of this finding via email on 12/04/11;
- Sanitation facilities were provided at work areas for the construction workers;
- Spill clean up equipment was available on site; and
- Toolbox talk on Wetland Awareness was undertaken on 12 May 2011.

Areas of non compliance in terms of the RoD and the EMP, since the previous monitoring session, were as follows:

- Preventative measures to be implemented to avoid erosion and/or sedimentation and immediate measures to be implemented in areas where erosion and/or sedimentation occurred;
- Materials such as soil and topsoil and other dust generating materials to be covered while in transit;
- A waste register regarding materials removal from the site, the type of material, the quantity, the date removed, the haulage contractor, the disposal site to be maintained.

2.2.2 Summary of Monitoring Categories

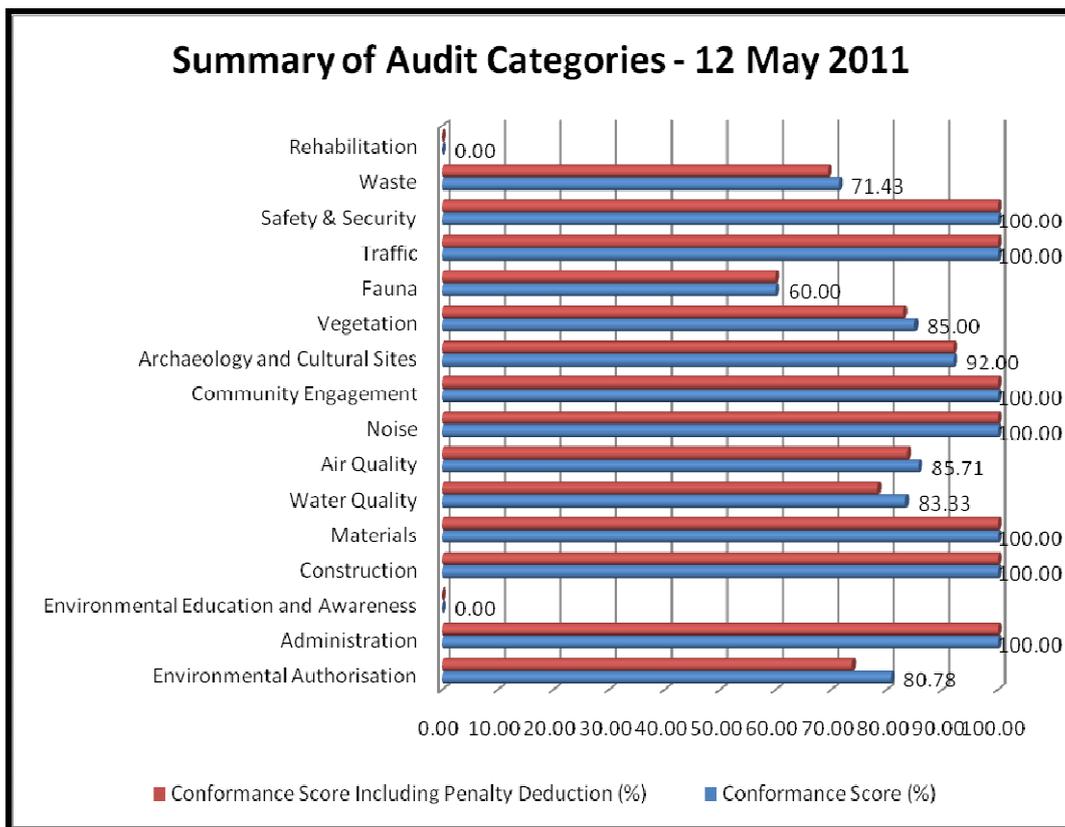


Figure 1: Summary of monitoring categories and conformance (12 May 2011)

2.3 **Monitoring Event 07 – 20 May 2011**

2.3.1 Overview

A site inspection to monitor compliance against the conditions of the authorisation and the approved EMP took place on 20 May 2011. The inspection was attended by Tshepiso Molaba (BKS), Sandhisha Jay Narain (Group 5), Ryan Phelan (Group 5) and Roxana Le Roux (Nemai Consulting).

New environmental activities on site, since the previous monitoring session, included the following:

- Erosion control measures were implemented along the topsoil stockpiles located above Afrisam batch plant;
- A trench was created at spoil area to prevent siltation of the Mooi River;
- A silt curtain was erected across the Mooi River;

- Water quality monitoring of the Mooi River was undertaken where the following variables were monitored: temperature, pH, turbidity, dissolved oxygen electrical conductivity and total dissolved solids. Daily and weekly water quality monitoring reports were being developed;
- Fire extinguishers were available at the offices;
- Regular visual monitoring was beng undertaken by the Environmental Officer (EO) and Environmental Manager (EM) to ensure that no dust was being generated by trucks transporting materials within the site; and
- The following Toolbox Talks had been given:
 - Littering - 13 May 2011;
 - Housekeeping - 14 May 2011;
 - Erosion Control - 16 May 2011;
 - RoD and EMP specifications - 20 May 2011 (managerial level).

No areas of non compliance in terms of the RoD and the EMP, since the previous monitoring session, were as follows

2.3.2 Summary of Monitoring Categories

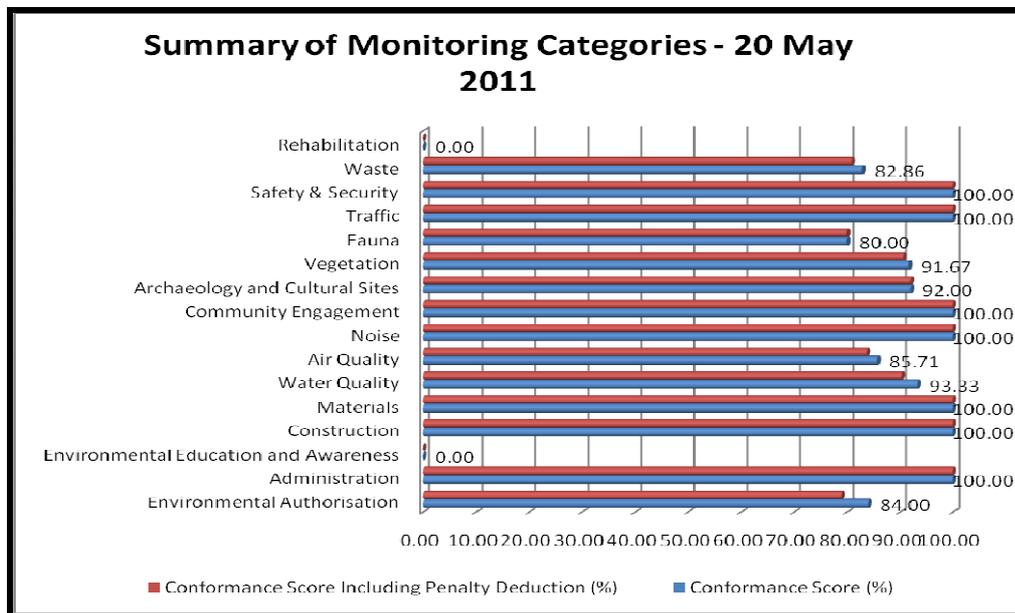


Figure 2: Summary of monitoring categories and conformance (20 May 2011)

2.4 Monitoring Event 08 – 24 May 2011

2.4.1 Overview

A site inspection to monitor conformance against the conditions of the authorisation and the Environmental Management Plan (EMP) took place on 24 May 2011. The inspection was attended by Tshepiso Molaba (BKS), Sandhisha Jay Narain (Group 5), Ryan Phelan (Group 5) Donavan Henning (Nemai Consulting) and Roxana Le Roux (Nemai Consulting).

New environmental activities on site, since the previous monitoring session, included the following:

- Erosion control measures and stormwater management measures had been implemented throughout the site, which included cut-off trenches at Derek Green's farm, along the topsoil stockpiles located above Afrisam batching plant and below the spoil site;
- Provision of waste bins adjacent to the lab area;
- Containers for cigarette stubs have been provided at the contractor's offices;
- The following Toolbox Talks had been given:
 - Wetland Awareness;
 - Littering;
 - Snakes;
 - Heritage sites;
 - Dewatering;
 - Refuelling;
 - Housekeeping;
 - Erosion Control;
 - RoD and EMP specifications.

No new significant areas of non compliance, in terms of the RoD and the EMP, were identified since the previous monitoring session.

2.4.2 Summary of Monitoring Categories

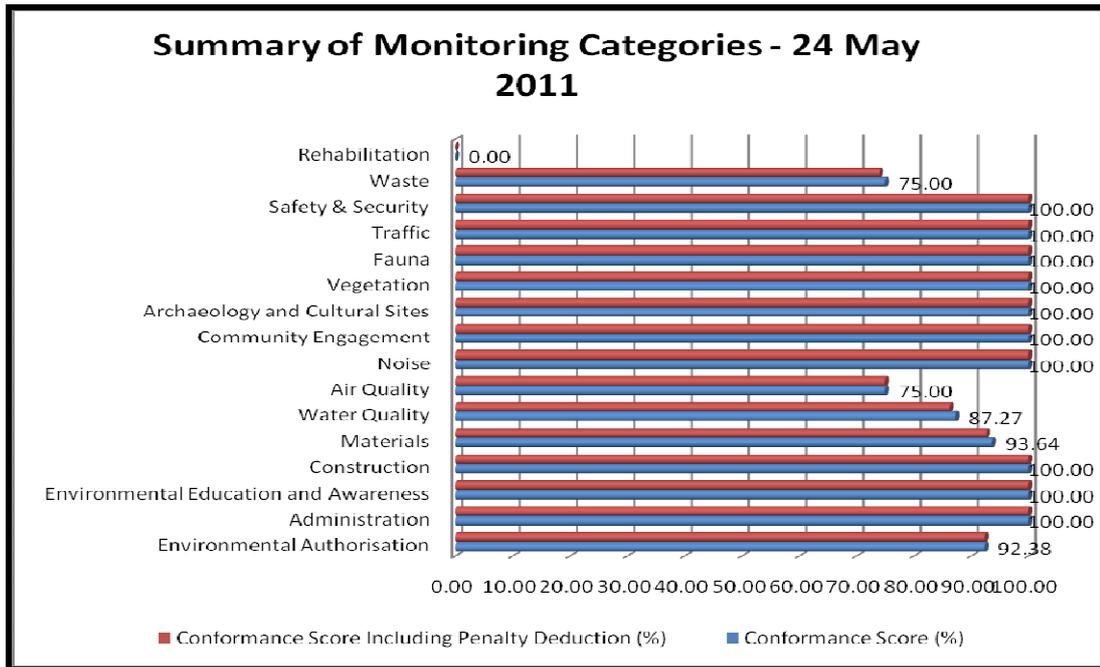


Figure 3: Summary of monitoring categories and conformance (24 May 2011)

2.5 Monitoring Scores for May 2011

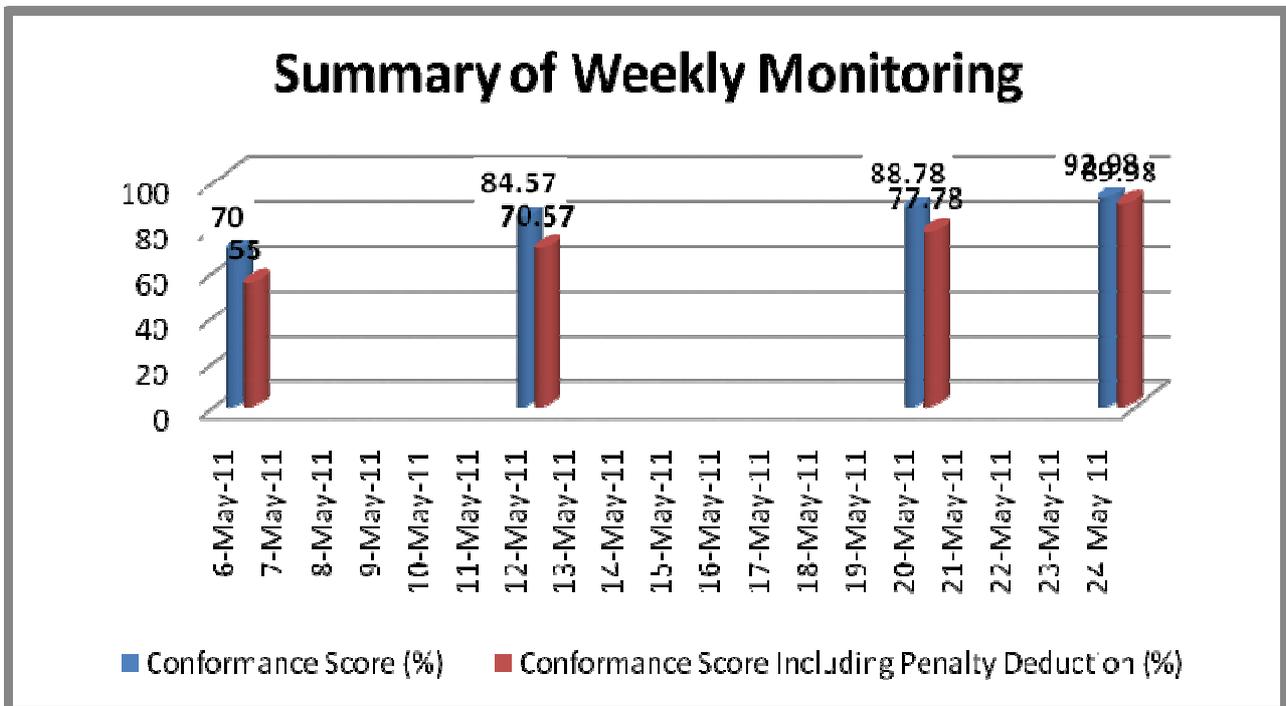


Figure 4: TCTA Summary of Weekly Monitoring Sessions for May 2011

From the above graph it can be seen that TCTA has achieved a good overall percentage conformance for the ECO monitoring sessions undertaken in May 2011.

On the last ECO monitoring session on 24 May 2011 TCTA had achieved a conformance score of 92.98% and a conformance score including penalty deduction of 89.98%. The graph indicates that the overall conformance score has increased after each weekly monitoring session.

2.6 Issues and Complaints

An Issues Register is available in the environmental file on site. This Issue Register details the date the issues are received, details of the person that raised the issue, the nature of the issue, whether action was taken to solve the issue and the date the issue was resolved, as well as close out comments. Table 1 below indicates the details of issues and complaints received for May 2011.

Table 1: Issues recorded for May 2011

No.	Date	Submitted by	Details	Action Taken	Date Closed Out
09	9 May 11	Baden Smythe	Potential use of property by the Contractor to access Mr Garlick's property.	Y	13 May 11: Land owner was informed that contractor will not access his land until the land acquisition of the property is finalised.
10	10 May 11	Steve Morris	Access to Peter Warren's property was blocked by six vehicles by people looking for work. He has suggested that more signage is installed at the site gate and the security guard should direct people to the Nottingham Rd office.	Y	Signage was installed on the site gate.
11	10 May 11	Steve Morris	Mr Baden Smyth has raised a concern that the Contractor would like to build a road between D Greene and C Garlic's properties. Although this road will affect his property no one has informed him of this development or asked for permission to build the road.	Y	See Issue 9 above.

12	13 May 11	John Bredall	Concern over Horse, when blasting is undertaken	Y	13 May 11: The vet visited the Bredall stable the on the 13 th May 11 and horses were sedated at the time of the blast. Blast impact was minimal in terms of noise and vibrations, no further complaints received.
13	16 May 11	Steve Morris	Litter from the sod turning function has blown into P Warrens property.	Y	The Contractor removed the litter on 16/05/11
14	19 May 11	Stuart Winckworth	He noted his displeasure at the lack of regular communication and updates with regards to when people can expect their PAJA notices and when they can expect to be expropriated fully. He indicated that some people are relying on the payment, and are working on the dates that have been communicated. It was stated at the EMC on Monday 9 May 2011 that the dates have been pushed back, and Mr Winckworth noted that this needs to be quickly and effectively communicated to the land owners. Mr Winckworth also explained that he had people living, rent free, on his property when he bought it, that he has always had good relations with them, but that they are not his problem to deal with during expropriation.	Y	Proposed that the issue of regular communication and project updates be addressed via the newsletter, but that landowners on the critical path be called and updated as timeframes change.
15	26 May 11	Chris King	"Mr Thulani Babuyekhulu came onto my property on 25/05/11 after 19H00 to inform my staff that there is a meeting at the local school about the relocation of graves. Whilst I have no objection to the staff being consulted about such meetings, I would like the courtesy of being informed that people will be on my property after dark."		26 May 11: TCTA has not organised such a meeting and we are not even aware of it. I will follow up with the community representatives and try and get more information.

It can be concluded that the complaints that had been received for May 2011 had been adequately attended.

3 SELECTED PHOTOGRAPHIC RECORDS FOR MAY 2011

Plate 1: Parked refueling vehicle provided with a drip tray to prevent contamination - ECO Monitoring 06
May 2011



Plate 2: Equipment at workshop area to be provided with a drip tray to prevent contamination - ECO
Monitoring 06 May 2011



Plate 3: Spillage on site opposite the office building to be contained and disposed of at a registered licensed facility -ECO Monitoring 06 May 2011



Plate 4: Spillage on site opposite the office building has been removed - ECO Monitoring 12 May 2011



Plate 5: Heritage area on site has been demarcated and 'No Entry' sign erected. Amafa was notified - ECO Monitoring 12 May 2011



Plate 6: Cement mixing to be undertaken on impermeable surface - ECO Monitoring 12 May 2011



Plate 7: Cement mixing undertaken on impermeable surface to prevent contamination - ECO Monitoring 20 May 2011



Plate 8: Dust suppression measures: water tank watering access roads on site - ECO Monitoring 20 May 2011



Plate 9: A cut-off trench was implemented below the spoil site in order to prevent rocks from falling into the Mooi River - ECO Monitoring 20 May 2011



Plate 10: Erosion control measures implemented along the topsoil stockpiles located above Afrisam batch plant - ECO Monitoring 20 May 2011



Plate 11: Waste to be collected and placed in appropriate waste containers in a waste designated area - ECO Monitoring 20 May 2011



Plate 12: A silt curtain has been erected across Mooi River to trap the silt - ECO Monitoring 20 May 2011



Plate 13: Waste bins provided adjacent to the lab area - ECO Monitoring 24 May 2011



Plate 14: Measures implemented to prevent river siltation - ECO Monitoring 24 May 2011



Plate 15: Procision of drip tray to prevent contamination - ECO Monitoring 24 May 2011



Plate 167: 'Do Not Disturb' notice erected at topsoil area opposite the dam footprint - ECO Monitoring 24 May 2011

4 NON COMPLIANCE AND INCIDENT REPORTING

There are not major non-compliance and incidents to report for the month of May 2011.

5 PROPOSED AMENDMENTS TO EMP

There are no proposed amendments to the EMP for the month of May 2011.

However, it is important to high the following:

- The EMP states that all vehicles are to be covered during transit however it is accepted that this is not practical within the footprint of the construction site. This principle will be enforced on haul roads, access roads and any area outside of the construction site.
- As agreed in the EMC 07 meeting access roads are interpreted as roads outside the construction site and all conditions of authorization pertaining to access roads will only be applicable outside the construction domain.
- The spoil area opposite Erika Millican's property is considered a working area and will not be watered down for dust suppression. Instead, visual inspections will be undertaken and if dust is a problem the area will be watered.

6 CONCLUSIONS

Scoring for the ECO Weekly Monitoring Reports for May 2011 has improved with each monitoring event. This indicates TCTA's increased compliance with the EMP and RoD.