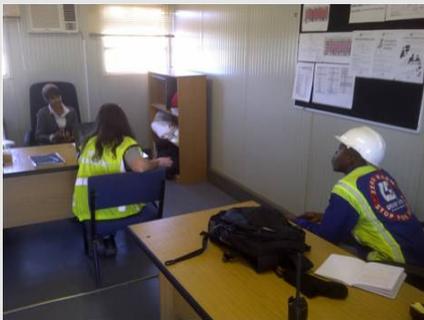




MOOI MGENI TRANSFER SCHEME PHASE 2 (MMTS-2) Construction of the Spring Grove Dam Wall

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



MONTHLY ECO REPORT : November – December 2011



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TITLE AND APPROVAL PAGE

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LIST OF ACRONYMS & ABBREVIATIONS

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

DEFINITIONS

Auditing

An 'environmental' audit is a methodical examination (including tests, checks, and confirmation) of environmental procedures and practices with the view of verifying whether they comply with internal policies, accepted practices and legal requirements

Environment

The surroundings in which humans exist and which comprise:

- The land, water and atmosphere of the earth.
- Micro-organisms, plant and animal life.
- Any part or combination of a) and b) and the interrelationships among and between them.
- The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that can influence human health and well-being.

Environmental Aspect

Those components of the company's activities, products and services that are likely to interact with the environment.

Record of Decision

The written statement from the relevant environmental authority in terms of the Environment Conservation Act (Act 73 of 1989), with or without conditions, that records its approval of a planned activity and the implementation thereof and the mitigating measures required to prevent or reduce the effects of environmental impacts during the life of a contract.

Environmental Feature

Elements and attributes of the biophysical, economic and social environment.

Environmental Impact

The change to the environment resulting from an environmental aspect (an activity) on the environment, whether desirable or undesirable. An impact may be the direct or indirect consequence of an activity.

Environmental Management Plan (EMP)

A detailed plan of action prepared to ensure that recommendations for enhancing positive impacts and/or limiting or preventing negative environmental impacts are implemented during the life-cycle of a project.

Environmental Objective

Overall environmental goal pertaining to the management of environmental features.

Environmental Target

Performance requirement that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.

Hazardous Waste

Any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment

Monitoring

'Compliance' monitoring is a continuous and systematic process to ensure that the conditions in the Record of Decision (RoD) Environmental Management Plan (EMP) are being adhered to.

Pollution

Any change in the environment caused by substances, radioactive or other waves, or noise, odours, dust or heat, emitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future.

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’s functions in terms of environmental compliance monitoring are 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) (refer to environmental governance arrangements in **Figure 1**).

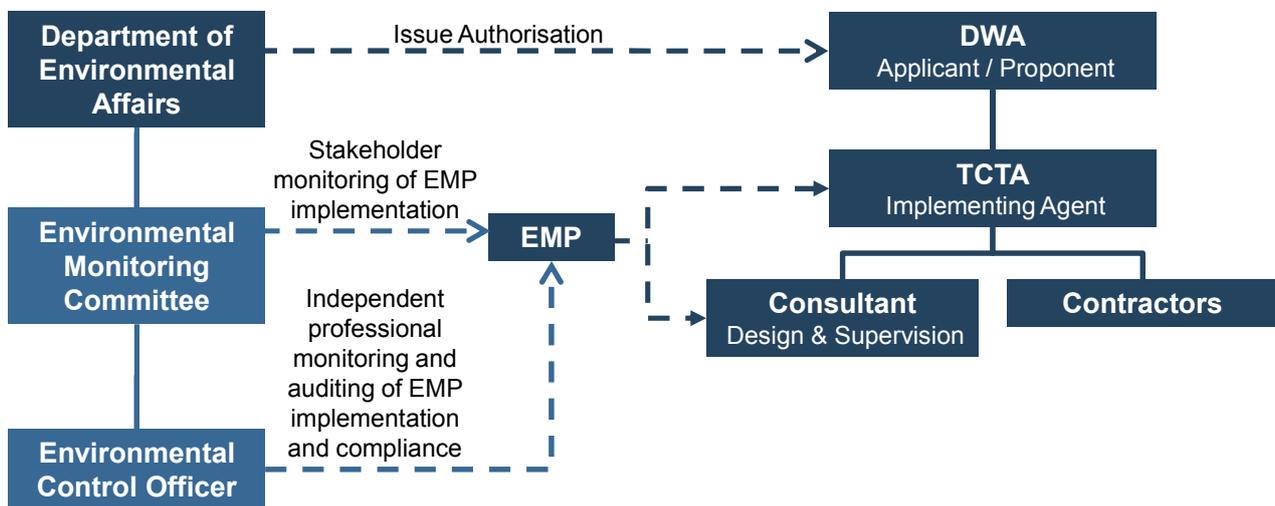


Figure 1: Environmental Governance Arrangements: Lines of Accountability

To date, the following EMPs have been approved by the Department of Environmental Affairs (DEA):

- EMP for the Construction of the Spring Grove Dam Wall – approved on 03 May 2011;
- EMP for Traffic Related Activities – approved on 16 August 2011; and
- EMP for Search, Rescue and Relocation – approved on 07 September 2011.

This document serves as the monthly ECO Report for November to December 2011. The monitoring event was undertaken on 08 December 2011.

2 ECO MONITORING APPROACH

2.1 Weekly Monitoring

Weekly ECO monitoring sessions are carried out once a week where a full day is spent onsite to inspect the overall construction site. The weekly ECO monitoring reports, which are submitted to TCTA, serve as an overview of the following:

- New or improved areas of good environmental practices and compliance;
- Areas of poor practices or where concerns have been noted;
- Status of previous issues; and
- Conclusions.

The weekly ECO monitoring events are more focused on best environmental practices, rather than regulatory compliance.

2.2 Monthly Monitoring

Monthly ECO monitoring serves to check compliance against the following:

- Conditions of the RoD for the construction of the Spring Grove Dam Wall; and
- EMPs and associated conditions of approval.

The Monthly ECO monitoring reports are submitted to TCTA, the Environmental Monitoring Committee (EMC), and ultimately DEA. The monthly ECO monitoring includes once a month full day site inspections, checking environmental administrative provisions (e.g. documentation, files, registers), analysing monitoring data, checking complaints, interviewing the Environmental Manager, Environmental Monitor (EM) and Environmental Officer (EO) (as required) and completing a detailed ECO Monitoring Checklist.

The ECO Monitoring Checklist consists of monitoring items extracted from the EMP and RoD, and are categorised as follows:

- Environmental Authorisation;
- 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

The following Conformance Scores, based on the level of compliance for the overall site, is allocated to each monitoring item in the checklist (overleaf):

CONFORMANCE SCORES	DESCRIPTION
1	Task not achieved
2	Task 20% complete
3	Task 50% complete
4	Task 80 % complete
5	Task 100% completed in accordance with the EMP

Where non-conformance to the RoD conditions and EMP mitigation measures is encountered (i.e. COMFORMANCE SCORE < 5), the significance of the associated Impact is recorded based on the following guidelines):

IMPACT SCORES	IMPACT
1	Low – mitigation not needed/ mitigation measures to be maintained
2	Medium – mitigation should be considered
3	High – mitigation compulsory

The identified non-conformances and related impacts are also rated based on the following **Penalty Scores**:

PENALTY SCORES	DESCRIPTION
0	Not Applicable / Impact or Non-Conformance occurred in area of low Environmental Significance
1	Moderate – Impact/Non-Conformance occurred in area of moderate Environmental Significance (<i>1% Deduction from total conformance score</i>)
2	High – Impact/Non-Conformance occurred in area of high Environmental Significance (<i>3% Deduction from total conformance score</i>)
3	Very High – Impact/Non-Conformance Occurred in area of very high Environmental Significance (<i>5% Deduction from total conformance score</i>)

The overall compliance score is based on:

- No of items scored for the monitoring event;
- The highest conformance score for the monitoring event;
- The actual conformance score for the monitoring event;
- The conformance percentage for the monitoring event (%);
- Total Penalty Deductions (%); and
- Total Conformance Score Including Penalty Deductions (%).

3 CONSTRUCTION ACTIVITIES FOR THE MONITORING PERIOD

Amongst others, the following main construction activities took place during the monthly monitoring period, as identified during the monitoring sessions and from the EO's daily site diary:

1. Excavation activities on the left bank;
2. Drilling activities on the right bank;
3. Steel fixing and shutter installation is on-going;
4. Re- enforcement of the intake tower bases and stilling basin is on-going;
5. Grouting activities have commenced at the earth embankment;
6. Construction of the gabion retaining walls on top of the culvert walls is progressing;
7. Dental concrete pouring has commenced on the right bank (**Figure 2**);
8. Water diversion is in operation (**Figure 3**);
9. Installation of a conservancy tank opposite the workshop area was being undertaken;
10. Upgrade of the D146 is on-going (**Figure 4**);
11. Water tank watering haul roads on site; and
12. Additional storage area for stockpiling of aggregate (**Figure 5**).



Figure 2: Concrete pouring on the right bank



Figure 4: Upgrade of the D146



Figure 3: Water diversion



Figure 5: Additional storage area for stockpiling aggregate

The following areas were inspected during the monitoring session:

- Site offices;
- Stores area;
- Permanent bunded area;
- Workshop;
- Temporary bunded area;
- Waste transition area;
- Batch plant area;
- Laboratory area;
- Eating area;
- Crusher area;
- The three streams on site;
- Dam basin;
- Concrete trial mix area;
- Temporary river crossing;
- River diversion; and
- Spoil sites.

*

COMMENTS:

TCTA

4 ENVIRONMENTAL ACTIVITIES FOR THE MONITORING PERIOD

Some of the **key environmental activities** on site, which also include areas of good practices and compliance, were as follows:

1. Water truck undertaking dust suppression on site;
2. Use of drip trays for storage of hazardous substances;
3. Additional supasorb pads placed under the generator at the water abstraction point;
4. Each foreman has been allocated a booklet of safety and environmental toolbox talks to be carried out with their teams on a daily basis. These toolbox talks will be undertaken for the next three months. The toolbox talks' records will be forwarded to the Environmental Officer upon completion;
5. Mobile toilets observed at work area;
6. Washing of Readymix truck in dedicated area (**Figure 6**).
7. Reclaiming of construction waste (**Figure 7**);
8. Life ring, siren and 'No swimming' signage observed at the river diversion area;
9. Signage observed at the batch plant area;
10. Use of personal protection equipment; and
11. Provision of eating area (**Figure 8**).



Figure 6: Washing of Readymix truck in dedicated area



Figure 7: Reclaiming of construction waste



Figure 8: Dedicated eating area

*** COMMENTS:**

TCTA

5 WATER, AIR AND NOISE MONITORING

Amongst others, the functions of the ECO include the following:

- Conduct third-party monitoring and auditing;
- Regularly monitor and review the progress towards achieving the specific strategies, objectives and performance targets of the EMP; and
- Review monitoring data and evaluate against performance targets.

The Contractor has appointed Blue Sands to conduct monthly water, air and noise monitoring. Comments on these reports for October 2011, as received in December 2011, follow below. It is noted that the raw data is received by the ECO as soon as it becomes available to ensure prompt feedback.

5.1 Air Quality

5.1.1 Dust Fallout

- Monitoring stations are similar to the baseline studies, and appear to adequately consider the proximity to source, community receptors and terrain. The DF10 sampling location was added in response to the spoil area expanding and the necessity to monitor dust in this location, due to the increased activity.
- Dust fallout rates remain well within the residential band. This is supported by the observation that there are few visible signs of dust fallout on surrounding vegetation and other horizontal surfaces.

5.1.2 Continuous Particulate Monitoring (PM₁₀) with Wind Speed and Direction

- The PM₁₀ concentrations were all below the daily limit of 120µg/m³.

5.2 Environmental Noise

- For interpretation purposes against SANS 10103:2008, areas close to the R103 can be considered as 'Urban districts with a main road', whereas it can be argued that the

construction of the dam may be taking place in a ‘Rural’ setting or possibly in a ‘Suburban district with little road traffic’.

- On 20 October 2011 the sound levels recorded at EN02 that are attributed to construction activities, were in exceedence of the threshold sound level for ‘Urban districts with a main road’.
- The sound levels recorded at EN03 on 20 October 2011 were in exceedence of the ‘Urban’ setting threshold level and can partly be attributed to trucks transporting aggregate.
- Similarly for levels recorded on 27 October 2011, measurements that could be attributed to construction activities occurred at EN02 and EN12. On this date the sound levels recorded at EN02 were in exceedence of the threshold for ‘Urban’ districts, and the sound levels recorded at EN12 were in exceedence of the threshold for ‘Suburban district with little road traffic’.
- Based on the entries in the Issues Register maintained by the Social Monitor, no complaints regarding noise was received on the above days where thresholds were exceeded.

5.3 Water Quality

- Particularly sites WQ03 (upstream of the temporary on site bridge), WQ04 (± 50 m downstream of the proposed dam wall), and to a lesser extent WQ05 (downstream of the dam wall at Rosetta Bridge) reflect possible influences to water quality that could be caused by construction activities.
- Thresholds to be determined for new variables tested.
- On 27 October 2011, Faecal coliform values at WQ03 and WQ04 were higher than those measured at the upstream sites, but the highest concentrations were measured at WQ05, downstream of the site. This would indicate that there are sources of this variable between the dam site and the Rosetta bridge. Lower flow observed, which reduced dilution factor.
- Lead concentrations to be detected below 0.05 mg/l to allow for accurate comparison with threshold on 0.02 mg/l.
- Nitrite/Nitrate levels exceeded threshold on 27 October 2011 at WQ03.
- Orthophosphate levels exceeded threshold on 27 October 2011 at WQ03.
- Sources of high concentrations unconfirmed.

*

COMMENTS:

TCTA

6 ENVIRONMENTAL PERFORMANCE

An overview of the environmental performance during the monthly monitoring period is provided in the sub-sections to follow.

6.1 Weekly ECO Monitoring – Status of Issues

6.1.1 24 November 2011

STATUS OF PREVIOUS ISSUES

Issue Ref.	Category	Summary of poor practice / area of concern	Status
017	Pollution	Inadequate storage of hazardous materials at the workshop area; the batch plant area and at the dam foundation offices.	Unattended to.
059	Water Conservation	Leaking water pipe at the water abstraction point.	Unattended to.
061	Pollution	Spillage observed under the excavator at the crusher area.	New spillage observed at the crusher area to be removed. EM new suggested deadline: 28 November 2011.
066	Pollution	1. Concrete runoff at the batch plant. 2. Concrete spill observed at the river diversion area.	Unattended to.
067	Siltation	Silt laden water observed at the river diversion area.	Unattended to.
068	Pollution	No drip tray provided for the compressor at the earth embankment.	Attended to.
071	Housekeeping	1. Poor housekeeping at the river diversion area. 2. Housekeeping required at the diesel bowser storage within the workshop area.	Unattended to.
072	Waste Separation	1. Waste separation at the lab area and waste transition area.	Attended to.
073	Pollution	1. Vehicle maintenance not being undertaken within the designated area at the workshop area. 2. Spillages observed at the workshop area. 3. No spill tray provided under the vehicle during maintenance undertaken at the workshop area. 4. Cigarette stubs observed near the storage of hazardous materials at the crusher site. 5. Oil rag observed in the storage container at the crusher site. 6. Hazardous substances container placed directly on the ground at the river diversion area. 7. Grease container placed directly on the ground at the earth embankment area. 8. Leaking toilet adjacent to the waste transition area.	Attended to.
075	Housekeeping	Housekeeping at the workshop area.	Unattended to.
076	Waste Management	Waste separation at the waste transition area.	Unattended to.

NEW ISSUES (i.e. areas of poor practice / areas for improvement / areas of concern)

Issue Ref.	Category	Observations	Improvements Required / Objectives to be achieved
077	Siltation	1. River siltation observed during the site inspection.	1. Siltation to be monitored and mitigation measures implemented. NCR issued on 21/11/2011.
078	Pollution	1. Uncontrolled concrete runoff observed at the separator at the batch plant. 2. Cement pile observed at the batch plant area.	1. Concrete runoff management required at the batch plant area. EM suggested deadline: 01 December 2011. 2. Management of cement pile at the batch plant area required. EM suggested deadline: 01 December 2011.

6.1.2 01 December 2011**STATUS OF PREVIOUS ISSUES**

Issue Ref.	Category	Summary of poor practice / area of concern	Status
017	Pollution	Inadequate storage of hazardous materials at the workshop area; the batch plant area and at the dam foundation offices.	Unattended to.
059	Water Conservation	Leaking water pipe at the water abstraction point.	Unattended to.
061	Pollution	Spillage observed under the excavator at the crusher area.	Unattended to.
066	Pollution	1. Concrete runoff at the batch plant. 2. Concrete spill observed at the river diversion area.	1. Attended to. 2. New concrete spills at the river diversion area: to be removed. EM suggested deadline: 08 December 2011.
067	Siltation: dewatering	Silt laden water observed at the river diversion area.	Unattended to.
068	Pollution	No drip tray provided for the compressor at the earth embankment.	Unattended to.
071	Housekeeping	1. Poor housekeeping at the river diversion area. 2. Housekeeping required at the diesel bowser storage within the workshop area.	Unattended to.
073	Pollution	Leaking toilet adjacent to the waste transition area.	Unattended to.
075	Housekeeping	Housekeeping at the workshop area.	Unattended to.
076	Waste Separation	Waste separation at the waste transition area.	Attended to.
077	Stormwater management	River siltation observed during the site inspection.	Unattended to.
078	Pollution	1. Uncontrolled concrete runoff observed at the separator at the batch plant. 2. Cement pile observed at the batch plant area.	1. Unattended to. 2. Attended to.

NEW ISSUES (i.e. areas of poor practice / areas for improvement / areas of concern)

Issue Ref.	Category	Observations	Improvements Required / Objectives to be achieved
079	Pollution	<ol style="list-style-type: none"> Spillage observed under the excavator at the crusher area. Spillage observed in front of the bunded area. Concrete spillages observed at the river diversion area. Bucket containing shutter oil placed directly on the ground at the river diversion area. No drip tray used during refuelling at the workshop area. Drip tray containing hazardous substances under the excavator at the crusher area. 	<ol style="list-style-type: none"> Oil spillage observed under the excavator at the crusher area to be removed. EM suggested deadline: 08 December 2011. Spillage observed in front of the bunded area to be removed. EM suggested deadline: 08 December 2011. Concrete spillages to be removed. EM suggested deadline: 08 December 2011. Provision of drip tray to be used for spillage prevention. Drip tray to be used during refuelling to prevent spillages. Drip tray containing hazardous substances under the excavator at the crusher area to be replaced with an empty tray.
080	Litter	<ol style="list-style-type: none"> Litter observed at the river diversion area and adjacent to the eating area. 	<ol style="list-style-type: none"> Litter observed at the river diversion area and adjacent to the eating area to be removed. EM suggested deadline: 08 December 2011.

6.1.3 08 December 2011**STATUS OF PREVIOUS ISSUES**

Issue Ref.	Category	Summary of poor practice / area of concern	Status
017	Pollution	Inadequate storage of hazardous materials at the dam foundation offices.	Unattended to.
059	Water Conservation	Leaking water pipe at the water abstraction point.	Unattended to.
067	Siltation: dewatering	Silt laden water observed at the river diversion area.	Attended to.
071	Housekeeping	<ol style="list-style-type: none"> Poor housekeeping at the river diversion area. Housekeeping required at the diesel bowser storage within the workshop area. 	Unattended to.
073	Pollution	Leaking toilet adjacent to the waste transition area.	Attended to.
077	Stormwater management	River siltation observed during the site inspection.	Unattended to.
078	Pollution	Uncontrolled concrete runoff observed at the separator at the batch plant.	Attended to.
079	Pollution	1. Spillage observed under the excavator at the crusher area.	1. Unattended to.
		2. Spillage observed in front of the bunded area.	2. Attended to.
		3. Concrete spillages observed at the river diversion area.	3. Attended to.
		4. Drip tray containing hazardous substances under the excavator at the crusher area.	4. Attended to.
080	Litter	Litter observed at the river diversion area and adjacent to the eating area.	Attended to.

NEW ISSUES (i.e. areas of poor practice / areas for improvement / areas of concern)

Issue Ref.	Category	Observations	Improvements Required / Objectives to be achieved
081	Pollution	<ol style="list-style-type: none"> Overland flow of silted runoff observed adjacent to the bunded area at the batch plant area. Cement observed at the river diversion area. 	<ol style="list-style-type: none"> Runoff intercepted by bund wall which leads to an attenuation pond. Cement observed at the river diversion area to be removed.

Issue Ref.	Category	Observations	Improvements Required / Objectives to be achieved
082	Litter	1. Litter observed adjacent to the access road near the river diversion area.	1. Litter observed at the river diversion area and adjacent to the eating area to be removed. EM suggested deadline: 15 December 2011.
083	Waste Separation	2. Waste separation at the lab area.	1. During the last monitoring event on 08 December 2011 it was observed that the scrap metal designated bin at the lab area was used for plastic. Waste separation at the lab area to be addressed. EM suggested deadline: 15 December 2011.

6.1.4 Conclusions

Spillages, waste separation, storage and handling of hazardous material, and housekeeping were identified as on-going problems that need to be attended to.

Spillages observed were removed and certificates of safe disposal were received from the waste service provider. Continual improvements for storage of hazardous materials were also observed.

* **COMMENTS:**

TCTA

6.2 Monthly ECO Monitoring Checklist

Note that compliance against the EMP for the Search, Rescue and Relocation (approved on 07 September 2011) was not scored during the monthly monitoring event. The current works area does not encroach on possible sites for occurrence of protected species and a site walkabout for current works area was conducted prior to construction activities. The specialists for the search and rescue will be mobilised by TCTA in due course.

The results of the monthly ECO Monitoring Checklist are summarised in the sub-sections to follow.

6.2.1 Monitoring Categories

The results of the monitoring categories are summarised in **Table 1**.

Table 1: Summary of Monthly ECO Monitoring Checklist categories: Nov – Dec 2011

Monitoring Category	Conformance Score (%)
Environmental Authorisation	96.82
Administration	100.00
Environmental Education and Awareness	100.00
Construction	100.00
Materials	91.76
Water Quality	89.41
Air Quality	100.00
Noise	100.00
Community Engagement	100.00
Archaeology and Cultural Sites	100.00
Vegetation	100.00
Fauna	100.00
Safety & Security	100.00
Waste	96.00
Traffic	96.15
Rehabilitation	0.00

6.2.2 Areas of Non-Compliance

Selected areas of significant non-compliance for November to December 2011, which (amongst others) influenced the conformance and penalty scores contained in **Table 1**, are captured in the table to follow.

Table 2: Selected areas of non-compliance: Nov – Dec 2011

Condition / Mitigation Measure	Comments
To manage handling, use and storage of materials on site. Materials to be neatly stored on site in a designated area	Improved handling and storage required for antifreeze container at crusher area. See Figure 9 .
A record of all types and quantities of hazardous materials on site to be kept	Hazardous material register available, which records fuel. Register needs to include hazardous material in containers.
All hazardous materials to be stored in clearly identified containers or vessels	All hazardous material containers to be labelled. See Figure 10 .
Products to be kept in the original containers unless they are not re-sealable; with all products and containers being labelled and original labels and MSDSs retained	
Containers to be labelled so that the hazard nature of the material is clear	
All washing to be undertaken at the designated bunded wash bay area that will be established for that purpose	Non-conformance recorded by EM, where a contractor was observed washing out a concrete bucket at the earth embankment.

Condition / Mitigation Measure	Comments
Silt laden water shall not be directly discharged over land or directly into watercourses and shall be contained in settlement ponds and managed before release	<ul style="list-style-type: none"> • Siltation at dam wall construction site. • Runoff generated from watering down of aggregate stockpiles is discharged over land, which is eventually collected in an attenuation pond. Runoff is causing minor erosion. See Figure 11. • Non-conformance recorded by EM for silt-laden runoff from stockpiles and site roads, which was discharged into the river.
Such overland discharge may not cause erosion	
Contaminated stormwater and run-off from the construction site to be contained	Attenuation pond created at batching plant. Non-conformance recorded by EM for silt-laden runoff from stockpiles and site roads, which was discharged into the river.
Vehicles with abnormal width or length to be escorted by at least one vehicle with amber lights and appropriate signage in front (or a traffic police vehicle), even if the abnormal load permit does not require an escort	Abnormal load not escorted.



Figure 9: Improved handling and storage required for antifreeze container



Figure 10: Containers for hazardous materials to be labelled



Figure 11: Containers for hazardous materials to be labelled

6.2.3 Overall Monitoring Results

The summary of the results of the ECO monitoring checklist follows.

Table 3: Summary of results of Monthly ECO Monitoring Checklist: Nov – Dec 2011

Description	Total	Percentage
Number of Items Scored for this Audit	176	
Highest Possible Conformance Score for the monitoring period	880	100%
Actual Conformance Score	837	95.11%

6.2.4 Sequential ECO Monitoring Results

A graph indicating the sequential ECO Monitoring Results from May 2011 until present follows.

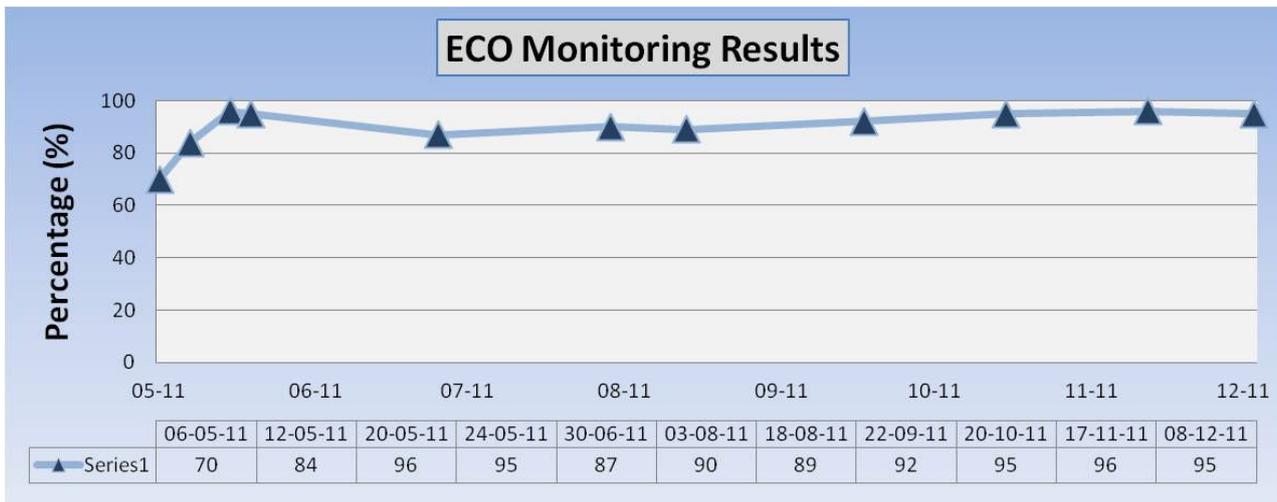


Figure 12: Graph - summary of results of Monthly ECO Monitoring Checklists

*

COMMENTS:

TCTA

7 NON-CONFORMANCE / INCIDENT REPORTING

The following environmental non-conformances / incidents were recorded by the EM during the monthly ECO monitoring period.

Table 4: Environmental Non-Conformance / Incident Register: Nov - Dec 2011

Date of NCR / Incident	Description	Suggested Corrective Action	Actual Corrective Action	EM Suggested Deadline	Actual Date Corrected	Closed-Out
2011/11/21	Resulting from the first storm (2pm 18/11/2011) silt contaminated runoff from stockpiles and site roads, above the water abstraction point was observed entering the river causing sedimentation. As per specification P67 4.3.6 the contractor shall take all precautions necessary to properly manage and dispose of run-off.	Appropriate pollution control facilities such as berms, settling ponds and silt curtains must be used around stockpiles to prevent silt laden water from entering directly into the river.		281/11/2011		No
2011/11/22	A contractor was observed washing out the concrete bucket at the earth embankment. It was communicated to the Foreman (Nico) that this activity is not allowed outside of the wash bay. No action was taken by the foreman to stop the activity. In another incident, the RE observed a worker washing a concrete bucket in the D146 stream.	Both these incidents are a contravention of site specification P20 4.1. The contractor must ensure that senior staff takes responsibility in upholding and enforcing site procedures and rules. Where washing out of buckets have taken place and where excess concrete has been dumped, the contaminated soil must be dug-up and disposed off accordingly.				No

Both non-conformances from 21 and 22 November 2011 need to be attended to.

* **COMMENTS:**

TCTA

8 ISSUES AND COMPLAINTS

Table 5 contains the issues and complaints (11 entries) that were recorded by the Social Monitor during the monthly ECO monitoring period.

In terms of the target set in the EMP for Issues and Complaints Management, all complaints must be responded to within 10 working days. Based on the entries in the register, this target has been met.

The following issues and complaints are unresolved, based on the register:

- Issue no. 96 – feedback required regarding trucks turning into oncoming traffic on the R103 when exiting the D146, as well as the absence of flagmen in wet conditions; and
- Issue no. 100 – feedback required regarding the culvert to John Wetton’s property.

Although attended to, feedback is required on the following issues:

- Issue no. 98 – re-concreting of driveway; and
- Issue no. 99 – stop sign on the Overdale Road, at the intersection.

The remaining issues have been adequately attended to.

Table 5: Issues and Complaints Register: Nov – Dec 2011

No	Date	Submitted by	Description of Issue	Response to Issue	Resolved & Communicated	Date Resolved
90	16-Nov-11	Various	Complaints from a number of D146 and Overdale residents re the dust coming off both site and the roads.	Ryan and Sandhisha both followed-up with Dumisani and Fynn-James. Katie sent an e-mail to James Mbongwa from Fynn-James. The water trucks began more intensive watering.	Yes	16-Nov-11
91	22-Nov-11	John Wetton	e-mail from John Wetton: Hi Katie, I note that the stop sign has not been erected? Can you advise when the small bridge at the entrance to the R103 will be completed. At the request of the sub contractor who re engineered the road we removed our storm water drainage pipes. He advised us that new drains would be installed. Kindly advise when this will be attended to. I am very concerned over the road surface particularly on the hills up to and past our property. The clay is very slippery and dangerous when wet. kindly advise what mitigation contractor will put in place over the rainy period . Many thanks. Kind Regards, John	response to John via e-mail: Thank you for your e-mail. Please find responses to your queries below: 1) Stop sign: The Engineer has spoken with the traffic engineers. They don't recommend that a stop sign be erected, and have stated that the gradient does not make it necessary. 2) D146 open: It is anticipated that the D146 will be open to traffic by mid next week (week of 28 Nov). However, there will be on-going work at that intersection which will only be finished early next year. The D146 will be left in a safely useable state over the builders' break. 3) Storm water pipes: The Engineer has called for a programme for completion of the D146 upgrade, and should have a response from The Contractor by the end of this week. Your issue is on the priority list. 4) Road surface: The road will be maintained on an on-going basis.	Yes	22-Nov-11
92	22-Nov-11	Christine King	13h30: driving between the Nottingham Road Police Station and Fordoun Spa 8 construction vehicles passed me in a row. This kind of traffic density is not acceptable on these roads.	Response from Andrew Olden: There was an issue yesterday where the police were not letting construction vehicles through onto the R103, so the trucks were stacked and therefore arrived together once released. The incident of the stacking was reported to me at the time by Afrisam. Response from David: a RTI officer explained that there was a mis-communication between RTI officers re the procedure around yesterday's block. Only vehicles with SGD numbers were allowed to use P147 and R103 yesterday, but instead all trucks were stopped.	Yes	23-Nov-11

No	Date	Submitted by	Description of Issue	Response to Issue	Resolved & Communicated	Date Resolved
93	23-Nov-11	Dee Tallents	Via phone call: a) have heard a rumour re truck times being extended to 22h00. This is absolutely not on. We must be kept updated about these kinds of things; we never get any feedback from the EMC meetings. b) Also, an aggregate truck almost took-out one of Overdale Guest House's guests this week. The guests were parked at the gate waiting for it to open and the truck just skimmed past the back of their car.	Response from Kogi: John Whetton is the person representing the Rosetta residents on the EMC. Further John Zelenka attends every meeting also on behalf of the residents of Rosetta – they are supposed to provide feedback to their constituents. After every EMC (except for Nov – as there was no written feedback) the TCTA progress/project feedback presented at the EMC gets e-mailed to everyone on the stakeholder database. Dee Tallents is on this database so she gets this feedback from me. Response from Katie: the draft letter to the DEA re the application for extension of haulage times and increased loads was re-sent to Dee Tallents for her information. Katie asked Dee to advise her guests to be mindful of the trucks on the road, and also asked David Hadebe to remind the truck drivers that they need to be aware that they're in a residential area.	Yes	23-Nov-11
94	23-Nov-11	Carolyn Zelenka	Via phone call: a) at about 09h30 I felt nauseous, headachy and was shaking all over due to reverberations coming from some kind of compactor machine on the D146. b) Carolyn wishes to lodge a formal objection to the suggestion of 60 lorries operating daily between 06h00 and 22h00. Carolyn has heard that they will scrap the one-way loop system and return via Nottingham Road. The corner on the R103 near the Rosetta Nursery is lethal, signage must go up there. The community is very upset about this. c) Taxi drivers are already murderous as they drive along the R103, and there is still no police presence on the road, so with more trucks and more over-taking there will be many accidents. d) Can James Berning's road not be used for the haulage vehicles? e) Business in this area, particularly on the R103 and D146, has been completely killed by the dam. The Zelenkas were going to build a gallery for textile art (the first of its kind in RSA), but can't do that now. This project has messed everyone around.	Responses: a) After speaking with Bennie it was established that there was no compactor on the D146, and that the only compacting machinery was on site, had operated many times before, and was not operating in an abnormal manner today. b) Response from Kogi: One of the main reasons for this application is that we require the additional trucks to prevent further delays to the project. In order to commence with the RCC placement we need the required amounts of aggregate, if we don't have sufficient stockpiles then we can't commence on time. c) noted d) This route is not an option for environmental reasons. e) noted	Yes	24-Nov-11

No	Date	Submitted by	Description of Issue	Response to Issue	Resolved & Communicated	Date Resolved
95	23-Nov-11	John Wetton	Via phone call: a) The ditch/channel across the driveway, created by the rain and the fact that there is no proper drainage as the pipes that were there needed to be removed for the upgrade of the road, has worsened. It was a moderate channel up until now. Only John's 4x4 will get in/out of the driveway safely. Please can it be fixed; perhaps put in bigger stones that won't be washed away. b) is the clay surface the final surface? We were assured, by a surveyor, that there would be black top on the road. He showed it to John on the specs. Via phone call on Monday 28 Nov 2011: please could you look at the way in which the pipe has been layed? Lorraine can't get over it with her car.	Response: a) on the morning of the 24th Rudi replaced the pipes in the entrance to the driveway. b) A gravel surface will be the final surface. The black top will run from the R103/D146 intersection until half way up that section of the D146 (half way up the hill). Response Monday 28 Nov 2011: Pay weekend Monday, so team will look at it first thing on Tuesday 29. Monday 5 December: the pipe was set deeper and will be concreted-in, with wing walls to protect the surrounding land from erosion.	Yes	05-Dec-11
96	24-Nov-11	Peter Greene	By phone and then by e-mail: Hi Katie, just confirmation of our earlier conversation. I had previously passed on a concern from a Rosetta resident that trucks are having to pull out into the oncoming traffic when they re-join the R013 at the junction of the D146. The concern was that although there were flagmen present these flagmen may not be clearly visible in poor conditions. Today whilst travelling to Mooi River in light rain there were no flagmen present at all. It is precisely in wet and misty conditions that the intersection is most dangerous and unfortunately they can't only pitch for work on sunny days.		No	
97	30-Nov-11	Peter Warren	The road needs to be watered more. There is a lot more dust, since the aggregate trucks have been using the top site gate instead of the usual one. This piece of road does not get watered. Also, dust collection buckets must be placed on this side of the road (Peter Warren's side of the road), since the prevailing wind that blows off site blows straight onto his property and then dissipates and drops dust.	Dust collection buckets have been placed in all crucial locations. The dust monitoring is well advanced, and the bucket across the road from Peter Warren's house provides figures for the area that Peter is concerned about.	Yes	06-Dec-11

No	Date	Submitted by	Description of Issue	Response to Issue	Resolved & Communicated	Date Resolved
98	01-Dec-11	Angelique Scott.	Hi Katie. A couple of months ago, Andrew was sent an email concerning our entrance as we were not able to exit without a 4x4 vehicle due to the gradient. This problem was addressed, however the repairs have now caused a separate problem which has been exaggerated by the rains. From the road to our gate used to be concreted which made it easier for our vehicles to come and go without getting stuck. Since the road has been resurfaced, this concrete has been buried and our rock flower beds destroyed. The flower beds we can redo but what about our concrete to help eliminate the vehicles getting stuck and to help stop the mud and stones from the D146 being washed down onto our gate rail, causing our gate to jam? Please could we ask you to address this matter at your soonest as with all the heavy rain we have been having lately, it is getting worse. Thanking you in advance. Kind Regards.	The driveway will be re-concreted.	Yes	06-Dec-11
99	04-Dec-11	John Wetton	Hi Katie. Now that the Overdale road route will be closed to construction traffic I was wondering whether we could put a stop sign at the intersection of Overdale and D146. So if you are approaching the D146 bend from Overdale there would be a stop sign at the ingress to D146. Cars and other light vehicles travel very fast along this road and it really is dangerous for Lorraine and I crossing the D146 when we come up the hill along the D146 from the R103. Many thanks for your attention to matters raised with you and your patience. John	There will be a stop sign placed on the Overdale Road, as one approaches the intersection. Additional measures may be needed, and these will be assessed on an ongoing basis. The yield sign on the D146 as one approaches the intersection from the culvert will also be kept.	Yes	05-Dec-11
100	06-Dec-11	John Zelenka	Very concerned about the culvert at John Wetton's driveway. How will a lorry and a car get around that corner passing each other? It's extremely dangerous.	The culvert is not in its final position; it will be angled in a more suitable way and the deep ditches filled-in.	No	

*** COMMENTS:**

TCTA



9 PROPOSED AMENDMENTS TO THE ROD AND EMP

9.1 Proposed Amendments to RoD

An application for an amendment to the Environmental Authorisation was submitted by DWA to DEA on 01 August 2011.

Proposed amendments or matters for clarification related to the RoD are contained in **Table 6**.

Table 6: Proposed amendments / matters for clarification related to the RoD

Condition No.	Description	Comments
3.2.1.22	Indigenous vegetation removed from the dam basin must be kept in a temporary nursery to be used for rehabilitation	Addressed in EMP for Search, Rescue and Relocation, which was approved on 07 September 2011.
3.2.1.23	The wood from exotic and/or invasive species removed from the dam basin must be made available to the local community free of charge	Decision pending from Contractor regarding the way forward for the disposal of the cleared vegetation. RoD condition may prove to be costly.
3.2.3.3	The ECO who will act on behalf of the EMC to undertake daily monitoring compliance with the conditions of the RoD, environmental legislation and EMPs	ECO was not appointed as a daily monitor. Daily monitoring is undertaken by the EO on behalf of the Contractor and by the EM on behalf of the Engineer. Application for an amendment to the Environmental Authorisation was submitted by DWA to DEA on 01 August 2011.

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COMMENTS:

TCTA

9.2 Proposed Amendments to EMP

In accordance with the RoD condition no. 3.2.4.4, EMPs will be regarded as dynamic documents and any changes to the EMPs must be submitted to DEA for acceptance, which is to be accompanied by recommendations of the EMC.

An EMP Amendments Register was submitted by TCTA to DEA on 21 September 2011, which records the proposed amendments to the EMP for management measures that are deemed to be ineffective or redundant. These amendments were discussed with the EMC on 03 August 2011.

Proposed amendments or matters for clarification related to the EMP are contained in **Table 7**.

Table 7: Proposed amendments / matters for clarification related to the EMP

No.	Description	Comments
Previously listed Mitigation Measures		
1.	EMPs to provide rehabilitation measures for areas to be disturbed during the construction phase [RoD condition no. 3.2.4.3(b)].	EMP for the Construction of the Spring Grove Dam Wall to make provision for rehabilitation of areas affected by construction work outside of dam basin (e.g. access roads).
2.	EMPs to include implementation measures aimed at controlling invasive plant species and weeds [RoD condition no. 3.2.4.3(f)].	Addressed in EMP Register.
3.	Cover vehicles transporting spoil, topsoil or other dust generating materials.	Addressed in EMP Register.
4.	Dust suppression measures must be implemented on dry weather days.	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 nuisance the area will be watered down.
5.	For each waste type create a MSDS that is always available to accompany the waste.	Addressed in EMP Register.
6.	All waste containers designated for off site transport to be secured and labelled with the contents and associated hazards, be properly loaded and be accompanied by a shipping paper (i.e. manifest) describing the load and its associated hazards	Impractical for all waste containers. Suitable for hazardous waste.
7.	Transporters of hazardous materials to ensure that: vehicles transporting hazardous materials are registered for this purpose; clearly display in English the nature of materials being transported; what to do in the event of an emergency and an emergency telephone number (24 hour) of a responsible person who can provide advice in an emergency	Bulk fuel transporters comply with this measure. However, requirements are too onerous for sub-contractors (e.g. mechanics). EMP deviation to be discussed.
8.	The quantity of hazardous material used each month is to be documented	Requirement is more feasible in terms of fuel usage. Necessity of measure to be explored further in terms of other hazardous material used on site, such as material used for the maintenance of vehicles, material used at the laboratory, etc.
9.	Monitor the number of project related vehicles travelling off site per day	Trucks are being monitored through GPS tracking system. Monitoring of other construction-related vehicles is an onerous task, and the practicality thereof needs to be investigated further.

* **COMMENTS:**

TCTA