



Pollution Incident Response Management Plan

Wentworth Shire Council
Buronga Landfill

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1. Introduction

The Pollution Incident Response Management Plan (PIRMP), also referred to as the Plan throughout the document, will work in conjunction with the Emergency Response Plan (ERP) and the Landfill Environmental Management Plan (LEMP). These three documents play an important role in the health and safety of the environment as well as the health, safety and well-being of all persons associated with the operation of the Buronga Landfill.

In preparing the Plan it was deemed important to reiterate the definition, objectives and purpose of the Plan as referred to in the Guidelines. This serves to reinforce to all personnel, the importance of the PIRMP in the operation of the facility.

The main focus for prevention of pollution incidents is training, plant and equipment maintenance, effective site supervision and good housekeeping. Prevention of incidents can be achieved through the vigilance of all employees, subcontractors and visitors to the site.

1.1 Definition of a pollution incident

Pollution incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.

1.2 Objectives

The objectives of the Plan as set out in the Guidelines are to:

- ensure comprehensive and timely communication about a pollution incident to staff at the premises, the Environment Protection Authority (EPA), other relevant authorities specified in the Act (such as local councils, NSW Ministry of Health, WorkCover NSW, and Fire and Rescue NSW) and people outside the facility who may be affected by the impacts of the pollution incident;
- minimise and control the risk of a pollution incident at the facility by requiring identification of risks and the development of planned actions to minimise and manage those risks; and
- ensure that the plan is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency and suitability.

1.3 Purpose

To improve the management of pollution incidents and facilitate better coordination with the relevant response agencies. The plan is presented in printed form, available at the premises and will be provided to an authorised EPA officer and to any person who is responsible for implementing the plan on request.

2. Site Details

The Buronga Waste Management Centre is owned and operated by the Wentworth Shire Council.

The area of the approved waste management centre is approximately 7.5 hectares and forms part of a larger proposed landfill area covering more than 1.25 square kilometres.

The site was first used for disposal of rubbish in 1934. The landfill currently accepts 30,000 tonnes of general solid waste per annum including putrescible waste, recycling material, compost, oil and tyres.

The facility is licenced under Environment Protection Licence No 20209.

The existing landfill is unlined and plans have been prepared for the construction of a new cell which will comply with the NSW EPA Environment Guidelines: Solid Waste Landfills (1996) and the LEMP.



Figure 1 – Aerial Photo, 2012

3. PIRMP Principles

This Plan has been written in plain English (everyday language) so that it is easy to understand. The aim of any plan is for it to be appropriate to the size and complexity of the site, the number of employees involved and the types of activities undertaken on the site. The Pollution Incident Response Management Plan is no exception to this principle and hence it has been prepared accordingly.

Effective implementation of this Plan requires support from all levels of management and the full engagement and commitment of the employees who operate the site each day. The Plan will be communicated to all employees affected by it and will be reinforced at regular Toolbox meetings.

Responsibility for implementing and maintaining the Plan rests with the Waste Manager in conjunction with input from the employees and other affected parties such as regular subcontractors.

The Waste Manager will ensure that all employees read and understand the Plan during their induction at the time of employment. Sections of the Plan will be sampled regularly while the entire Plan will be tested and reviewed at least every twelve months.

The ERP and the PIRMP work as one document with both having responsibility for health and safety of people entering and working on the site as well as the health and welfare of the environment, neighbours and the whole of the community.

The ERP has reference to the Emergency Response Team and Safety Committee which meets regularly to discuss any problems that may have been identified. These two groups will now have the PIRMP as another tool for use in the management of the site.

It is important to note that incidents do not only affect personnel working on the site. They can also impact on the environment, neighbouring properties and the community as a whole.

With regard to landfills it is important to understand that the three most significant environmentally potential incident situations that can occur are leachate spills, chemical/petroleum spills and fires.

Leachate and chemical/petroleum spills have the potential to contaminate water ways and the surrounding environment. Chemical spills also have the potential to release toxic fumes into the atmosphere.

Fires on the landfill can result in the emission of significant volumes of smoke into the atmosphere which can caused harm and discomfort to the community in general.

Other instances of pollution incidents include the accidental acceptance of illegal and potentially harmful hazardous waste which is treated in this document as illegal waste as is it not an approved waste for the site.

Asbestos waste is approved for acceptance at the landfill however the material must be appropriately wrapped to prevent exposure the operational people working at the site. The Asbestos Management Procedure provided information on how asbestos must be handled at the site.

Effective pollution incident response management procedures are essential in the management of any operation and regular training of all employees and contractors is necessary to ensure their safety and well-being as well as providing them with the skills to act promptly in all situations.

4. Plan Details

4.1 Description and likelihood of hazards

While the Buronga landfill is small in terms of waste acceptance, the potential for hazardous situations still exists and therefore is not to be treated lightly.

The main areas identified where incidents can occur are with illegal wastes, leachate and petroleum products. Other areas of concern can be included over time and when deemed applicable.

4.1.1 Illegal Waste

Description of hazard

It is not uncommon for vehicles disposing of waste at a landfill to be carrying illegal waste, i.e. waste not permitted to be accepted at the licenced facility.

This type of waste cannot be accepted at Buronga Waste Management Centre and therefore must be “turned away”.

The illegal material could be a full truck load or it could consist of illegal waste mixed into permitted waste. In either instance the full load of waste must be treated as hazardous material. Where possible, the illegal material must be separated from the approved material and taken off site. If this cannot be carried out safely then the whole load of material should be removed from the site.

If it is not possible to separate the illegal material, the whole load must be removed from the premises. In both cases, the Excluded Waste Register must be filled in.

In the event that the load of illegal waste has already been deposited at the site, and the material cannot be safely loaded back onto the delivery vehicle, approval may be sought from the EPA to bury the material on site. Such instances are rare and wherever possible to material must be safely removed from the site.

Likelihood of a hazard

It is unlikely that illegal waste will never enter the site. It is however the responsibility of the weighbridge operator to prevent, wherever possible, such material coming on to the site. It is also the responsibility of the truck driver to notify the weighbridge of any illegal waste he/she is transporting.

The final step in the detection and inspection process is at the tipping face where the compactor operator and the landfill supervisor inspect the waste to ensure it complies with the licence conditions for waste acceptance.

Considering the checking and inspection systems in place it is considered a low risk that illegal waste will enter the site.

4.1.2 Leachate

Description of hazard

The site will have leachate storage tanks with an initial capacity of 60,000 litres. The leachate tanks will be placed in a bunded area located at an appropriate area on the landfill. When necessary the leachate at the base of the cell will be pumped into the tanks. The tanks will be fitted with level controls however in the event the tanks overflow, the leachate will be contained by the bund.

The leachate will be managed by irrigation onto the waste and when necessary, recirculation back into the waste. Irrigation allows large quantities of leachate to be evaporated during the hot summer period.

Likelihood of a hazard

The likelihood of leachate being directly discharged from the tanks to the environment is considered low. This would only occur if the leachate was directly pumped offsite. This is not possible as the pumps to be used in maintaining the leachate level in the tanks will not discharge any liquor off site.

There is the potential for the leachate to overflow the leachate tanks should the level controls fail, however the daily site inspections, checks, maintenance controls and leachate management through irrigation and recirculation that are proposed in the Leachate Management Plan are aimed at reducing the potential for a spill. The likelihood of leachate overflowing the leachate tanks is considered to be low.

The other situation where leachate could find its way off the site is through the irrigation system. The irrigation of the leachate will only take place over the waste and only during operating hours so that the process is supervised at all times by the Waste Manager and the waste compactor plant operator.

Severe storm events are rare within the Wentworth Shire however should such an event occur the impact on the landfill will be an increase in the level of leachate at the base of the cell. This is considered to be a low risk and will be managed by recirculating the leachate for a short period.

4.1.3 Chemical/Petroleum Products

Description of hazard

The site operates with a compactor, a dump truck, an excavator and a dozer. These items of plant are involved in placing and compacting waste and transferring VENM for use as daily cover.

The likely hazard associated with the operation of this equipment is a spill from a broken oil or fuel line which will result in the petroleum product being discharged into the waste.

The quantity of such a spill will be very small and the risk very low.

Likelihood of a hazard

The likelihood of a significant petroleum spill occurring is considered low.

The quantity of diesel fuel stored in the fuel tanks of the operational plant is small and they would not cause any significant harm to the environment or the personnel at the site.

The quantity of unleaded petrol stored at the site amounts to 20 litres and is used in the operation of the fire-fighting pump. Any spill of this liquid would be considered minor and would not cause any harm to the environment.

4.1.4 Landfill Fire

Description of hazard

It is possible for “hot” waste to be delivered to the landfill resulting in a fire in the waste. Situations do occur where a delivery driver collects a load of waste which contains material that is already on fire before it arrives at the landfill.

Likelihood of a hazard

The likelihood of a fire on the landfill is considered low due because of the various checks the load of waste must pass through prior to be finally accepted at the tipping area.

The weighbridge operator checks each load of waste however it is possible for a “hot” load of waste to pass through undetected. Often the burning material is located in with the other material and not easily observed.

The most likely place to detect the burning material is at the tipping area. Once the vehicle unloads the waste it will spill out and expose any “hot” material.

4.2 Pre-emptive actions to be taken

The most effective method of preventing incidents occurring is to implement an efficient system of inspections and maintenance including a series of regular checks and reviews.

Checklists and inspection reports have been developed which ensure that daily site inspections are carried out effectively and plant and equipment is inspected by the operators prior to the commencement of work. The checklists and inspection procedures developed for the site include:

- Daily/Weekly Site Inspections;

- Vehicle and Plant Inspections;
- Weighbridge Records;
- Asbestos Register; and
- Excluded Waste Register.

The other key area for regular inspection is the weighbridge. All waste entering the site must comply with the conditions set out in the Environment Protection Licence. The weighbridge operator records all loads of material entering the site, including waste and other operational materials. The material is again inspected by the plant operator when the material or waste is unloaded.

The information provided below outlines the different potential hazards and the pre-emptive actions to be taken.

4.2.1 Illegal waste

The most effective pre-emptive actions for preventing illegal waste entering the site is through the system of checks, inspections and questions being asked through the various stages from waste acceptance to final disposal.

The weighbridge operator asks the truck driver for information concerning the waste being delivered to the site. This information is recorded.

The material is inspected at the time of unloading by the landfill supervisor and the compactor operator.

If illegal waste is found on the site, it is immediately isolated and steps are taken to have it removed from the site and transported to an approved landfill.

If the illegal waste is detected at the weighbridge, the truck is rejected from the site but not before an Excluded Waste Report is completed.

4.2.2 Leachate

The leachate storage tanks will be fitted with a pump and level controls which maintain the freeboard of the leachate and prevent overflows.

All leachate resulting from stormwater run-off from the waste will be collected in a small dam to be located within the waste banded area. This dam will be inspected daily and any excess leachate will be returned to the landfill waste cell.

Daily inspections will be carried out by the Waste Manager to check for any faults in the pipe lines and the pump will be tested every day to ensure it is operating properly. The leachate pipes will be located on the waste side of the dam and the bund wall thereby ensuring that any leaks will drain back into the dam or the waste where it is captured.

If the Waste Manager finds any leaking pipes he will instruct his maintenance crew to carry out the repairs. If the pump or level control is found to be faulty a defect report will be prepared and action will be taken to repair the fault.

4.2.3 Diesel fuel spill

Diesel fuel is stored in the various pieces of operational plant. Spills of diesel fuel can occur either during the daily operation or overnight while the plant is parked-up.

The plant and equipment is checked daily by the operators as part of their daily start-up and inspection routine. All plant operators are trained to check and inspect their plant and equipment before they commence work.

Should an operator find a fault with the any part on the plant, including a leaking fuel line, it is reported to the Waste Manager.

If the fault is a leaking fuel line it is either repaired, or replaced.

Any diesel fuel that has spilled is isolated and cleaned up. Spill kits are located at the plant parking site and adjacent to the landfill.

4.2.4 Oil (used in plant) spill

Oil spills will only occur from faulty or broken hydraulic lines on the plant and equipment.

The plant and equipment is checked daily by the operators as part of their daily start-up and inspection routine. All plant operators are trained to check and inspect their plant and equipment before they commence work.

Any oil spill will be isolated and cleaned up using the spill kits located at the plant parking site and adjacent to the landfill.

In the event the operator finds a faulty or broken hydraulic line, the machinery is parked up for repair.

4.2.5 Petrol fuel spill

All petrol fuel is stored in approved “jerry” cans located in an approved storage cabinet near the site office. The facility carries only a small quantity, 2 x 20 litres, of unleaded petrol fuel for use in fire-fighting pumps.

Spills are only likely to occur when filling the fire-fighting pump. In order to minimise the chance of a spill, funnels are used during the filling process.

Once the pump has been filled the cap on the “jerry” can is tightly closed and the container returned to its storage area.

4.2.6 Waste Oil spill

The landfill is approved to accept waste oil in small quantities. The waste oil is held in temporary storage prior to disposal off site (4,000 litre tank).

The container must be located in a bunded area which has capacity to contain the volume of the storage tank in the event of a spill.

The tank and the bund must also be located in an area where any spills resulting from filling or decanting of the tank into the vehicle which is to remove the liquid off the site, can be contained on site.

The likelihood of a significant spill is very low and it is unlikely that any spill will contaminate the environment. As there are no waterways near the landfill the risk of contamination to a waterway is low.

4.3 Inventory of pollutants

Material Safety Data Sheets (MSDS) must be located in the Weighbridge Office and should be readily available for all personnel and visitors.

The pollutants kept on site include:

- 200,000 litre dam for storage of leachate produced from waste degradation and precipitation;
- A small volume of unleaded petrol (2 x 20 litre containers); and
- Waste oil held in temporary storage prior to disposal off site (4,000 litre tank).

If other materials are required for use on the site, new Material Safety Data Sheets must be made available.

4.4 Safety equipment

All emergency response equipment will be serviced and maintained in accordance with relevant Australian Standards and/or manufacturer's instructions.

Emergency response equipment will be listed on the Critical Parts Register to ensure the equipment is scheduled for services/inspections.

Regular training will be carried out to ensure that all site operational employees can operate the equipment.

The safety equipment will include, as a minimum, items such as:

- fire extinguishers for electrical fires and other materials;
- fire hose, pump and water tank;
- earth moving machinery; and
- Spill Kit.

4.5 Contact details

The Emergency Response Plan provides all contact details for the site.

4.6 Communications with neighbours and local community

Communications with neighbours is always considered good practice for any operation. The Waste Manager should maintain a good relationship with the neighbours and listen to their concerns.

As the site is located more than 5 kms from the township it is unlikely there will be any cause for concern.

4.7 Minimising harm to persons on the premises

In addition to all the preventive measures described herein, the best and most effective method for minimising harm to all persons on the premises, including employees, visitors and subcontractors, is through education and training.

All persons working on the site, employees and subcontractors, and others visiting the premises, are required to attend an induction programme.

All employees and regular subcontractors must attend the weekly Toolbox Meetings where they are openly encouraged to raise issues of concern.

Minimising harm also comes through development and training programmes which employees are encouraged to commit to. Training often takes the form of on-the-job training of employees in the use of plant and equipment as well as reinforcement of the various management plans and systems in place.

The Buronga waste management facility only employs people who are experienced in landfill operations and have qualifications for the plant they operate.

Appropriate signage is also important. The Buronga waste management facility operates heavy machinery and therefore provides clear directional and safety signs to warn of associated dangers.

MSDS are located at the weighbridge and are readily accessible to everyone. This allows all persons associated with the site to access information on the hazardous materials that exist on site.

4.8 Maps

The Waste Manager is responsible for preparing a Site Map or marked-up aerial photo of the site which will identify the location of the following:

- The location of the site in relation to the nearest neighbours;
- The location of the stormwater discharge point;
- The stormwater dam;
- Waste cell location;
- Leachate dam; and
- The location of the nearest water course.

4.9 Actions to be taken during or immediately after a pollution incident

The Emergency Response Plan sets out the actions to be taken during and immediately after a pollution incident. It is here that the two Plans work together.

The first person on the scene and the site supervisor play an important role in any incident or emergency because that person is responsible for assessing the situation and the extent of the incident or emergency.

In the event of an emergency within the landfill site, the following procedures apply:

- a) Remain calm, don't panic;
- b) Cease all non-emergency communications;
- c) Stop work in the area of the emergency and if necessary on the site as a whole;
- d) Evacuate the area of the emergency, and if necessary, the site as a whole;
- e) Assess the dangers at the emergency scene;
- f) Notify the Manager;
- g) Seek assistance from the appropriate emergency services (Fire, Ambulance, Police) where required by calling 000; and
- h) Administer first aid if necessary, and if safe to do so.

Where applicable the Waste Manager will notify the relevant regulatory authorities such as WorkCover NSW and the Environment Protection Authority.

Do not attempt to transport someone needing emergency medical treatment to a hospital. Call 000 and act on their advice.

4.10 Staff training

The Waste Manager is responsible for ensuring that all employees are trained in site safety as a measure of reducing the occurrence of accidents or incidents.

It is the responsibility of all employees and contractors working on the site to be aware of emergency procedures, work in a safe manner and to look after the interests of their fellow workers.

All people involved in emergency control such as the Waste Manager and the First Aid Officer or other persons appointed to act in the event of an emergency, should be sufficiently trained and familiar with all aspects of their area of responsibilities.

All personnel will be trained in the requirements of the PIRMP and the ERP.

Training will be provided for appropriate persons in the following:

- First Aid;
- Spill Response;
- Evacuation Drill;
- Fire Extinguishers; and
- Any other training required for the purposes of emergency response identified.

The Waste Manager will determine the frequency of retraining and any additional training that may be required for emergency response. New employees will receive training upon becoming employed. The frequency of training sessions should not exceed six month intervals.

The Waste Manager will maintain a record of training (Training Matrix) undertaken by all employees and contractors working on the site as well as their competencies, including licences, attained over their working career. The Training Matrix or Record of Training contains details of who was provided training, when it was undertaken and the frequency in which retraining should be provided.

It is the Waste Manager's responsibility to ensure that all operational staff undergoes site induction and general environmental due diligence training. The Waste Manager is also responsible for completing and maintaining records of operator inductions.

5. Responsibilities

5.1 Waste Manager

The Waste Manager will be responsible for the overall management of the site including compliance with the Consent Conditions, Workplace Safety and environmental compliance.

Prevention of accidents and incidents is the responsibility of all managers and maintaining a clean and tidy site is one of the most essential preventive actions. Associated with maintaining a clean site is the need to have properly maintained and effective access roads to minimise the likelihood of accidents and enable good access for emergency vehicles in the event of an emergency.

The Waste Manager must carry out weekly Toolbox meetings with staff and subcontractors to ensure they are aware of their obligations concerning health and safety and that they have a good understanding of the emergency response procedures. Minutes of all meetings will be recorded and kept on file in the Site Office or Weighbridge Office.

The Waste Manager is the custodian of the Emergency Response Plan and has overall responsibility for the following:

- Implementation, testing, training and reviewing the effectiveness of the Emergency Response Plan;
- Assess the extent of any incident to determine the severity of the situation and whether or not it constitutes an emergency;
- Ensuring adherence to the Emergency Response Plan in cases of emergency;
- Coordinating all emergency response activities in consultation with operational team as necessary;
- Contacting the relevant Emergency Services organisation;
- Reporting to the Council General Manager or other representatives;
- Ensuring that all relevant training is provided and kept up to date for employees;
- Ensuring all subcontractors are appropriately trained and have the correct operation licences;
- Advising the relevant external authorities in order to ensure that the company's obligations are met following a serious incident;
- Contacting family and/or next of kin; and
- Arranging counselling.

Following an emergency, the Waste Manager is responsible for:

- Directing any external enquiries and media on site or in the case of vehicle incidents and any other site media inquiries to the General Manager;
- Declaring the emergency to be over;
- Initiating a post incident review/investigation of events;
- Reviewing the effectiveness of the Emergency Response Plan in managing the incident;
- Ensuring all lessons learned are captured and used in the review of all relevant plans and procedures; and
- Recommending any changes or improvements to the Manager.

5.2 Site Personnel

Every person working at the site, including contractors, have a duty of care and responsibility to ensure that accidents, incidents and near misses are reported to the Waste Manager and the Safety Committee.

Buronga Waste Management Centre is a responsible employer and provides open and transparent management with a view to encouraging people say something if they see something.

6. Notification of Incident

EPA Notification

The EPA must be notified of any incidents causing or threatening material harm to the environment as soon as practicable. A report on the incident is to be forwarded to the EPA and a copy retained on site.

Details provided to the EPA should include:

- the time of the event;
- location of the event;
- actions taken to control the situation;
- suspected cause of the event;
- actions taken to mitigate any environmental harm and/or environmental nuisance caused by the event; and
- proposed action to prevent a recurrence of the event.