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THE LEADER IN RESOURCE RECOVERY

ALLAWUNA FARM LANDFILL – FUEL/CHEMICAL STORAGE & HYDROCARBON SPILL MANAGEMENT PLAN

This plan describes the procedures for the storage and handling of fuel and chemicals and the management measures for hydrocarbon spills for the Allawuna Farm Landfill in the Shire of York.




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1 INTRODUCTION

SITA Australia Pty Ltd (SITA) wishes to develop a landfill facility in the Shire of York. The proposed facility will be located on Allawuna Farm, Saint Ronans. The local site location is shown in the below **Figure 1**. It is proposed that this facility would receive putrescible waste, clean fill, Type I & II Inert Waste, contaminated solid waste¹ and Type I & II Special Waste. The facility will accept up to 250,000 tonnes of waste annually.

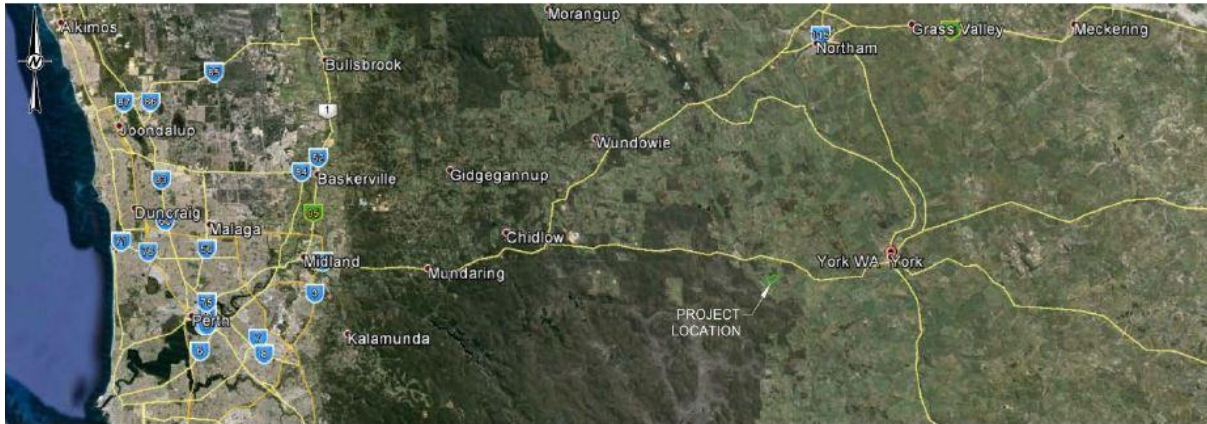


Figure 1: Location of Allawuna Farm, St Ronans

1.1 PURPOSE OF THE DOCUMENT

The purpose of this document is to provide a standard set of management procedures that will be adopted for fuel and chemical storage, handling and response to hydrocarbon spills at the Allawuna Farm Landfill site.

This plan outlines the storage and management of fuels and chemicals onsite and outlines the procedures for response to spills at the site.

¹ Meeting waste acceptance criteria specified for Class II landfills.



2 MANAGEMENT FOR FUELS AND CHEMICALS

2.1 OBJECTIVE

To ensure that best practicable measures are taken to prevent fuel and chemical spills (such as hydrocarbon) that may adversely affect the environmental values or the health, welfare or amenity of people and nearby land users by meeting accepted guidelines, standards and criteria.

Hydrocarbons include a wide range of products ranging from petroleum through to heavier lubricants both naturally occurring and synthetic. Products that will be used on site include fuels, oils hydraulic fluids, lubricants and greases.

SITA understands that hydrocarbons (spills or leaks) can impact the environment and that these need to be managed by using concrete bunded areas, designated refuelling areas and adequately bunded storage pallets to ensure that any spills or leaks are managed quickly, effectively and safely.

2.2 ACCOUNTABILITY

It is the responsibility of all employees and contractors to manage hydrocarbon spills as they occur. Any spill shall also be reported immediately to the Landfill Manager. It is expected that all staff and contractors will comply with these requirements.

2.3 FUEL AND CHEMICAL STORAGE

The maximum quantity of diesel stored onsite for landfill plant and equipment will be approximately 35,000 litres, oil approximately 1,000 litres and lubricants and grease approximately 400 litres.

The above ground diesel fuel storage tank, comprising of a self bunded double wrapped tank (**Figure 2**) will be located next to the workshop within the infrastructure area (**Figure 3**).



Figure 2: Example of Self Bunded Diesel Storage Tank

The fuel tank will be installed and commissioned in line with the *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007* and Australian Standard AS 1940 *The storage and handling of flammable and combustible liquids*.

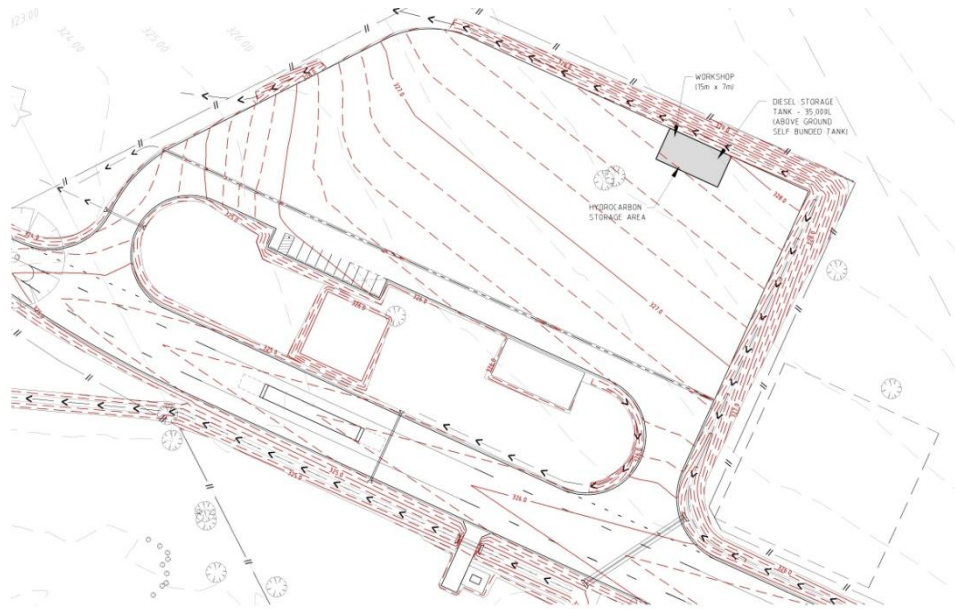


Figure 3: Location of Diesel and Chemical Storage within the Infrastructure Area

Oils and lubricant storage containers will be stored within the workshop area on bunded pallets (Figure 4).



Figure 4: Examples of Bunded Storage Pallets for Oils and Greases

Spill kits will be located throughout the facility to clean up any fuel or chemical spills (Figure 5). A register of spill events will be maintained for future reference.



Figure 5: Example of Spill Kit and Contents

2.4 POTENTIAL SOURCES OF SPILLS

Hydrocarbon spills can occur when refuelling on site plant and equipment through over filling, failure to maintain a seal between the container and equipment to be filled or machinery or vehicle collisions or roll overs onsite. Low volume hydrocarbon spills can also occur from workshop chemicals and solvents, such as oil, grease, degreaser and lubricants.

2.4.1 Spill during refuelling diesel storage tank

There is a low-moderate risk of hydrocarbon spillage when pumping from a tanker truck to the above ground storage tank. The low-moderate risk, is mainly associated with the fuel volume of the refuelling truck and the onsite diesel storage tank (i.e. consequence of a major spill), rather than the risk occurring. This can be caused by over filling of the storage tank, rollover of the refuelling truck, failure of the filling hose and seals or tank rupture due to impact or fatigue.

These spills can be mitigated by ensuring that the tank has enough capacity to receive the load, by dipping before discharging and by using a licensed contractor with quality assured and maintained equipment, together with a concrete containment bund which complies with AS 1940.

2.4.2 Spill during refuelling machinery or power generator

There is a slight risk of hydrocarbon spillage when pumping from the above ground storage tank or mobile fuel storage tank to refuel machinery, vehicles or the power generator. This can be caused by over filling of the machinery/vehicle or generator, failure of the filling hose or failure to maintain a seal between the container and equipment.

These spills can be mitigated by ensuring that that care is taken during refuelling of machinery/vehicles or the power generator, all hoses and pumps are inspected for damage or wear regularly and refuelling occurs within the designated refuelling area such as concrete bunded areas or within the landfill cell.

2.4.3 Spill resulting from an accident

There is a low risk of hydrocarbon spillage caused due to a vehicle accident or collision. These incidents can lead to the rupture of fuel storage tanks and fuel lines as a result of a vehicle accident or impact with a fuel storage tank or vessel.

This risk is minimised onsite by the management of vehicles/machinery with strict speed limits, the maintaining of site roads, signage, induction and training of drivers and operators.

2.4.4 Spill resulting from workshop operations

There is a low risk of hydrocarbon spillage caused due to a leak or spillage of workshop chemicals and solvents, such as oil, grease, degreaser and lubricants. The workshop will have a concrete floor, oils and grease containers will be stored on bunded pallets and spill kits will be available on site to clean up any fuel or chemical spills from the workshop operations.

2.5 SPILL KITS

Appropriate spill kits will be placed on site near refuelling areas and within the workshop area to assist in the containment, management and disposal of hydrocarbon spills at the site. These spill kits will be replaced immediately if they are used for spills.



2.6 MANAGEMENT OF FUELS AND CHEMICALS

The following management measures will be implemented at the Allawuna Landfill Site to reduce the likelihood of spills:

- The quantity of chemicals and fuels stored will be kept to a minimum,
- Self bunded tanks, pallets or concrete bunds will be used for storing chemicals and diesel,
- The workshop and apron areas will be sealed with concrete or asphalt,
- The bunded tanks and concrete pads will be surrounded by a 2 m wide gravel apron to minimise the risk of fire and grassed areas within 30 m of these areas will be cleared or regularly trimmed to maintain a low fuel load,
- Mobile pumps used throughout the site will be located within spill trays,
- Fire extinguishers will also be placed near high risk areas. The Fire Management Plan outlines the procedures for chemical and fuel fires at the site,
- With the exception of the diesel powered generator all refuelling of mobile plant will be undertaken in the designated bunded refuelling areas (or on the active landfill area for the compactor trucks),
- All chemicals will be stored as per manufacturer's recommendations and material data safety information sheets will be made available to all staff,
- Material Safety Data Sheets (MSDS) will be maintained for all chemicals and fuels on site, with MSDS made available to all staff,
- Appropriate contingency plans have been developed and implemented to manage spills or accidents in the landfill management plan known as the Emergency Procedures Guide and Contingency Plan,
- Any hazardous waste arising from spent chemicals, contaminated soil in the event of a leakage and petroleum waste will be stored on an impervious hardstand and transported off site for final disposal by a licenced contractor, and
- Empty chemical and fuel containers will be collected for recycling or disposal by an appropriately licensed contractor.

2.7 PROCEDURE FOR SPILLS

The following procedures shall be implemented at the Allawuna Landfill site for the management of hydrocarbon spills.

2.7.1 Stop and assess the situation

Stop all activities in the area, assess the situation, ensure the safety of all personnel and remove all possible ignition sources.

2.7.2 Source of spill

Identify the source of the spill and act swiftly. Hydrocarbon spills can occur anywhere fuels and chemicals are used, stored and transported. Spills can occur inside or outside of bunded areas.



Bunded areas are designed to contain spills and are therefore easy to clean up. However, spills outside of bunded areas are often more serious and require immediate action and clean up.

It is noted that if a spill is of an unknown substance or onsite personnel consider it unsafe or it could pose a threat to people or property together with the risk of fire, toxic fumes or explosion. This should be reported to the Landfill Manager immediately and emergency procedure should follow those as outlined in the Allawuna Farm Landfill Emergency Procedures Guide and Contingency Plan.

2.7.3 Control

The source of the spill shall be controlled to ensure that the flow of hydrocarbon is stopped as soon as possible. This may mean isolating machinery and pumps, or if the spill has resulted from a container that has become damaged, the container shall be placed in a position to reduce flow.

2.7.4 Contain

It is likely that most spills at the site will occur within concrete lined or sealed areas and as such will not pose an immediate risk to the surrounding environment. But if these spills are managed incorrectly, then the spill may result in contamination of subsoils or groundwater in the same manner as spills outside of these bunded and sealed areas.

Spills shall be contained as soon as possible to reduce the hydrocarbons entering drains, the subsoils and surface water bodies (such as creeks, stormwater dams etc). All spills shall be bunded off to contain or stop the flow from the spill and to prevent the hydrocarbons from spreading or moving to other areas.

2.7.5 Clean up

All hydrocarbon spills shall be cleaned up using an appropriate spill kit where safe and practicable to do so. This may also include excavation of the affected soil, stockpiling in a secure area and then sampling the area affected to determine the extent of the impact and to ensure all of the contaminants are removed.

Tested of the excavated material concentrations of the chemicals will determine its disposal into an appropriately licensed landfill site by a licensed contractor.

The affected impacted area, shall then be remediated to its former clean state. If the spill is of a large quantity, then it is recommended that the downstream ground water monitoring bores in the area be monitored to ensure there is no impact to the ground or surface water.

2.7.6 Recording

All spills shall be recorded including any remediation measures.

2.7.7 Restock

Used spill kit supplies shall be restocked or replaced immediately after a spill.

2.8 SUMMARY

It is considered that the management measures outlined above will reduce and control the instances of hydrocarbon spills at the Allawuna Farm Landfill site.



3 REFERENCES

Dangerous Goods Safety (*Storage and Handling of Non-explosives*) Regulations 2007.

Australian Standard AS 1940-2004, *The Storage and Handling Of Flammable and Combustible Liquids*.

