

RUSTMO1 SOLAR FARM

ENVIRONMENTAL COMPLIANCE MONITORING REPORT

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Monthly ECO Report - August 2013
Submission to DEA &
RustMo1 Solar Farm (Pty) Ltd



Prepared for: RustMo1
RustMo1 Solar Farm (Pty) Ltd
PO.Box 7
Sundowner
2161

Savannah Environmental Pty Ltd

1ST FLOOR, BUILDING 2,
5 WOODLANDS DRIVE OFFICE PARK
CNR WOODLANDS DRIVE AND WESTERN SERVICE ROAD,
WOODMEAD
PO BOX 148, SUNNINGHILL, 2157
TEL: +27 (0)11 656 3237
FAX: +27 (0)86 684 0547
E-MAIL: INFO@SAVANNAHSA.COM
WWW.SAVANNAHSA.COM



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1. INTRODUCTION

This is the 07th Compliance Report for the RustMo1 PV Facility and outlines the findings of the bi-weekly environmental compliance monitoring undertaken by the ECO during the month of August 2013. Lusani Rathanya of Savannah Environmental, as the appointed ECO, is responsible for monitoring, reviewing, and verifying compliance to EPC Contractor (i.e. Juwi Renewable Energy), and all other contractors on site with the environmental specifications contained in the Environmental Authorisation (EA), EMP, 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 per the construction schedule/ programme. All pre-construction-activities were completed and no environmental issues noted. The main activities undertaken on site during this reporting period comprise:

- » Contractor Pambele completing the Relay Room (Ceiling, Gutters, Painting and Flooring)
- » Contractor LH Marthinusen Assembled the Transformer and undertook testing; painting it is underway
- » Contractor Brand Engineering is laying Control cables, assembling the 88kV Isolator and 2x22 Isolator Assembled, Construction Caps on 22kV Cable support, 22 kV Bus support.

Activities expected within the next month (i.e. September 2013) include:

- » All power and control equipment will be erected (components, VTs, CTs Breakers, Serge Arrestors and Control equipment for OPS building)
- » MV and HV terminations on the conductor
- » Mechanical completion expected on 15 September 2013

As per the approved EMP for the site, bi-weekly compliance monitoring has been taking place to ascertain compliance with relevant legislation and documentation. This approach is based on the stage of completion of earthworks and high-level compliance on site. Site monitoring was conducted on the 16th August 2013 and 02nd September 2013.

3. AUDIT FINDINGS

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

Oil spillages were found on the ground next to the generator (02 September 2013). This is mainly due to ineffective monitoring of the drip tray placed underneath the generator. The health and safety officer was advised to monitor the container and empty it often (refer to figure 1.).



Figure 1: Oil spillages surrounding the generator

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.

All previously recorded non-conformities have been closed /resolved in the previous reporting periods.

3.4. Compliances and Conformances recorded to date

- » All 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.
- » All the contractors on site have all required safety equipment.
- » There is good communication between the client, Contractors and, Sub-contractors as well as the ECO.
- » Housekeeping is being maintained and no littering has been noted.
- » All open trenches dug for the relay room have been appropriately barricaded.

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

The following measures were put in place in order to mitigate environmental issues:

- » Environmental training/induction was held for construction workers as part of environmental awareness. This training has been reinforced through Toolbox Talks delivered on a regular basis.
- » There is a designated smoking area on site to reduce the probability or risk of fire outbreaks on site (fire extinguishers also available on site).
- » Construction waste bins are not over-filled.
- » Construction workers are 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) are made available to construction workers on site.

3.6. Outstanding matters

There are no outstanding matters for the month of August 2013. All outstanding matters for previous months have been closed, and the contractors are currently complying with the EA, EMP and applicable legislation.

4. ENVIRONMENTAL MONITORING RECORD OF OBSERVATIONS

4.1. Waste Management

In order to manage waste generated on site, chemical toilets and bins have been put in place at different areas. The construction waste bins have been placed within a designated area and are appropriately labelled. Sanitech and Coastal Hire (waste management contractors) service the waste bins and chemical toilets on a weekly basis.

4.1.1 Solid Waste (domestic/general)

The contractor is undertaking precautions to manage general wastes generated during construction work in the form of waste skips and wheelie bins that have been on site. General waste generation is currently low at Rustmo1 Solar Farm and there is no evidence of pollution from waste on site.

4.1.2 Liquid Waste

The contractor is also undertaking necessary measures to manage liquid sewage waste in the form of chemical toilets on site. These chemical toilets are accessible to all construction workers and waste management companies service them on a regular basis (i.e. Sanitech and Coastal Hire). There are enough toilets on site for both men and women. Sewage waste generation is currently low and no evidence of pollution is evident on site.

4.1.3 Hazardous Waste

The contractor and subcontractors have been taking measures to manage oil and diesel spills in the form of drip trays placed under the construction vehicles when not operated. At present, no major hazardous spillage has occurred on site, although small spills have been noted. Spill kits 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

There was no occurrence of protected and endangered species within the development area during pre-construction activities. The developer has recommended the planting of trees as part of the rehabilitation plan after the construction phase.

4.2.2 Fauna and Avi fauna

No animals were observed on site (RustMo1) during the reporting month of August 2013. 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

Department of Water Affairs issued a water use licence for the abstraction of water from the borehole. The Contractor (Finishing Touches) has completed the trenching for placement of water pipeline from the borehole to the solar farm.

4.2.4 Soil Management

The site contains no stockpiled soils, and all the excess soil that was on site in the previous month was utilised to fill in the eroded area on the farm near Marikana Platinum Mine. The ECO has received a signed formal agreement letter between the landowner and the contractor, Brand Engineering, regarding the re-use of soil for filling in the eroded area.

4.3. Heritage

No heritage sites were noted on site during the EIA and none have been recorded during excavations completed to date. However, it is still possible that sites could be uncovered during excavation activities associated with construction (Ref: EMP Page 34). The contractors have not disturbed any of the already known heritage sites (e.g. gravesite) within or close to the development footprint.

The environmental awareness toolbox talks conducted by the ECO made Contractors aware of any archaeological artefact that could be found within the site; and if found any work in that area has to be seized and findings should be reported to the South African Heritage Resources Association (Ref: EMP page 34; EA - Scope of authorisation Point 10).

4.4. Social

4.4.1. Public Involvement

Approximately 80% of workers at RustMo1 are from the local communities, and the public involvement is notable through the regular informative meetings the contractor has with the community liaison officer (CLO) for RustMo1. The Contractor Brand Engineering hired an additional 59 temporary labour workers from local communities from the 15th – 26th July 2013.

4.4.2. Complaints and claims for damage

There were no complaints or claims raised during this reporting period. All complaints from Interested and affected parties will be recorded in the I&AP Complaints register and a copy will be available on site at all times.

4.4.3. Landowner issues

There were no issues raised by landowners with regard to the project during the month of August.

4.5. Rehabilitation

The completion of the construction phase will culminate in the rehabilitation of all disturbed areas. According to the client, actions will be undertaken 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

The EPC Contractor, Juwi Renewable Energy, and all the Sub-contractors on site, have implemented the following 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 identifiable and required to wear appropriate Personal Protection Equipment (PPE), which includes safety boots, earplugs, reflector vests, and hard hats.
- » Barricading is in place for all the open trenches on site in order to protect animals and anyone working on site from falling into the opened trenches.
- » The emergency assembly point, and designated smoking areas have been demarcated on site, and signage erected respectively for each of the designated area.
- » The Safety officer communicates the Emergency Evacuation Procedure to all construction workers. Plans addressing evacuation on site are kept by the Safety and Health Officer
- » Fire fighting equipment (e.g. fire extinguishers, and fire beaters) is present on site
- » Dust Suppression takes place on a weekly basis on internal access road to the OPS Building.

6. INFRASTRUCTURE MANAGEMENT

The subcontractor Pambele, is in the process of completing the Relay Room (Ceiling, Gutters, Painting and Flooring). All trenches dug are barricaded and no littering in the surrounding areas has been noted (see figure 2 below).



Figure 2: Relay room within the RustMo1 Solar Farm

The subcontractor, Brand Engineering, lay control cables, assembled the 88 kV Isolator and 2x22 Isolator, construction Caps on 22kV Cable support and 22 kV Bus support. Furthermore, Pambele subcontractors were undertaking the construction of the 22/88kV substation (refer to figure 3 below).



Figure 3: Construction of a 22/88 kV substation on site

7. ENVIRONMENTAL AWARENESS AND TRAINING

Environmental awareness at the RustMo1 site is achieved through the undertaking of regular environmental toolbox talks, inductions, and SHE (Safety & Health, and Environment) weekly meetings. The table below indicates the major environmental awareness toolbox talks conducted to RustMo1 construction workers on site during this reporting period.

DATE	TOOLBOX TOPIC	VENUE
05/08/2013	Spillage Response	RustMo1 Solar Farm
26/08/2013	Waste Management	RustMo1 Solar Farm

8. NON-COMPLIANCE AND CONTRACTOR COMMUNICATIONS

A minor non-compliance was noted on site due to spillage of oils on areas surrounding the generator. Communication between the client, ECO, and the contractor remains good.

9. INCIDENTS

No environmental incidents were recorded during this reporting period.

10. MEETINGS AND CORRESPONDENCE

DATE	MEETING/CORRESPONDENCES	VENUE
19/08/2013	SHE Weekly Meeting	RustMo1 Solar Farm
	Progress meeting every Tuesday	RustMo1 Solar Farm

11. CONCLUSION AND RECOMMENDATIONS

To date the ECO is satisfied with the level of environmental performance for Rustmo1 site. All the construction activities on site are progressing with careful consideration to 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 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 assists to avoid/minimise non-compliances on site and to inform the resolution/rectification of 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.

Lusani Rathanya (ECO) of Savannah Environmental prepared this report for RustMo1 Solar Farm.