



**Yulara Landfill
Operational Procedures**

Prepared for
Voyages Ayers Rock Resort

15 January 2026

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Document Status

	Name	Signature	Date
Approved for Issue ____	Prepared by _____	_____	_____
Revision _____ ✓	Reviewed by <u>Daryl Burrows</u>	_____	<u>15/01/2026</u>

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15/01/2026

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1 INTRODUCTION

1.1 General

This Landfill Operational Procedures Manual has been developed for Voyages Indigenous Tourism Australia Pty Limited (Voyages) to provide instruction for the day-to-day tasks and major tasks at the landfill facility. It outlines the standard operating procedures (SOPs), environmental controls, safety protocols, and compliance measures necessary to ensure the facility is operated in an environmentally responsible, safe, and efficient manner.

The manual serves as a practical reference for site operators and other personnel involved in landfill activities. Its content has been informed by historic operational practices, site constraints and equipment limitations, and has been refined where necessary to improve environmental outcomes.

All staff are required to be familiar with the procedures outlined in this manual and to implement them as part of their routine duties. Ongoing review and updating of the manual will ensure it continues to meet operational needs and evolving regulatory requirements.

This document has been prepared as a stand-alone document which forms a portion of the overall Landfill Environment Management Plan (LEMP). It is the intention that as a stand-alone document it will be kept at hand as a reference document for Voyages Staff and its detail and requirements will not be lost in the larger LEMP document. Some tasks are most appropriately addressed within this manual, while others are better suited to the Environmental Monitoring, Mitigation, Action and Responsibilities Plan. In some cases, tasks are relevant to both documents. As such, users of this manual should also be familiar with the Yulara Landfill Environmental Monitoring, Mitigation, Action and Responsibilities Plan, as aspects of that document, including supporting background information may apply directly to the content and implementation of this manual.

During the February 2025 round of groundwater bore installation a layer of higher permeability soil was identified higher in the stratigraphic profile than expected. Encountering this layer near the base of a cell or a slot within a cell would be detrimental to the performance of that cell to impede transmission of liquids. For this reason a method and an inspection process has been developed to ensure that at least 1.0m of suitably low permeability materials (mudstones or siltstones) are located beneath future cells (refer Section 4.6).

This document should be reviewed and updated as follows:

- In advance of a licence renewal.
- If a better alternative method of works is considered appropriate.
- If legislation or licence conditions change necessitating a corresponding change in procedures.
- If a method is found to no longer be effective.

1.2 Objectives

The objectives of this operational procedures manual are as follows:

- Provide clear guidance and instruction to staff for each specific task in such a manner as to maintain workplace health and safety, comply with licence and regulatory conditions and achieve the best environmental outcomes (onsite and offsite) within the limit of site resources and equipment.

1.3 Format

1.3.1 General

Consistent with the Environmental Monitoring, Mitigation, Action and Responsibilities Plan the procedures have been broken into procedures to be undertaken by Voyages Staff (Section 2) and procedures to be undertaken by the Third Party Monitoring Team (TPMT – refer Section 4).

1.3.2 Voyages staff procedures

The following procedures will be managed or undertaken by Voyages staff:

General Procedures

- Hours of Operations
- Cell Excavation
- Cell excavation inspection
- Waste Collection
- Waste Placement
- Subgrade Placement
- Recycling
- Listed Waste Storage
- Contaminated Soils
- Grease Trap Waste
- Fuel Management
- Equipment Maintenance
- Fence Maintenance

Emergency Procedures

- Fire Response
- Chemical Spill Response
- Wet Weather/Flooding

1.3.3 Third party monitoring team procedures

The following procedures will be undertaken by the TPMT:

- Landfill Gas Monitoring
- Groundwater Monitoring
- Leachate Monitoring
- Stormwater Monitoring
- Cell Excavation Inspection
- Weed and Pest Animal Monitoring

2 VOYAGES STAFF GENERAL PROCEDURES

2.1 Hours of Operation

The landfill is not open to the public. Voyages Waste Management staff are authorised to access the landfill between 7:30 AM and 4:30 PM for waste disposal and routine site operations. Non-routine or specialised tasks may be conducted outside standard operating hours with prior authorisation from the Land and Environment Manager.

Landfill staff are issued keys for site access. Voyages employees who are not part of the landfill team may access the site only with approval from the Land and Environment Manager and must sign out a key from the Technical Services Office.

2.2 Cell Excavation

Fill has historically been placed at the landfill in excavations referred to as cells. However due to the limited equipment, staff and room they are not excavated in one operation. Instead they are excavated in multiple slots perpendicular to the length of the cell itself. Multiple slots are excavated and filled in each cell and multiple cells are ultimately created in each stage of the landfill (refer LEMP for staging plans). The cells generally run east west across the entire extent of the landfill and the slots run north south and are of the order of 40m to 50m wide. The depth of excavations are approximately 6m. Excavated materials are stockpiled and used for cover and final surface cover.

As the landfill is unlined, it is essential that each cell is constructed on a low-permeability foundation, such as silt, clay, siltstone, or mudstone. During the installation of a groundwater monitoring well in the northeast portion of the site, a zone of higher-permeability sandy material was encountered between 1.8m and 11.4m below the surface. Although approximately 20m of underlying siltstone and mudstone was present beneath the sand layer, the sandy zone may facilitate lateral migration of landfill gas and leachate. Accordingly, this material should be avoided as a foundation for new landfill cells.

The cell excavation procedure has been revised to include a protocol for pre-excavation assessment of subsurface materials. This ensures that landfill cells are not constructed over sand-rich layers and that a minimum of 1m of low-permeability material is maintained beneath each cell. This procedure will be undertaken in the presence of the Voyages Land and Environment Manager. The slot (portion of a cell) excavation procedures are as follows:

- Commencement of all works shall begin on a schedule such that the slot is completed at least 1 month (preferably 2 months) prior to it being required. This is to avoid having no available airspace in the event of equipment breakdown or staff movements.
- Place pegs at the four corners of the extent of the proposed slot and identify where spoil will be placed around the slot as it is excavated.
- Clear the vegetation in the area of the slot and the stockpiling areas.
- Clear the topsoil and stockpile separately from other excavated materials. Topsoil will be re-used at a later stage for revegetation works.
- At this point in the past the slot would have been excavated to the final depth of nominally 6m with ramp access on one side. Going forward the following process will be undertaken for the excavations:
 - Establish a 2m deep test-pits in the middle of the proposed slot to confirm if the 1m to 2m interval is low permeability material.
 - If the 1m to 2m interval is low permeability material proceed to excavate the upper 1m of material.
 - From the base of the 1m deep excavations establish a 2m deep test-pit in the middle of the slot to confirm if the 2m to 3m interval is low permeability material.

- If the 2m to 3m interval is low permeability material proceed to excavate the 1m to 2m interval of material.
- From the base of the 2m deep excavations establish a 2m deep test-pit in the middle of the slot to confirm if the 3m to 4m interval is low permeability material.
- If the 3m to 4m interval is low permeability material proceed to excavate the 2m to 3m interval of material.

This process will be continued until the desired depth is achieved. If however higher permeability material (sand or sandstone) is identified in the test-pits then the excavation of the next layer should be abandoned and the slot depth limited to a level such that there is at least 1m of low permeability material below the base of excavations.

The process of assessing the materials should be undertaken by Voyages Land and Environment Manager. The current manager has been trained by the TPMT however if the manager does change the new manager shall be trained by the TPMT. That manager will advise if excavations can continue or if they should be stopped. The process should be documented with notes and photographs.

All excavations shall be carried out while monitoring climatic conditions and dust generation. If strong winds are forecast undertake earthworks prior to forecast strong winds and halt works if dust generation cannot be managed. Minimal site works (particularly excavation/movement of soil) shall be undertaken during strong winds or moderate and strong winds on hot days. Regular wetting of haul roads when vehicles are using the site in dry conditions and moderate to strong winds shall be undertaken. If excessive dust is being generated from vehicles drivers shall reduce their speed.

The above process may take a significant amount of time and has the potential due to equipment breakdown, staff absences and inclement weather to be delayed. For this reason Voyages staff shall have adequate volume slots already excavated to account for such contingencies. At a minimum three months of available filling space shall be available at all times, however a more conservative six months would be preferable.

2.3 Cell/Slot Excavation Inspection

As the cell/slot excavation process is being undertaken to achieve a goal there is a need for an inspection process to assess if the goals have been met and document the process. The inspection process is presented in Section 2.4 and 3.5 of the Environmental Monitoring, Mitigation, Action and Responsibilities Plan.

2.4 Waste Collection

The following details the procedures for kerb side pickup of waste from residential premises and the collection from the resort, other Voyages support facilities and related commercial facilities. Waste is separated into recyclable and non recyclable (general waste) at the source prior to collection.

- General waste from the resort, Voyages support facilities and related commercial facilities is to be collected using the compactor waste truck from the loading docks or the designated waste bin storage area at each facility.
- General waste from residential premises is to be collected from approved kerb side bins with the compactor waste truck.
- Green waste and recyclables are collected separately. Recyclables are separated by residents, collected via kerb side pickup and stored in the Voyages Landfill office yard (Berry Road) prior to being transported to Adelaide. Currently Contained deposit scheme vessels, milk bottles and other plastic bottles and cardboard are recycled. Green waste is collected from the kerb side and can also be deposited at the green waste facility by approved arrangement with Voyages landfill staff.
- At the landfill itself ferrous and non ferrous metals are crudely separated into general areas. A scrap merchant visits the landfill approximately once a year and further separates, transports and recycles the ferrous and non ferrous metals.

- To avoid litter the compaction scoop on the compactor waste truck must be lowered over the tail gate when the truck is in transit. This does not include short distances between residential premises but does include going from commercial premises to commercial premises or relocating from one residential street to another.
- If litter is exiting the truck collection should be halted and the source or reason for the litter rectified. Litter which exited the truck should be collected.
- If animals are struck by the waste truck the driver must stop. If the animal is dead it should be removed to the side of the road and not disposed of at the landfill. If the animal is alive and injured Uluru-Kata Tjuta National Park, Cultural Centre staff shall be contacted.
- If a spill from the truck occurs it should be cleaned up immediately using the on board spill kit. Appropriate personal protective equipment should be worn as required. The use of a spill kit must be reported to the Land and Environment Manager so the kit can be restocked.

2.5 Waste Placement

Airspace within a landfill is a valuable resource and should be utilised as efficiently as possible. At Yulara, the site's remote location limits opportunities to divert low-value recyclables from landfill (noting as presented in Section 2.4 there is still recycling occurring), as is commonly practiced in other parts of Australia. As a result, alternative strategies must be effectively implemented to minimise unnecessary airspace consumption. This procedure focuses on achieving optimal compaction using the available equipment. Waste shall be placed in the slot according to the following method:

- The compactor truck shall utilise the ramp into the slot to place the waste as close to the bottom as possible.
- Bulky goods shall be removed from the waste prior to commencing compaction. If possible and if safe they should be broken down out of the cell and any non-recyclable components returned to the cell for compaction.
- Timber or green waste shall be removed from the waste prior to commencing compaction and sent to the green waste area.
- The dozer or excavator shall spread waste into thin layers, nominally no more than 200 mm in thickness, before being compacted with multiple passes by the excavator or dozer. Once initial compaction is completed, the waste shall be reworked by turning it over and spreading it again, followed by additional compaction passes using the excavator or dozer. This process shall be repeated until little to no improvement in the compaction is being noted by the operator.
- The Land and Environment Manager shall conduct periodic spot checks to verify that plant operators are achieving the required level of waste compaction. Where compaction is deemed insufficient, the Land and Environment Manager may direct additional working of the waste, such as turning and re-compacting, or require further compaction passes using the available plant.
- At the end of each day the waste must be compacted completely prior to placement of a minimum of 150mm of daily cover (stockpiled spoil from slot excavations). To minimise airspace usage this layer can be removed prior to the placement of additional waste however the Land and Environment Manager will need to consider the cost efficiency of this action.

2.6 Subgrade Placement

Upon completion, each landfill slot or cell will be covered with a temporary subgrade layer that serves as an interim cap until final capping and site rehabilitation are undertaken. This subgrade shall be considered a temporary measure, as it is not integrated with adjacent cell subgrades or the surrounding ground surface. It is prone to settlement and cracking and lacks the required contouring and stormwater control features of a traditional landfill cap. While it does not meet the standards of a formal landfill cap, it serves an important interim function in minimising exposure and facilitating site management until permanent capping is implemented. In addition, construction activities at Yulara are constrained by limited access to specialised professional services. As a result, interim subgrade layers are constructed using locally available resources

and on-site equipment. In contrast, the final capping works will require the involvement of external specialists, including geotechnical and hydrological professionals, to ensure compliance with regulatory standards and long-term performance requirements. On this basis the procedure for placement of the 600mm subgrade has been kept simple and is as follows:

- Filling in the cell shall proceed as detailed in Section 2.5 above until 600mm below ground surface is reached. At this point the waste will be covered with just subgrade material (stockpiled spoil from cell excavations which should be low permeability silts and clays if procedures in Section 2.4 are followed). The 600mm layer shall be placed as detailed in the following bullets:
 - The subgrade shall be placed in 150mm thick compacted lifts. This layer is not proposed to be moisture conditioned as Voyages staff have advised their equipment is not capable to undertake this. How the layer is compacted will be dependent on available equipment. If a sheepsfoot roller is available that shall be used, if not the dozer shall be used. As moisture conditioning is not being undertaken additional passes and compactive effort will be required.
 - The top layer of each lift (except the last) shall be tracked over with a sheepsfoot roller (if available in Yulara) or the dozer to roughen the surface and achieve effective bonding between successive layers.
 - The final surface shall be trimmed with the excavator or dozer to be a consistent level with the surrounding land and to reduce pooling. As the surface will be flat water will not shed but the goal will be to level sufficiently to avoid concentrations of water in one particular area.

Voyages staff have advised that older areas of the landfill have been temporarily capped with a subgrade in excess of 600mm, possibly as much as 2m. This may be removed and the nominal 1.4m filled prior to placement of a new 600mm subgrade. Alternatively it could be left however this would not contribute to the future capping thickness as it has not been documented and as such its thickness and material type can not be confirmed.

All earthworks associated with subgrade placement shall be carried out while monitoring climatic conditions and dust generation. If strong winds are forecast undertake earthworks prior to forecast strong winds and halt works if dust generation cannot be managed. Minimal site works (particularly excavation of the soil stockpile/movement of soil) shall be undertaken during strong winds or moderate and strong winds on hot days. Regular wetting of haul roads when vehicles are using the site in dry conditions and moderate to strong winds shall be undertaken. If excessive dust is being generated from vehicles drivers shall reduce their speed.

2.7 Recycling

2.7.1 General

Due to the landfill's remote location, the recycling of low-value materials may not be feasible, as the cost of transporting them to market is prohibitive. In addition, some materials such as steel, while having a higher market value, are recycled without financial return, as the combination of weight and distance to market remains economically unviable. At Yulara the following materials are considered to be viable for recycling:

- Ferrous metals – refer section 2.7.2
- Non ferrous metals – refer section 2.7.3 and 2.8.2
- ewaste – refer section 2.7.4
- Contained deposit scheme (CDC) vessels (10c bottles and cans) – refer paragraphs below these bullets
- Milk bottles and other plastic bottles – refer paragraphs below these bullets
- Cardboard – refer paragraphs below these bullets

- Cooking oil – refer paragraphs below these bullets

Materials that can be recycled shall be stored in their designated areas. Care shall be taken by Voyages staff to ensure that recyclable materials are not mixed.

Baled cardboard, CDC vessels, milk bottles and other plastic bottles and waste cooking oil shall be transported directly to Yulara Freight Services and shall not enter the landfill. The Freight Manager shall be notified when materials require transport.

Other materials (concrete, glass, light plastics, waste oils) will be stored until there is sufficient material to make crushing or collection cost effective/efficient.

Further detail on selected recycled products is provided in the following sections

2.7.2 Steel

Steel (clean and dirty) shall be placed in the designated steel recycling area. As there is no financial benefit in separating clean steel from dirty steel they can be stored together. All vehicles and mechanical equipment must be drained of fluids prior to storage to prevent potential leaks and spills. Collected liquids shall be transported for disposal at an appropriately licensed facility. Car bodies shall be stored awaiting crushing and removal by a car body recycler.

Within the steel storage area, a designated section is allocated for white goods, as they typically contain a higher proportion of non-ferrous materials than other steel products. In addition, white goods require further decommissioning before being placed in this section of the steel pile. Prior to degassing, white goods such as refrigerators, freezers, and air conditioners shall be placed in the designated degassing area. They shall remain there until a degassing work order has been raised and a suitably qualified person has completed the degassing process and collected the gas for appropriate off-site disposal. Note Voyages contracts multiple refrigeration mechanics to maintain air-conditioners, refrigeration plant and ice makers and degassing is an ongoing part of their works on site.

2.7.3 Non ferrous metals

Non ferrous materials are crudely separated into general areas. A scrap merchant visits the landfill approximately once a year and further separates, transports and recycles the non ferrous metals.

2.7.4 Ewaste

Ewaste can be accepted and shall be stored in the ewaste holding area adjacent the northern fence line of the listed waste area. Ewaste shall be stored until such a time as there is sufficient to transport to a recycling facility.

2.8 Listed Waste Storage

2.8.1 General

According to NT EPA Environment Protection licence EPL 179-02 Table 1 the Yulara landfill can accept for storage, but not burial, the following wastes:

- Lead and lead compounds.
- Soils contaminated with a listed waste.
- Containers that are contaminated with residues of a listed waste.
- Waste mineral oils unfit for their original intended use
- Waste mixtures, or emulsions, of oil and water or hydrocarbon and water

In addition tyres can be accepted for either storage, treatment or disposal.

More information on each listed waste is discussed in the following sections.

Listed wastes shall be stored within the fenced listed waste area of the landfill site. A covered section is provided within this area to provide protection from stormwater ingress. Liquid listed wastes shall be stored in drums or sealed containers on self contained bunded pallets.

2.8.2 Lead and lead compounds

Lead is most commonly found in the form of lead-acid batteries and, to a lesser extent, particularly in Yulara, in lead piping. Lead-acid batteries shall be stored upright in the designated battery storage area until sufficient quantities have been accumulated for transport to a recycling facility (currently Antons Recycling in Alice Springs). Lead pipe and other lead-containing products shall also be stored in the battery storage area and transported for recycling alongside the batteries.

2.8.3 Contaminated soils

The Yulara landfill is not licensed to accept contaminated soils. However, disposal of absorbent media used to clean up hydrocarbon spills shall be carried out in accordance with the *SA EPA Guidelines: Disposal of Used Hydrocarbon Absorbent Materials*. Under these guidelines, the maximum volume for any single landfill disposal is the lesser of 0.1m³ or 100kg. Intermediate volumes (nominally up to 2m³) and larger volume (in excess of 2m³) of adsorbent materials or hydrocarbon impacted soils shall be stored in sealed containers (such as 205L drums) or stockpiled on and covered with UV stabilised plastic film respectively. At that point Voyages staff should consult with the TMPT to determine if it is more economical to transport to an appropriately licensed facility or to remediate on site. If remediation on site is selected Voyages staff or the TMPT shall notify the NT EPA and advise of the nature and quantity of the hydrocarbon impacted soil and prepare a remediation plan. A basic outline of the hydrocarbon remedial approach will be as follows however the final details will be dependent on the type and concentration of the hydrocarbon and the soil type.

- A designated area of the landfill that has already been filled (i.e. not natural ground) and is at least 50m from a site boundary shall be used as a remediation area.
- The ground should be trimmed to level and any large stones removed.
- A top of the levelled ground a UV stabilised plastic marker layer (builders film with a minimum thickness of 200um) shall be placed.
- Contaminated material shall be stockpiled on the marker layer and the stockpile shall be smoothed/shaped so as to not collect water.
- A minimum 200um thick UV stabilised builders film shall be placed over the stockpile to eliminate water ingress and dust generation.
- A suitably experienced environmental consultant shall sample, analyse and quantify the nature of the hydrocarbon contamination and prepare a remediation approach. The remediation approach shall include at least the following.
 - A remediation method. For light fraction hydrocarbons time and turning may all that is recommend. For heavier fractions more intervention may be required.
 - Validation requirements and sampling and analytical regime.
 - Performance targets or compliance criteria which is likely to be Table 2 "Waste Fill" criteria listed in the SA EPA "Current Criteria for the Classification of Waste – Including Industrial and Commercial Waste (Listed) and Waste Soil"¹.
- The TPMT shall prepare a report detailing the work undertaken and the validation process and classification of the soil for submission to the NT EPA. If the performance targets or compliance

¹ The SA EPA requirements have been adopted in this case instead of an NT EPA criteria such as Attachment 1 Waste Acceptance Criteria – City of Darwin. The Darwin criteria has been established for a composite liner or double liner landfill which is not in place at Yulara. The SA EPA requirements for Waste Fill criteria are more conservative and hence more appropriate for an unlined landfill.

criteria are met and the NT EPA is satisfied with the works and validation undertaken then the material is no longer considered contaminated soil and can be placed in the landfill.

Other soils contaminated by or thought to be contaminated by chemicals other than hydrocarbons shall be handled as follows:

- A designated area of the landfill that has already been filled (i.e. not natural ground) and is at least 50m from a site boundary shall be used as a holding area.
- The ground should be trimmed to level and any large stones removed.
- A top of the levelled ground a UV stabilised plastic marker layer (builders film with a minimum thickness of 200um) shall be placed.
- Contaminated material shall be stockpiled on the marker layer and the stockpile shall be smoothed/shaped so as to not collect water.
- A minimum 200um thick UV stabilised builders film shall be placed over the stockpile to eliminate water ingress and dust generation.
- A suitably experienced environmental consultant shall sample, analyse and quantify the nature of the contamination and recommend either remedial measures, offsite disposal or onsite disposal (only after remediation and validation or if the soils were found to not be contaminated in the first place). Analytical results shall be compared to Table 2 "Waste Fill" criteria listed in the SA EPA "Current Criteria for the Classification of Waste – Including Industrial and Commercial Waste (Listed) and Waste Soil"¹.
- Once the fate of the soil has been determined, the cover shall be removed and the stockpile excavated down to the marker layer, extending approximately 50 mm below it to ensure complete removal of all material.
- The site of the now removed stockpile shall be backfilled and levelled to make good.

2.8.4 Contaminated containers and paints

Contaminated Containers

Containers contaminated with residues of a listed waste shall be stored in a designated area in sealed containers to avoid spills. If containers are not adequately sealed they should be stored or transferred to a second container made of the same material as the original container to avoid use of unsuitable materials which may degrade or fail. Note mixing of residues should not occur as unknown detrimental reactions may occur. Once sufficient quantities of containers have been accumulated they should be transport to an appropriately licensed facility for disposal.

In addition to the above degassed gas cylinders (not a listed waste vessel but a hazardous waste vessel) shall be stored and when sufficient number transported to an appropriate facility for recycling. At present Elgas accept Voyages gas cylinders.

Paints

Unused paint shall be placed in the listed waste area of the landfill in sealed containers and on banded pallets until there is sufficient numbers to transport to an appropriate disposal facility such as a Paintback receiving site. The nearest Paintback site is The Rediscovery Centre, 80 Commonage Rd Ilparpa, NT.

2.8.5 Waste mineral oils

Waste mineral oils unfit for their original intended use shall be stored in a dedicated area within the listed waste area in sealed containers on banded pallets. If containers are not adequately sealed they should be stored or transferred to a second container made of suitable materials resistant to oil degradation (e.g., steel or approved plastic drums). An adequately sized spill kit should also be located in the storage area and spills shall be cleaned up immediately. Once sufficient waste mineral oils have been accumulated they should be transported to an appropriately licensed facility for disposal.

2.8.6 Waste mixtures, or emulsions

Waste mixtures, or emulsions, of oil and water or hydrocarbon and water shall be handled as if they were mineral oil (refer Section 2.8.5) with the exception that mixtures of hydrocarbon and water shall be labelled accordingly for the benefit of the receiving facility.

2.9 Grease Trap Waste

The Yulara landfill in mid 2025 constructed a dedicated grease trap waste treatment area. The area consists of 4 shallow decanting ponds and one large shallow evaporation pond. Waste collected from the Voyages grease traps (kitchen grease traps only, no fuel or mechanical related grease traps) shall be placed in one of the four decanting ponds. Once the waste has settled the water shall be decanted from below the oils and placed in the evaporation pond. **Once partially dry the grease shall be removed from the pond and placed in a stockpile for further drying.** **Amy is this correct?** Any solids (food debris) in the evaporation pond shall be removed and can be placed directly in the landfill.

Grease traps are required to be cleaned every 8 weeks, which should be sufficient time to allow full evaporation of liquids. Petroleum based hydrocarbons or their synthetic equivalents can not be disposed of into the ponds. Auto mechanic waste must be disposed of to an appropriately licensed facility. Grease trap waste and auto mechanic waste cannot be disposed of onto any soil areas.

2.10 Fuel Management

General

All staff involved in fuel management shall be familiar with Section 3.2 – Chemical Spill Response. Emergency procedures in Section 3.2 override all actions in this section i.e. clean up of a spill is superseded by personal or public safety.

Collection and Transport of Fuel

Prior to filling the dedicated external fuel tank on the site utility vehicle, the operator shall verify that both a fully stocked spill kit and a shovel are on board. Fuel shall be sourced from the town service station, and all service station rules for filling shall be strictly observed. Any spills occurring during filling must be immediately reported to the service station attendant. Follow the service station attendant instructions from this point.

Fuel must not be transported unless the tank cap is securely fastened. Smoking in the vehicle is strictly prohibited. The vehicle shall be driven in a safe and controlled manner, with particular caution during cornering, where fuel movement may affect vehicle balance and handling, and braking, as stopping distances may be increased.

In the event of an accident during transit to the landfill, the fuel tank shall be inspected for leaks. Any small leaks shall be addressed using the absorbent spill materials provided in the vehicle's tray. If a spill on the road exceeds the capacity of the spill kit, the shovel shall be used to cover the affected area with soil to absorb the fuel. The hydrocarbon-impacted soil shall then be collected, transported to the landfill, and managed in accordance with Section 2.7.3. For larger spills that may present a fire or explosion risk the area should be evacuated. Any spills, leaks or accidents shall be documented in the Daily Inspection and Site Diary by the Voyages Land and Environment Manager.

Fuelling of Landfill Machinery

Fuelling of machinery shall not take place within the landfill cell but instead on level ground outside the cell. The utility vehicle shall be parked at a suitable distance from the machinery to ensure the fuelling hose is not overstretched, which could cause cracking or stress on fittings and result in leaks. Fuelling operations shall be conducted in a manner that prevents leaks or spills onto the soil.

If leaks occur, they shall be cleaned immediately using the spill kit. In cases where a significant leak impacts the soil, the affected soil shall be collected and managed in accordance with Section 2.7.3. Any spills, leaks or accidents shall be documented in the Daily Inspection and Site Diary by the Voyages Land and Environment Manager.

2.11 Equipment Maintenance

Equipment maintenance shall be carried out in accordance with the manufacturer's recommendations. Any machinery components containing fluids, such as sumps, radiators, and hydraulic hoses, shall be fully drained prior to commencing work. Fluid draining shall be conducted on an impervious surface.

If maintenance is performed on soil surfaces, plastic sheeting shall be placed beneath the work area to capture any spills or leaks. This sheeting shall remain in place during the refilling of fluids following maintenance.

In the event of a leak or spill, the chemical spill procedure shall be followed for clean-up and disposal.

2.12 Fence Maintenance

Voyages staff inspect the perimeter fence daily. A staff member drives around the perimeter at the start of the day to inspect the fence integrity, litter (refer Section 2.5 of the Environmental Monitoring, Mitigation, Action and Responsibilities Plan) and cameras. The staff member responsible for this shall carry wire to undertake minor repairs as needed at the time of the inspection. Larger breaches which require additional resources shall be carried out the same day if fencing resources are available. If the breach is more significant than can be repaired on the same day then temporary fencing or barrier mesh shall be installed until such time as Voyages staff or a fencing contractor can undertake the work.

While undertaking the perimeter fence inspection the integrity of the on site surveillance cameras shall also be checked and replaced if required.

To facilitate the above Voyages staff shall ensure there is an adequate supply of fencing resources in stock at all times. A spare camera shall also be kept in stock to enable same day replacement of damaged, defective or stolen on site cameras.

Voyages staff have discussed the installation of a perimeter stormwater bund to contain stormwater. If this is established its integrity shall be inspected as part of the daily perimeter fence inspection. If the bund is damaged plant operators shall be notified for repair works. The repair shall be the first task undertaken on the day and shall be completed prior to commencement of other works.

3 VOYAGES STAFF EMERGENCY PROCEDURES

3.1 Fire Response

3.1.1 Roles and responsibilities

Waste Services Manager – Ensure that staff are familiar with this procedure.

First person to scene – Assess the size and source of the fire and notify another person to ensure your own safety. If the fire is small, located on-site, and it is safe to do so, attempt to extinguish it using appropriate firefighting equipment. Immediately after, notify the Voyages Land and Environment Manager.

In the event of a large fire, immediately call the Fire Brigade by dialling 000, followed by immediate notification of the Voyages Land and Environment Manager.

3.1.2 Evacuations

In the event of a large fire, evacuate the area and ensure all personnel move to a safe distance. Follow the directions of emergency services at all times.

For bushfires, adhere strictly to instructions issued by the Fire Brigade and evacuate if directed. Landfill plant and equipment may be used to create firebreaks if requested or deemed necessary by emergency services.

3.1.3 Actions, clean up

Follow all directions issued by the Fire Brigade. Landfill plant and equipment may be used to create onsite firebreaks if required.

If the fire originates within the landfill, the site must be closed and remain so until the fire has self-extinguished. The affected area should be regularly monitored to ensure there is no risk of re-ignition. Access to the site must be restricted, and any debris of human origin, such as construction materials, firefighting equipment, or other refuse, must be removed once it is safe to do so.

3.1.4 Actions, reporting

The Waste Services Manager must maintain a log of fires occurring at the premises including the following information:

- The time and date of when the fire was reported.
- The circumstance which ignited the fire.
- The time and date of when the fire ceased and whether it burnt out or was extinguished.
- The location of the fire on the premises (e.g., timber stockpile, putrescible waste).
- Prevailing weather conditions.
- Observations made regarding smoke direction and dispersion.
- The amount of waste combusted by the fire.
- Action taken to extinguish the fire.

Waste Services / Environmental Manager must notify the NT EPA of any fires at the premises by contacting the Pollution Hotline on telephone number 1800 064 567 as soon as practicable after (and in any case, within 24 hours after) first becoming aware of the fire. The licensee must provide the status of the fire and the landfill licence number when contacting the Pollution Hotline. The incident is to be documented in the Daily Inspection and Site Diary by the Voyages Land and Environment Manager.

3.1.5 Equipment

Equipment available for use in a fire response are four portable extinguishers in the storage work yard and located on machinery and any landfill plant (water truck, excavator, dozer) that can be safely used.

3.2 Chemical Spill Response

3.2.1 Roles and responsibilities

Waste Services Manager – Ensure that staff are familiar with this procedure.

First person to scene – Assess the size of the spill. If the spill is small and can be safely managed on-site, proceed with the response actions outlined below. If the spill is large or poses a potential risk to health, safety, or the environment, immediately notify Emergency Services and inform the Voyages Land and Environment Manager.

3.2.2 Documentation

Materials Safety Data Sheets (MSDS) are located Sorry Amy you did tell me this but I didn't write it down could you please advise again.

3.2.3 Actions, immediate

Refer to the MSDS to determine the appropriate spill response actions and required personal protective equipment (PPE). Isolate the affected area.

If the MSDS confirms it is safe to proceed, take measures to prevent the spill from entering the landfill cell or natural drainage lines. Where necessary, apply absorbent material to the spill surface. If possible, stop the source of the spill. For large spills, landfill plant and equipment may be used to construct earth bunds to contain the liquid.

All affected soil or absorbent material shall be collected and managed in accordance with Section 2.7.3.

3.2.4 Evacuations

Refer to the MSDS to determine whether evacuation is necessary. If the chemical cannot be identified, immediately evacuate the area and notify emergency services. Further investigation, such as close inspection of the container or collection of a sample for laboratory analysis, shall only be undertaken once emergency services personnel have determined the appropriate level of PPE.

For fuel leaks near possible ignition sources, evacuate if spill is large - treat as a fire risk.

3.2.5 Actions, clean Up

In the event of a chemical spill, use an absorbent material specified in the product's MSDS to soak up the liquid. All affected soil and used absorbent material shall be collected and managed in accordance with Section 2.7.3. Appropriate PPE shall be worn throughout all clean-up activities.

3.2.6 Actions, remediation

Any contaminated soil shall be collected and managed in accordance with Section 2.7.3.

3.2.7 Actions, reporting

All chemical spills must be reported to the NT EPA by contacting the Pollution Hotline on 1800 064 567 as soon as practicable, and no later than 24 hours after becoming aware of the incident. When reporting, the licensee must provide the spill status and the licence number NT EPA EPL 179-02.

The incident shall be recorded in the Daily Inspection and Site Diary by the Voyages Land and Environment Manager.

3.2.8 Available equipment

Spill kits and landfill plant can be utilised to action spills.

3.3 Wet Weather/Flooding

3.3.1 Definitions

Small rain event – Rain events less than 4 hours or less than 50 mm

Large rain event – Events lasting more than 4 hours or greater than 50 mm

Flood event – Flood events are very large rain events that make access roads to the landfill impassable

3.3.2 Small rain events

During small rainfall events, landfill filling operations shall temporarily cease to prevent the spread of waste, deterioration of access points and ramps, and the creation of preferential stormwater pathways.

Waste dumping may continue during small rain events, provided vehicle access ramps remain safe to use and there is no risk of vehicles becoming bogged.

3.3.3 Large rain events

During large rainfall events, waste shall not be deposited in the active landfill cell due to the risk of machinery becoming bogged. Instead, waste is to be placed on a flat area near the landfill cell, positioned away from natural drainage lines and access roads.

Where practicable, waste should be placed against an earth bund to minimise litter movement. All dumped waste must be covered with a layer of soil immediately after placement to prevent windblown litter.

Once the rain event has ended and landfill areas are accessible to plant, the waste shall be transferred into the landfill cell and normal operations shall resume.

3.3.4 Flood events

Transport of waste shall cease during flood events until all access roads are fully passable by vehicles. Once roads are accessible, the procedures for large rain events shall be implemented until normal operations can safely resume without risk of vehicles or equipment becoming bogged.

Prior to resuming operations, earth bunds surrounding the landfill cell shall be inspected to ensure they remain intact and effective.

If the perimeter stormwater bund has been constructed its integrity shall be inspected and repaired if necessary.

3.3.5 Notes

Large rain events are anticipated to occur approximately once per year, based on statistical data analysis. Flood events are expected roughly every 24 to 36 months, according to site personnel experience.

4 THIRD PARTY PROCEDURES

4.1 General

Each third party monitoring team will have standard field procedures and equipment operation procedures. However the goal of this section is to define aspects of an investigation that must remain consistent from round to round and what is considered not acceptable.

4.2 Landfill Gas

Specific requirements for landfill gas monitoring at Yulara Landfill are as follows:

- Well heads must be sealed and incorporate a sampling point with either a quick fit attachment or a push fit attachment. Between the seal and the attachment point must be a quarter turn tap to allow rapid transition from the closed to open position for internal pressure and flow measurements.
- Landfill gasses shall be co-monitored with a landfill gas analyser (such as a GA 5000 or equivalent) and a photo-ionisation detector with a "Y" sampling train.
- Landfill gasses shall be monitored for at least 15 minutes to ensure purge of stagnant gasses in the well head and stabilisation of gasses drawn from deeper in the well and representative of gasses in the waste.
- If methane and oxygen are present together in landfill gas the well head, surface completion and sampling train shall be inspected for leaks and fixed. Once fixed the well shall be purged for a minimum of 10 minutes prior to re-commencing monitoring.
- Confined spaces in any sheds established on the ground shall be inspected for the presence of volatiles and landfill gas using a PID and landfill gas analyser (such as a GA 5000 or equivalent) respectively.

4.3 Groundwater

Specific requirements for groundwater monitoring at Yulara Landfill are as follows:

- All groundwater wells must be purged until field parameters stabilise (as measured every 10L) or run dry and recover prior to sampling. Both purging and sampling shall be conducted using the same method, specifically a Waterra inertia pump equipped with appropriate tubing and a foot valve.
- Every effort should be made to source a Waterra inertia pump for purging and sampling, including adjusting the monitoring schedule if necessary. However, if a Waterra pump is unavailable, a low-flow water sampling kit may be used as an alternative. When a low-flow sampling kit is employed, its tubing must be removed from the well upon completion, and the Waterra tubing and foot valve must be reinstated in the well.
- Bailing, air lift, peristaltic pumping, grab sampling, and Hydrasleeve (or equivalent) methods are not considered appropriate for groundwater sampling at the landfill and shall not be used.
- The sampling program should be scheduled to ensure groundwater sampling is conducted as close as possible to the date of sample transportation, avoiding transport over weekends. For example, groundwater sampling should not be performed before landfill gas monitoring if sample transportation is planned to occur after gas monitoring.
- Laboratory analysis shall be as detailed in the Yulara Landfill Environmental Monitoring, Mitigation, Action and Responsibilities Plan.
- Samples shall be stored in eskies with significant amounts of ice (more ice than sample bottles) so as to rapidly cool samples and ensure they are adequately cool for transport. Ice bricks are not to be used.

4.4 Leachate

Specific requirements for leachate monitoring at Yulara Landfill are as follows:

- Leachate sampling shall be conducted using a bailer. Due to the typically limited volume and slow recharge rate of leachate (ranging from days to weeks, rather than minutes or hours), grab sampling is generally the only practical method for sample collection.
- The bailer shall be lowered into the well allowed to sink and recovered. The sampling bottles shall be filled in a priority order as follows:
 - Nutrients and metals
 - VOC
 - SVOC
 - Physical properties
- Field parameters shall only be measured once all sampling bottles have been filled.

4.5 Stormwater

Specific requirements for stormwater monitoring at Yulara Landfill are as follows:

- Currently, there are no stormwater basins or drainage lines on site, as the terrain is generally flat. However, if stormwater features are present during or after a significant rain event and ponded water is deep enough to submerge a bailer or a sampling vessel (such as an un-preserved physical parameters bottle), samples shall be collected.
- Sample bottles containing preservatives shall not be submerged during collection, as this may wash out or excessively dilute the preservative.
- Samples shall be collected from mid-water, avoiding the surface and any areas of disturbed sediment. For example, if wading into the water, samples must be taken beyond the zone of cloudiness created by disturbance of the bottom sediment.

4.6 Cell excavation Inspection

A cell excavation inspection shall be carried out by the Voyages Land and Environment Manager once they have been trained by the TPMT. The procedure that the trained Voyages Land and Environment Manager, shall follow is detailed in Section 2.2. In addition to this section and Section 2.2 above, objectives, management, documentation and reporting requirements are presented in Sections 2.4 and 3.5 of the Yulara Landfill Environmental Monitoring, Mitigation, Action and Responsibilities Plan.

4.7 Weed and Pest Animals Monitoring

As a condition of the landfill licence issued by the Northern Territory Government, Voyages is required to undertake an annual monitoring program for animal pests, disease vectors, and weeds within the premises of the Waste Management Facility. The contents of this report should be consistent with the current format (2024 report) with the addition of the recommended tasks as presented in Section 3.6 of the Yulara Landfill Environmental Monitoring, Mitigation, Action and Responsibilities Plan.