

RUSTMO1 SOLAR FARM

ENVIRONMENTAL COMPLIANCE MONITORING

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& Momentous Energy

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Prepared for: RustMo1

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1. INTRODUCTION

In accordance with the Conditions of the Environmental Authorisation for RustMo1 Solar Farm, an independent Environmental Control Officer (ECO) was appointed prior to commencement of any authorised activities. Savannah Environmental, as the appointed ECO, is responsible to monitor, review, and verify compliance by the Contractor (i.e. Juwi Renewable Energy), and all other contractors on site with the environmental specifications contained in the EMP, conditions of the Environmental Authorisation (EA), specific management plans, method statements and all relevant environmental policies and legislation.

2. OVERVIEW OF CONSTRUCTION PROGRESS (NOTABLE ACTIVITIES/ EVENTS)

The Construction of RustMo1 Solar Farm is still on-going as planned, and all the contractors on site are successfully keeping to the construction schedule/ programme. All the pre-construction-activities were successfully completed at the outset of the project and no environmental issues were noted. The main activities on site at present comprise:

- » The installation of solar panels
- » DC cables Connection
- » Trenching for the placement of Water pipelines
- » Assembling of Tables/ Support structures for the PV modules
- » Earthing to anchors/Termination to structures
- » MV Trenching 2E03/04 to E01/02

As all earthworks on site is completed and environmental compliance on the site is maintained, the ECO is no longer permanently on site and is currently undertaking bi-weekly audits in line with the approved EMP for the project. This is considered to be adequate due to the high level of compliance on the site.

3. AUDIT FINDINGS

3.1. Non-conformities and Non Compliances identified during this monitoring and reporting period

Currently there is no record of Non-conformances or Non conformances from the contractors, and Sub-contractors. All the contractors on site are currently complying with all environmental regulations, the approved EMP, and the Environmental Authorisation.

3.2. Previously recorded non-conformities not yet rectified

To date there is no record of previously recorded Non-conformities that have not been rectified/resolved.

3.3. Previously recorded non-conformities rectified during this monitoring and reporting period.

None (All previously recorded no conformities have been closed/resolved in the previous reporting period).

3.4. Compliances and Conformances recorded to date

- » All the contractors and sub-contractors on site have their own complete spill kits (EMP ref page 36).
- » Additional chemical toilets have been delivered on site (chemical toilets for both men and women are available).
- » The proper construction waste bins have been delivered on site (two skips for general, and hazardous waste, and two wheelie bins for recyclable waste). These bins are appropriately labelled.
- » All the Contractors on site are keeping to their demarcated area of work and they have not disturbed anything outside the development footprint.
- » No off-roading from agreed access roads is happening on site, as most of the workers are moving on foot from one area of work to another.
- » The emergency assembly point has been implemented on site and signage for an emergency assembly point has been erected. All the contractors on site have all required safety equipment.
- » Signage for a designated smoking area has been erected on site.
- » All contractors on site have all required safety equipment for fire fighting.
- » Good communication is happening so far between the client, Contractors and, Sub-contractors as well as the ECO. This is considered advantageous to the progress of the project.
- » Housekeeping is well maintained on site, hence there is no littering on site.
- » All open trenches on site have been barricaded.

3.5. Measures implemented to avoid/reduce impacts on the environment

The following measures have been implemented to reduce the impacts on the environment:

- » Environmental Training/ induction is communicated to the construction workers on site as part of environmental awareness.

- » Designated smoking area on site to reduce the chance or risk of fire outbreak on site (fire extinguishers also available on site).
- » Spill packs are made available on site to reduce/avoid any the fuel spillages from construction machinery /Vehicles.

- » Construction waste bins available and not overfilled to prevent/minimise pollution on site.
- » Construction workers keeping to their demarcated area of work and agreed access roads to reduce/avoid disturbance to the surrounding environment not falling within the development footprint.
- » Ablution facilities (in the form of chemical toilets) made available to construction workers on site.

3.6. Outstanding matters

There are no outstanding matters for the month of May. All the outstanding matters for previous months have been closed, and the contractors are currently complying with the EMP, EA and all South African environmental legislation

4. ENVIRONMENTAL MONITORING RECORD OF OBSERVATIONS

4.1. Waste Management

Appropriate measures, in the form of adequate waste bins, are being taken to manage construction waste that may be generated during construction work. The waste bins/skips have been placed within a designated area. The waste bins and chemical toilets are serviced on a weekly basis by Sanitech and Coastal hire (waste management contractors). Additional chemical toilets have been delivered on site in order to ensure that there is no shortage of chemical toilets for both men and women.

Generation of waste is currently low at RustMo1 Solar Farm and no signs of pollution are evident on site. A record of waste disposal certificates is kept in the contractors environmental file, and the ECO has received a copy.



Actions have been taken to manage oil and diesel spills in the form of drip trays that are placed under the construction vehicles when not operated. At present, no major hazardous spillage has occurred on site but the spill kit and drip trays are available on site at all times. All the Sub-contractors have their own drip trays and spill packs.

4.2. Ecosystem Conservation

4.2.1 Flora

No protected species have been identified within the area of development during pre-construction activities. No plants that have been cleared on site are identified as protected or endangered, but they are indigenous to the area of work. According to the client, actions will be taken to plant more species of indigenous plants on the nearby areas as part of the rehabilitation after construction has been completed. This will be done with assistance from the ECO.

4.2.2 Fauna

The ECO has advised the contractor and Sub-contractors that no animal may be hunted, trapped or killed on site for any purpose whatsoever (Ref: EMP Page 31 (control impacts on ecology)).

4.2.3 Water Management

A water permit from the Department of Water Affairs has been issued regarding the use of water from the borehole as construction progresses. An access road to the borehole has been constructed. The Contractor (Finishing Touches) is still undertaking the trenching for the placement of water pipelines from the borehole to the solar farm.

4.2.4 Soil Management

All cleared soil will be used to fill in the eroded area near Marikana platinum mine. The ECO has received a formal agreement letter between the landowner and the Sub-contractor, Brand Engineering, regarding the re-use of soil for filling in the eroded area.

4.3. Heritage

Although limited heritage sites were noted on the proposed development site, it is possible that sites could be uncovered during excavation activities associated with construction (Ref: EMP Page 34). However, no new heritage artefacts/objects have been uncovered on site during the construction work to date, and the contractors have not disturbed any of the already known heritage sites within or close to the development footprint (e.g grave site).

Through environmental awareness toolbox talks prepared by the ECO and communicated on site, the Contractors are fully aware that if at any stage during the construction phase any archaeological artefact is uncovered, the work in the vicinity of the finding should be stopped immediately and the finding should be reported to the South African Heritage Resources Association and/or a professional archaeologist as soon as possible so that appropriate mitigation measures can be implemented (Ref: EMP page 34; EA - Scope of authorisation point 10).

4.4. Social

4.4.1. Public Involvement

Approximately 80% of workers at RusMo1 are from the local communities, and the public involvement is notable through the regular informative meetings they have with the community liaison officer (CLO) for RusMo1.

4.4.2. Complaints and claims for damage

No complaints or damage was recorded for the month of May.

Any complaints from Interested and affected parties will be recorded in the I&AP Complaints register. A copy of I&AP complaints register is available on site.

4.4.3. Landowner issues

No issues of concern from the landowners were recorded during the month of May.

4.5. Rehabilitation

All the disturbed areas associated with the construction activities will be rehabilitated upon the completion of all construction activities. According to the client, actions will be taken to plant more species of indigenous plants on the nearby areas as part of the rehabilitation after construction has been completed, and this will be done with assistance from the ECO.

5. PROTECTIVE MEASURES

- » Both the EPC Contractor, Juwi Renewable Energy, and the Sub-contractor, Brand Engineering, are implementing protective measures on site.
- » The security contractor (Servest Security) is responsible for ensuring the safety of all stored equipment on site, as well as the security for all construction workers. Access to the site is controlled.
- » All the construction workers on site are easily identified and are required to wear appropriate Personal protection equipment (PPE) which includes safety boots, ear plugs, reflector vests, and hard hats.
- » The emergency assembly point, and designated smoking area has been implemented on site, and signage erected respectively for each of the designated area.
- » Fire fighting equipment (e.g. fire extinguisher) is present on site.

6. INFRASTRUCTURE MANAGEMENT

The contractors Terafix and Lerumo currently undertaking with the installation of solar panels, as well as the assembling of the anchor structures for the PV modules.



7. ENVIRONMENTAL AWARENESS AND TRAINING

Environmental awareness at RustMo1 is reached through environmental toolbox talks, inductions, and SHE (Safety & health, and Environment) weekly meetings. The table overleaf indicates the major environmental awareness toolbox talks which were communicated to RustMo1 construction workers on site during this reporting period.

DATE	TOOLBOX TOPIC	VENUE
08/05/2013	Housekeeping(Prevent/minimise pollution)	RustMo1 Solar Farm
23/05/2013	Control impacts on Ecology (revision)	RustMo1 Solar Farm
30/05/2013	Protection of sites of heritage value	RustMo1 Solar Farm

8. NON-COMPLIANCE AND CONTRACTOR COMMUNICATIONS

There are no issues of non-compliance for the previous reporting month of April. The communication between the client, ECO, and the contractor remains good.

9. INCIDENTS

No environmental incidents occurred during the month of May. Any environmental incidents that may occur on site will be recorded in the environmental incident register kept on file by the ECO. A book for recording environmental issues is also kept in the security office.

10. MEETINGS AND CORRESPONDENCE

The table below indicates a record of meetings, and correspondences for this reporting period.

DATE	MEETING/CORRESPONDENCES	VENUE
07/05/2013	SHE Weekly Meeting	RustMo1 Solar Farm
14/05/2013	SHE Weekly Meeting	RustMo1 Solar Farm
21/05/2013	SHE Weekly Meeting	RustMo1 Solar Farm

11. OTHER

The RustMo1 Project launching event (ceremony) was held on 28 May 2013. The Minister of Energy also attended the function to witness the progress of this renewable energy project (RustMo1).

12. OVERVIEW OF ENVIRONMENTAL PERFORMANCE

For the Overall environmental performance in percentage scores please refer to the attached environmental audit checklist (Appendix B) that clearly reflects on the contractor's performance on individual activities. It is important to note that the attached checklist for construction activities has been compiled with reference to the approved EMP and Environmental Authorisation for RustMo1, as well as all the relevant environmental regulations of South Africa.

Each element in the attached environmental compliance monitoring checklist is scored on the following basis:

- » Score 3 : best practice/full compliance,
- » Score 2 : satisfactory (>50% compliance),
- » Score 1 : unsatisfactory (<50% compliance),
- » Score 0 : nothing in place and
- » Score N/A : not applicable at this time.

13. CONCLUSIONS AND RECOMMENDATIONS.

To date the ECO is satisfied with the level of environmental performance at RustMo1. All the activities on site are undertaken with careful consideration of their impacts on the environment. The contractors have developed specific and carry-over environmental method statements for all of their construction activities on site.

There is a good level of communication between the ECO, Contractors, and the Client. This is considered to be advantageous to the progress of the project. The contractors on site make use of all the advice and recommendations they receive from the ECO, and that helps to avoid/minimise non-compliances on site and to know how to resolve/rectify a Non-conformance if it occurs.

The ECO recommends that all the contractors on site should strive to maintain this level of environmental performance to avoid/minimise any possibilities of Non-compliances as the construction progresses.

This report was prepared by Dakalo Nemalegeni (ECO) of Savannah Environmental for RustMo1 Solar Farm.

APPENDIX A: COMPLAINTS REGISTER

No complaints were received for the month of May 2013

**APPENDIX B:
ENVIRONMENTAL CHECKLIST**

