Monitoring Guide 14/12/16/3/3/2/2169

PROPOSED RENEWABLE ENERGY GENERATION FACILITY LICHTENBURG PV SOLAR PARK, DITSOBOTLA LOCAL MUNICIPALITY, NORTH-WEST PROVINCE

Short name: Lichtenburg PV Solar Park

July 2022

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MONITORING GUIDE FOR THE CONSTRUCTION AND OPERATION AT THE PROPOSED RENEWABLE ENERGY GENERATION FACILITY CALLED LICHTENBURG PV SOLAR PARK, DITSOBOTLA LOCAL MUNICIPALITY, NORTHWEST PROVINCE

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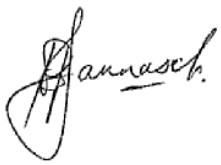

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1 INTRODUCTION

Construction at solar PV sites will inevitably use equipment and vehicles that contain hazardous substances or which has the potential to spill hazardous substances on the site. There will also be chemicals end other hazardous substances which are used on site, which needs to be stored on site. This creates the potential for possible spillages en the potential that these substances can pollute soil and water systems on site. It thus needs to be handled with care and strict control needs to be exercised over the handling and use of such substances.

2 POSSIBLE SOURCES OF HAZARDOUS SUBSTANCES

The following substances are potentially stored or used on site:

- Most of the construction vehicles and equipment used on site runs on diesel. The diesel is stored either in stationary tanks or in mobile fuel trailers or bowsers on site
- The oils needed for lubrication of the equipment and vehicles.
- Hydraulic oils used in drills and equipment like cranes, TLB's and graders
- Paints used on site
- Petrol cans for supplying fuel to four-wheeler motor cycles used on site
- Other chemicals and detergents used on site.

3 MEASURES TO STORE HAZARDOUS SUBSTANCES ON SITE

- All hazardous substances on site must be handled in the following ways:
- All access to any of these substances must be controlled access which means that the substances must be locked away.
- All containers or storerooms where these substances are kept must have an impermeable floor and must be able to contain the substance in the room/store where it may be cleaned up.
- Where the floor is not impermeable, the substances will be stored in a drip tray capable of containing any spills from these containers
- Material Safety Data Sheets (MSDS) for the specific substances must be available in a central file and at the place where the substance is stored.
- All substances will only be issued against a signature- records will be kept.
- Stationary diesel tanks will be kept in a concrete bunding able to contain at least 110% of the volume of the tank. The tap to drain storm water inside this bunding must run through and oil/water separator. Al oils and fuel from this separator must be taken to an oil recycling company. Keep records of all oil/fuel removed in this way.
- Fuel trailers must be parked either with sufficient drip trays underneath or it must be parked on an area where there is plastic sheeting underneath the soil to prevent ingress of the fuel/oil into the subsoil or groundwater. Polluted soil has to be removed from time to time to a site registered to accept this material.

4 HANDLING OF SPILLS

4.1 SMALL SPILLS ON THE GROUND.

- Pick up the soil to a depth where it is clean from the substance and store it in a closed container from where it cannot leak and closed to rain.
- Have these soils removed by a registered contractor like Enviro-Serve and keep records of volumes and details of each removal.

4.2 LARGE SPILLS ON THE GROUND

- Keep spill kits available on site
- Contain the spill by either using a spill absorbent sock from the spill kit or by making a soil berm around the spill.
- Scoop or pump out as much as possible of the pollutant into a closed container.
- Remove the polluted soil to a depth below the pollutant and place on a large sail to prevent any leaching of the pollutant to the soil and groundwater
- Close the sails to prevent the ingress rainwater
- Have the soil removed form site by a company registered to do that to a permitted waste site or let the company treat the soil on site until the pollutant's levels are low enough to dispose of the soil on site again.
- If there is any possibility that there is pollution of groundwater or surface water, samples have to be taken to be analysed to ensure that pollution can be treated if necessary.

4.3 TRANSPORTATION OF HAZARDOUS SUBSTANCES

- It is the responsibility of the transportation company to train their drivers and crews to handle the packaging and transportation of hazardous substances safely and environmentally responsible.
- All vehicles transporting hazardous substances to the PV solar site must carry spill response kits as first line treatment of spillages of hazardous substances from their freight.
- Material Safety Data Sheets (MSDS) for the specific substances transported must be available in the vehicle used for the transportation of the substances.

5 TRAINING OF STAFF

- All staff working on site and responsible for a specific area must be trained in the detection of incidents, and the reporting there-of
- All staff on site must be trained in the using of the spill response kit.
- All staff must be trained in the using of MSDS's and first aid kits should it be necessary during any spill incident.
- The staff must undergo an environmental consciousness course.

6 GENERAL

All spill incidents must be reported to the environmental control officer who must then report it to the authorities as required by law.

Each pollution incident must be entered into a register on site. All details about the spill, the emergency measures taken, and the clean-up done must also be part of the entry in the register.

Preventative measures must be drawn up to prevent recurring of the incident.

The incident register must be available for scrutiny by IAP's should it be requested.

7 SUMMARY

All pollution incidents especially with regard to leakages or spillages of hazardous substances are important and should be reported and investigated to prevent recurrence of such incidents. It is the duty of each worker and staff member to take the responsibility to monitor their work surroundings for spill incidents and to report it should it happen. This will ensure continual improvement in the environmental performance of the construction and operations teams on the site.