EMERGENCY RESPONSE PLAN

THE PROPOSED CONSTRUCTION OF A 90MW PV SOLAR PARK PROJECT, AND 66KV TRANSMISSION LINE TO CONNECT TO EXISTING SUBSTATION OVER PORTIONS 3, 4, 6 AND REMAINING EXTENT OF THE FARM WELTEVREDEN 746-LS WITHIN THE POLOKWANE LOCAL MUNICIPALITY, LIMPOPO PROVINCE.

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## PROJECT DETAILS

<table>
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<tr>
<th>DEA Reference No</th>
<th>DEA Ref: 14/12/16/3/3/2/1049</th>
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<td><strong>Project title</strong></td>
<td>Proposed construction of a 90MW PV solar park project, and 66KV transmission line to connect to the existing substation over portions 3, 4, 6 and the remaining extent of the farm Weltevreden 746-LS within the Polokwane Local Municipality, Limpopo Province</td>
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| **Report Status** | Emergency Response Plan |
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1 PURPOSE

The purpose of the Emergency Response Plan is:

- To assist contractor personnel to prepare for and respond quickly and safely to emergency incidents, and to establish a state of readiness which will enable prompt and effective response to possible events.

- To control or limit any effect that an emergency or potential emergency may have on site or on neighbouring areas;

- To facilitate emergency response and to provide such assistance on the site as is appropriate to the occasion;

- To ensure communication of all vital information as soon as possible;

- To facilitate the reorganisation and reconstruction activities so that normal operations can be resumed;

- To provide for training so that a high level of preparedness can be continually maintained.

This plan outlines response actions for potential incidents of any size. It details response procedures that will minimise potential health and safety hazards, environmental damage, and clean-up efforts. The plan has been prepared to ensure quick access to all the information required in responding to an emergency event. The plan will enable an effective, comprehensive response to prevent injury or damage to the construction personnel, public, and environment during the project. Contractors are expected to comply with all procedures described in this document. A Method Statement should be prepared at the commencement of construction detailing how this plan is to be implemented as well as details of relevant responsible parties for the implementation.

2 PROJECT-SPECIFIC DETAILS

Jeka Resources (Pty) Ltd is proposing to establish/construct a 90MW PV Solar Park and 66KV transmission line to connect to the existing Bakone substation on a 350ha of land on farm Weltevreden 746-LS within the Polokwane Local Municipality, Limpopo Province.
During construction of the 90 PV solar facility and 66KV transmission line, the construction lay-down yard will occupy a surface area of 350 ha and will include a site office, internal roads, construction camps, mobile toilets and bathroom facilities, a car yard where all vehicles will be parked to reduce oil spillage, and the hydrocarbon management facility. The potential for contaminating the soil resource is dependent on the presence of vehicles, machinery and processes involving various types of chemicals. For the Polokwane PV site, very little of these are anticipated during the life span of the project. The potential impact is thus assumed to be minor and localised if it should occur (i.e. oil leakage from vehicles and earth moving machines).

The presence of people on the site during both construction and operation could increase the risk of fire in the area if appropriate prevention measures are not in place.

3 EMERGENCY RESPONSE PLAN

There are three levels of emergency as follows:

- Local Emergency: An alert confined to a specific locality.
- Site Emergency: An alert that cannot be localised and which presents danger to other areas within the site boundary or outside the site boundary.
- Evacuation: An alert when all personnel are required to leave the affected area and assemble in a safe location.

If there is any doubt as the whether any hazardous situation constitutes an emergency, then it must be treated as an Evacuation.

Every effort must be made to control, reduce or stop the cause of any emergency provided it is safe to do so. For example, in the event of a fire, isolate the fuel supply and limit the propagation of the fire by cooling the adjacent areas. Then confine and extinguish the fire (where appropriate) making sure that re-ignition cannot occur; for a gas fire it is usually appropriate to isolate the fuel and let it burn itself out but keep everything around the fire cold.
3.1 EMERGENCY SCENARIO CONTINGENCY PLANNING

3.1.1 Scenario

Spill which would result in the contamination of land, surface or groundwater;

3.1.1.1 Spill Prevention Measures

Preventing spills must be the top priority at all operations which have the potential of endangering the environment. The responsibility to effectively prevent and mitigate any scenario lies with the Contractor and the Environmental Manager. In order to reduce the risk of spills and associated contamination, the following principles should be considered during construction and operation activities:

- All equipment refuelling, servicing and maintenance activities should only be undertaken within appropriately sealed designated areas.
- All maintenance materials, oils, grease, lubricants, etc. should be stored in a designated area in an appropriate storage container.
- No refuelling, storage, servicing, or maintenance of equipment should take place within 50m of drainage lines or sensitive environmental resources in order to reduce the risk of contamination by spills.
- No refuelling or servicing should be undertaken without absorbent material or drip pans properly placed to contain spilled fuel.
- Any fluids drained from the machinery during servicing should be collected in leak-proof containers and taken to an appropriate disposal or recycling facility.
- If these activities result in damage or accumulation of product on the soil, the contaminated soil must be disposed of as hazardous waste. Under no circumstances shall contaminated soil be added to a spoils pile and transported to a licensed hazardous waste disposal facility.
- Chemical toilets used during construction must be regularly cleaned. Chemicals used in toilets are also hazardous to the environment and must be controlled. Portable chemical toilets could overflow if not pumped regularly or they could spill if dropped or overturned during moving. Care and due diligence should be taken at all times.
- Contact details of emergency services and Contractors are to be clearly displayed on the site. All staff are to be made aware of these details and must be familiar with the procedures for notification in the event of an emergency.
- SABS approved Spill kits must be made available onsite for the clean-up of spills and leaks of contaminants. The relevant construction crew members must be trained in their use.
• Routine servicing and maintenance of vehicles must not take place on-site (except for emergencies). If repairs of vehicles must take place, an appropriate drip tray must be used to contain any fuel or oils.
• Fuel storage areas must be inspected regularly to ensure bund stability, integrity, and function.
• Keep a record of all hazardous substances stored on site. Clearly label all the containers storing hazardous waste.
• Transport of all hazardous substances must be in accordance with the relevant legislation and regulations.
• An effective monitoring system must be put in place to detect any leakage or spillage of all hazardous substances during their transportation, handling, installation and storage.
• Precautions must be in place to limit the possibility of oil and other toxic liquids from entering the soil or clean stormwater system.

i. **Procedures**

The following action plan is proposed in the event of a spill:

• Spill or release identified.
• Assess person safety, safety of others and environment.
• Stop the spill if safely possible.
• Contain spill to limit entering water bodies and surrounding areas.
• Identify substance spilled.
• Contaminated soil to be collected, stored and disposed to disposal site.
• Quantify spill (under or over guideline/threshold levels).
• Notify Site Manager and emergency response crew and authorities (in event of major spill).
• Inform users (and downstream users) of potential risk.
• Spill clean-up kit.
• Record of spill incident on company database.

**a) Procedures for containing and controlling the spill (i.e. on land or in water)**

Measures can be taken to prepare for quick and effective containment of any potential spills. Each contractor must keep sufficient supplies of spill containment equipment at the construction sites, at all times during and after the construction phase. These should include specialised spill kits or spill containment equipment.
Other spill containment measures include using drip pans underneath vehicles and equipment every time refueling, servicing, or maintenance activities are undertaken.

Specific spill containment methods for land and water contamination are outlined below.

**Containment of Spills on Land**

Spills on land include spills on rock, gravel, soil and/or vegetation. It is important to note that soil is a natural sorbent, and therefore spills on soil are generally less serious than spills on water as contaminated soil can be more easily recovered. It is important that all measures be undertaken to avoid spills reaching open water bodies. The following methods could be used:

- **Dykes**
  These can be created using soil surrounding a spill on land. Dykes are constructed around the perimeter or down slope of the spilled substance. A dyke needs to be built up to a size that will ensure contaminant of the maximum quantity of contaminant that may reach it. A plastic tarp can be placed on and at the base of the dyke such that the contaminant can pool up and subsequently be removed with sorbent materials or by pump into barrels or bags. If the spill is migrating very slowly, a dyke may not be necessary and sorbents can be used to soak up contaminants before they migrate away from the source of the spill.

- **Trenches**
  Trenches can be dug out to contain spills. Spades, pick axes or a front-end loader can be used depending on the size of trench required. Spilled substances can then be recovered using a pump or sorbent materials.

**Containment of Spills on Water**

Spills in water can negatively impact water quality and aquatic life. All measures need to be undertaken to contain spills on open water. The following methods could be used:

- **Weirs**
  Weirs can be used to contain spills in streams and to prevent further migration downstream. Plywood or other materials found on site can be placed into and across the width of the stream, such that water can still flow under the weir. However, only effective for spilled substances which float on the water surface.

- **Barriers**
  In some situations barriers made of netting or fence material can be installed across a stream, and sorbent materials placed at the base to absorb spilled substance. Sorbents
will need to be replaced as soon as they are saturated. Water will be allowed to flow through.

**b) Procedures for transferring, storing, and managing spill related wastes**

Used sorbent materials are to be placed in plastic bags for future disposal. All materials mentioned in this section are to be available in the spill kits. Following clean up, any tools or equipment used must be properly washed and decontaminated, or replaced if this is not possible.

Spilled substances and materials used for containment must be placed into empty waste oil containers and sealed for proper disposal at an approved disposal facility.

**c) Procedures for restoring affected areas**

Criteria that may be considered include natural biodegradation of oil, replacement of soil and revegetation. Once a spill of reportable size has been contained, the Environmental Control Officer and the relevant Authority must be consulted to confirm that the appropriate clean up levels are met.

3.1.2 Scenario: Fire (and fire water handling)

i. **Action Plan**

The following action plan is proposed in the event of a fire:

- Quantify risk.
- Assess person safety, safety of others and environment.
- If safe – attempt to extinguish fire using appropriate equipment.
- If not safe to extinguish, contain fire.
- Notify Site Manager and emergency response crew and authorities.
- Inform users (and downstream users) of potential risk of fire.
- Record of incident on company database.
- Cooking/meals must take place in a designated area. No firewood or kindling may be gathered from the site or surrounds.
- Informal vending stations should not be allowed on or near the construction site.
- Fire-fighting equipment and training must be provided before the construction phase commences.
ii. Procedures

Large scale fires may spread very fast in the environment it, hence it is most advisable that the employee/contractor not put his/her life in danger in the case of an uncontrolled fire. Portable firefighting equipment must be provided in line with the Building Code of South Africa and the relevant provincial building code. All emergency equipment including portable fire extinguisher, hose reels, hydrants must be maintained and inspected by a qualified contractor in accordance with the relevant legislation and National standards.

Current evacuation signs and diagrams for the building or site that are compliant to relevant state legislation must be provided in a conspicuous position, on each evacuation route. Contact details for the relevant emergency services should be clearly displayed on site and all employees should be aware of procedures to follow in the case of an emergency.

a) Procedures for initial actions

Persons should not engage in trying to stop the fire if any of the following conditions exist:

- No training or instructed in the use of a fire extinguisher.
- Do not know the cause of the fire or what is burning.
- The fire is spreading rapidly.
- No proper equipment to stop the fire.
- No means of escape available.
- Possibility of inhaling toxic smoke.
- No safety clothing available e.g. flame resistant clothing

b) Reporting procedures

- Report fire immediately to the Site Manager who will determine if it is to be reported to the relevant emergency services and authorities.
- The Site Manager must have copies of the Report form to be completed.
FIRE MEDICAL EMERGENCY

Is it safe to approach the injured worker/staff

NO

Can the area be made safe

YES

Ensure that the area is safe then assess the persons injuries

In the event of a fire
If safe, extinguish the fire using the appropriate fire extinguisher equipment

Do NOT fight the fire if any of these conditions exist
You have not been trained
You do not know what is burning
You do not have the proper equipment
The fire is spreading rapidly

Serious or unknown injury

Note if the person has received
• An electrical shock
• Deep laceration
• Suspected internal damage
• Shortness of breath

...treat as an emergency, following the emergency procedure

Apply 1st Aid and report injury

Emergency Procedure
Contact emergency service police, fire fighter, ambulance...
Do not remove injured person unless they or yourself is exposed to immediate danger

Comfort and support the injured person
If necessary, evacuate the site as per the evacuation plan
HAZARDOUS MATERIAL SPILL

Alert all affected parties

Identify source

Substance identification

YES

Refer to SANS for hazardous goods classification, 1st aid measurements and PPE requirements

NO

Non-essential persons evacuate site as per emergency evacuation procedure
Isolate affected area
Erect temporary barricade and place suitable warning signs

Notify emergency services, environmental and safety representative as necessary

No one shall leave the emergency assembly point without being accounted for and ALL CLEAR has been given to return to work by the emergency response coordinator

Is it safe to approach the injured worker / work area

YES

Isolate affected area
Erect a temporary barricade and place suitable warning signs and restrict unnecessary movement through the area

NO

Is the substance flammable

YES

Remove / isolate ignition source if safe to do so

Contain hazardous substance and toxic emissions using spill kit as per applicable MSDS

Notify emergency services, environmental and safety representative as necessary
4 CONCLUDING STATEMENT

Emergency services should be taken into consideration during construction and the operational phase of the project. The contractor should be made alerted immediately if any form of emergency that occurs on sites and necessary measures should be implemented to ensure safety of the workers and the environment.