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Brett Dunn
Program Manager – Land Use Planning
Department of Water and Environment Regulation
Kwinana Peel Region

Dear Brett,

RE: PA 28584, RF9830-02 – Proposed Stormwater, Spill and Wash Down Management Plan at Lot 1 (543) King Rd, Oldbury

The main aspects of the proposed transport depot at Lot 1 (543) King Rd, Oldbury consist of:

- The parking of six licensed and operational trucks, four of which are licenced controlled waste trucks of the following volumes: 8000L, 11000L (two trucks) and 14000 L.
- There are generally only two trucks that are operational during any one day.
- No waste is processed or disposed on-site. Three to four times a week there is a need for truck to truck transfer of liquid waste due to the restricted opening times of tip sites. Otherwise, trucks parked onsite are generally empty.

The objective of this letter is to present the proposed stormwater, spill and wash down management plan for Lot 1 (543) King Rd in relation to the beforementioned aspects of the transport depot. The proposed management plan was developed in accordance to best practice management to ensure that the nearby Resource Enhancement Wetland (UFI 7190) and Bush Forever Site 69 are not subject to adverse impacts from the transport depot.

Truck to truck transfer and wash down are the activities which pose the most risk of an environmental incident. Any uncontained spill or runoff of wash down water might cause adverse impacts on the surrounding environment. To prevent the latter, it is proposed to establish a dedicated area (Figure 1) for truck to truck transfer and wash down.

This 10 m x 47 m dedicated area will be impervious (infiltration $< 10^{-9}$ m/s), consisting of 100 mm of profile (i.e. impervious asphalt surface) on top of the existing hardstand. This dedicated area will be graded at 2% with liquid waste and wash down water being directed to a concrete sump (which also include a collection pit) (Figure 2) for spill and wastewater containment. The sump is designed for a spill volume of up to 20,000 L, allowing full containment of a spill from the biggest wastewater truck.

Radial flow of any spill and wash down water within the dedicated area will be contained via a 200 mm high concrete kerbing, located on the north, east and south sides of the dedicated area; and a 200 mm high gently raised concrete bunding located on the west side (Figure 1). The gently raised bunding will allow access to vehicles while containing radial flow.



It is also noted that stormwater falling in the dedicated area will also be discharged in the sump. A valve will be used to control outflow of stormwater to sedimentation traps and soakwells to allow discharge into the natural environment (Figure 3). The valve will be closed during truck to truck transfer and wash down, isolating the wastewater from the surrounding environment

As mentioned in Exit Waste's *Truck Vehicle Parking & Truck Transfer / Wash Out Policy* and *Operator Transfer / Wash Out Procedure* (attached), in the event of a large spill, wastewater contained in the concrete sump and collection pit will be vacuumed into a wastewater truck. The sump and the collection pit will then be washed with high pressure water to clean out any residue. Wash out water will also be vacuumed into the truck prior to be disposed off-site to an appropriate, licensed landfill site.

This approach ensures that any stormwater going through this system will not export waste residue into the natural environment. Sedimentation traps will also act as an additional layer of protection should residues still be present after cleaning.

In conclusion:

- In the event of a spill (however unlikely) or during wash down, liquid waste will be contained in a concrete sump and isolated from the natural environment prior to be disposed off-site. This is consistent with DWER's Water Quality Protection Notes, particularly WQPN 51- *Industrial wastewater management*.
- As mentioned in Exit Waste's *Truck Vehicle Parking & Truck Transfer / Wash Out Policy* and *Operator Transfer / Wash Out Procedure* thorough cleaning of the concrete sump and collection pit will be carried out after any spill event and wash down. Any stormwater going through this system; will therefore not export waste residue into the natural environment. In addition to this thorough cleaning, sedimentation traps will act as an added layer of protection should high pressure water cleaning not be sufficient. Such approach is consistent with WQPN 52 – *Stormwater management at industrial sites*.
- The proposed stormwater, spill and wash down management plan is therefore consistent with best practice management and ensures that the nearby Resource Enhancement Wetland UFI 7190 and Bush Forever Site 68 will not be subject to any adverse impacts from the transport depot.

If further information is required, please do not hesitate to contact the undersigned.

Yours sincerely,

Didier Alanoix
Environmental Scientist
August 3, 2020

Figures

LEGENDS:








-  34 M x 47 M HARDSTAND AREA
-  10 M x 47 M TRUCK TO TRUCK TRANSFER AND WASH DOWN AREA MADE OF 100 MM PROFILE ON TOP OF EXISTING HARDSTAND
-  200 MM HIGH CONCRETE KERBING TO CONTAIN SPILLS AND WASH WATER WITHIN THE TRUCK TO TRUCK TRANSFER AREA
-  200 MM HIGH GENTLY RAISED CONCRETE BUND TO CONTAIN SPILLS AND WASH WATER WITHIN THE TRUCK TO TRUCK TRANSFER AREA WHILE ALLOWING ACCESS TO VEHICLES
-  8 M x 4 M x 1 M WASTEWATER CONCRETE SUMP (DETAILED IN FIGURE 2)
-  TRIPLE INTERCEPTOR SEDIMENTATION TRAP (750L EACH) (DETAILED IN FIGURE 3)
-  1500 MM (ID) x 1500 MM (H), 2650 L SOAKWELLS (DETAILED IN FIGURE 3)

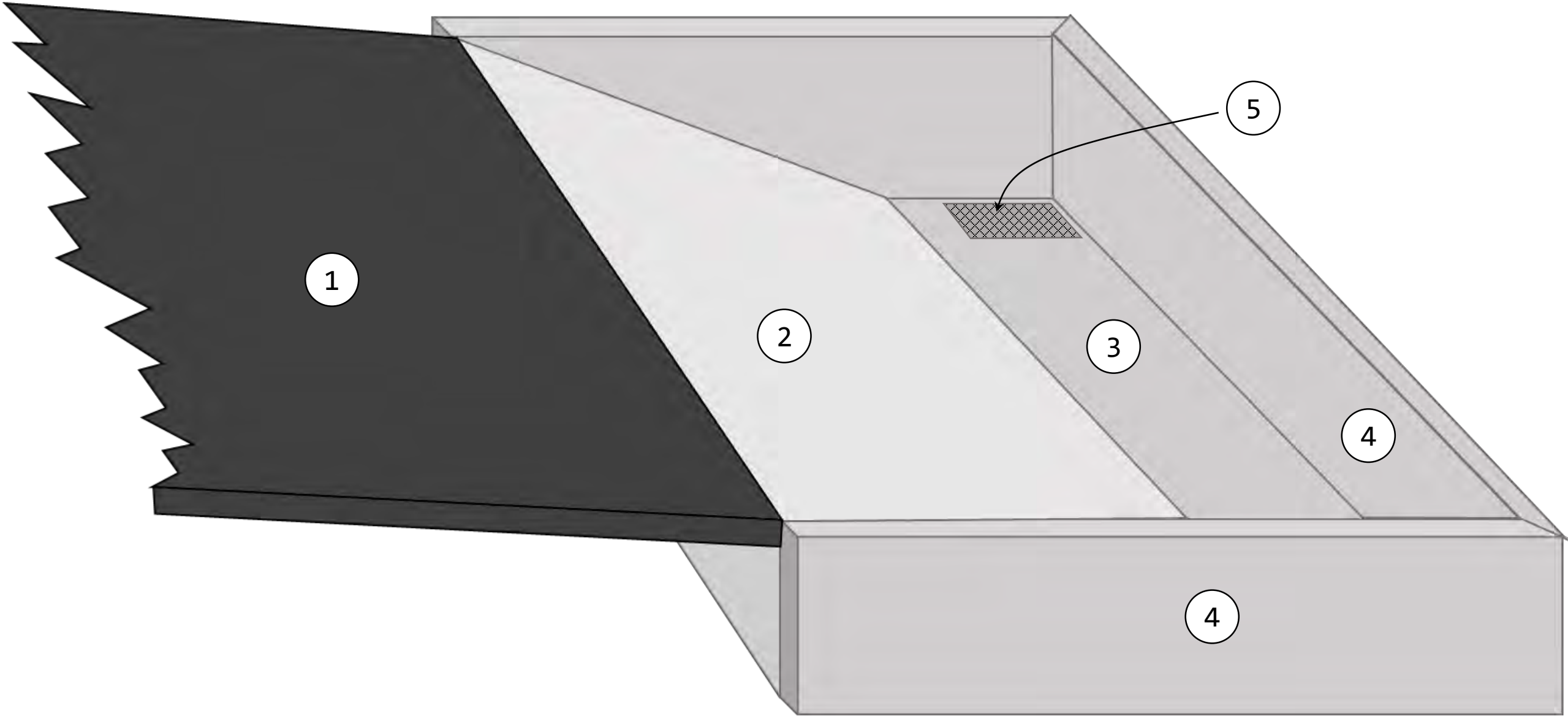


FIGURE 1. Proposed Spill, Wash Down and Stormwater Management System

LOT 1 (543) KING ROAD, OLDBURY
Ordinary Council Meeting - 19 October 2020

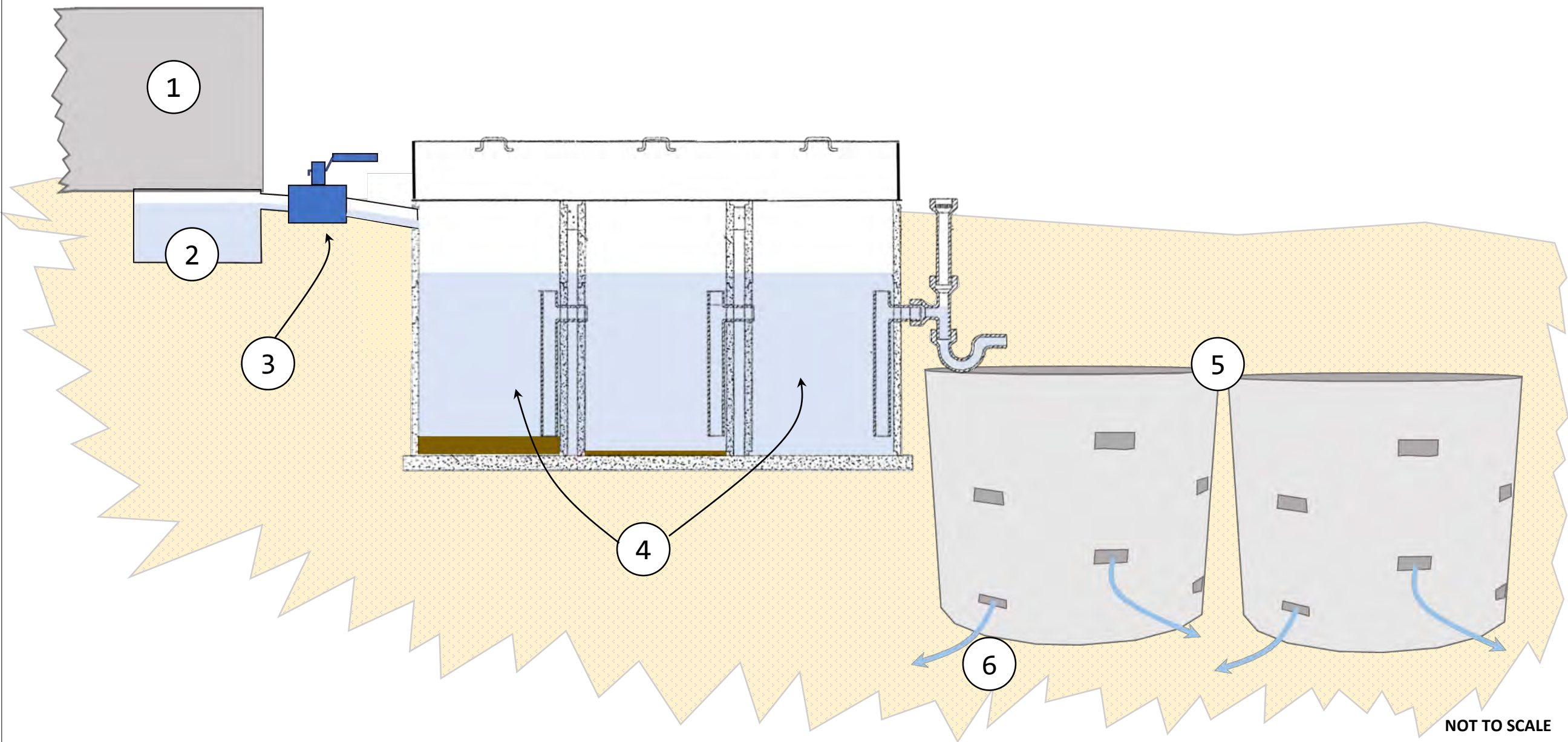
SOURCE: Client's proposed plan

- 10.1.1 - attachment 9
- LEGENDS:**
1. TRUCK PARKING AREA TO BE MADE OF 100 MM OF PROFILE ON TOP OF EXISTING HARDSTAND. TO BE GRADED AT 2% TOWARDS A CONCRETE SUMP (DETAILED IN POINTS 2 TO 6). STORAGE CAPACITY OF SUMP TO BE 20,000 L ALLOWING FULL CONTAINMENT OF SPILL FROM THE BIGGEST TRUCK (MAXIMUM WASTEWATER VOLUME FROM INDIVIDUAL TRUCK BEING 14,000 L) + FREEBOARD
 2. CONCRETE RAMP OF THE SUMP TO BE GRADED AT 1 IN 3 TO ALLOW VEHICLE ACCESS DURING CLEANING AND MAINTENANCE
 3. RAMP TO BE MADE OF A CONCRETE BASE TO PREVENT LEACHING OF WASH WATER AND SPILLS TO NATURAL ENVIRONMENT. SURFACE AREA OF THE BASE TO BE 8M X 1M
 4. SUMP TO BE 8 M (WIDTH) X 4 M (LENGTH) X 1M (DEPTH) WITH SUMP WALLS TO BE 150 MM THICK
 5. STORMWATER GRATED PIT CONNECTED TO SEDIMENTATION TRAP WHICH IN TURN CONNECT TO SOAKWELLS. OUTLET TO BE CLOSED WITH A VALVE (AS SHOWN ON FIGURE 3) DURING TRUCK TO TRUCK TRANSFER AND WASH DOWN TO FULLY CONTAIN WASTEWATER. SUMP AND GRATED PIT TO BE THOROUGHLY CLEANED AFTER ANY WASH DOWN OR SPILL INCIDENT.



NOT TO SCALE

- LEGENDS:**
- 1. SUMP
 - 2. 600 MM COLLECTION PIT WITH OUTFLOW RESTRICTED BY VALVE
 - 3. VALVE CLOSED DURING TRUCK TO TRUCK TRANSFER OR TRUCK WASHDOWN BUT OTHERWISE OPEN TO ALLOW DISCHARGE OF STORMWATER INTO THE SILT PITS
 - 4. TRIPLE INTERCEPTOR SEDIMENTATION TRAP (750 L EACH) TO BE INSTALLED TO CAPTURE ANY SOLID OBJECTS
 - 5. TWO 1500 MM (ID) x 1500 MM (H), 2650 L SOAKWELLS TO BE INSTALLED TO ALLOW STORMWATER TO DISCHARGE INTO NATURAL ENVIRONMENT
 - 6. DISCHARGE OF STORMWATER



Appendices

EXIT WASTE ENVIRONMENTAL INSTRUCTION

Vehicle Parking & Truck Transfer/ Wash Out Policy

Application (Tanker Truck Park Up Area)

The objectives with respect to spill management are to:

- Minimize adverse effect on the environment
- Minimize the risks of spills occurring
- Ensure a spill kit is available onsite
- Ensure that any contaminated soil/ water is disposed of correctly

Procedure

General Tanker Operations

- All tanker trucks to be only parked up in the bunded containment area
- Spill bund safety valve to be left closed overnight and in times of good weather
- During tanker waste transfer operations, truck operator is required to check bund safety valve is closed prior to unloading truck.
- Truck operator is required to “prestart check” tanker trucks to make sure all valves are closed etc, prior to operating the truck.
- Truck operator is required to use “spill tubs” during all waste transferring operations, to mitigate small spills, and make clean up easy.

Should a spill occur on site:

- Check for danger
- Isolate the source of the spill
- Contain the spill
- Alert your supervisor
- Recover and dispose of the material
- Document the spill on the incident form
- Investigate the cause and prevent it from re-occurring.

Response

The response will be in accordance with the three “C’s”

1. Control
2. Contain
3. Clean up

The quantity spilled will determine clean up method

Report any leaks or spillage to your supervisor

- Typical controls include:
 - Stop the flow at the source

Typical containment measures include:

- Use of spill booms- located in spill kits (trucks & site kits)
- Use of absorbent materials such as saw dust, kitty litter & sand. (where available on site).
- Use of bunds (plastic bunds and truck hoses etc).

Clean up measures include:

- Removal of the absorbent material to designated locations ie: to onsite site sealed bins & skip bins.
- If there is free liquid use vacuum truck to suck up spillage, which will be disposed of through the controlled waste disposal sites.
- Removal of contaminated soils will be disposed of through the appropriate waste streams already utilized in the business ie: use onsite skip bins for disposal to land fill.

Ensure all personnel are made aware of emergency procedures through site induction and /or tool box talks.

Responsibilities

1. The manager will ensure that Environmental instruction is implemented.
2. The manager/ Engineer will ensure that equipment is kept well maintained.
3. The manager will make sure the containment bund is checked for operation and silt pits cleaned regularly, so they work effectively to catch hydrocarbon and silt run off during periods of rain.
4. The manager will notify DWER and the EPA following a spill when necessary.

Containment Bund/ Sump Maintenance

- Spill containment area to be regularly inspected, any repairs required will be rectified ASAP.
- The silt pits and sump pit to be checked and cleaned as required, any silt and “first flush” waste captured by the silt pits will be disposed off site via a controlled waste tip site.

EXIT WASTE ENVIRONMENTAL INSTRUCTION

Truck Operator Transfer/ Wash Out Procedure

Truck To Truck Waste Transfer Procedure:

1. Truck to truck waste transfer is only to occur in bunded hardstand area
2. Pre start truck and make sure truck and all equipment is in operational condition
3. Check spill containment bund is in an operational condition (ie is empty, clean and safety valve closed).
4. Use onsite plastic spill tubs to catch any waste that may leak from valves when uncapping them and connecting transfer hose.
5. Complete waste transfer.
6. Any small spillage caught in spill tub to be sucked up into truck being loaded.

Spill Clean Up Procedure:

The response will be in accordance with the three "C's"

1. Control
2. Contain
3. Clean up

The quantity spilled will determine clean up method

Small Spills:

Essentially use onsite vacuum truck to clean up spill via vacuum loading and water to wash any residue from the ground surface.

Large Spills:

For large spills where containment sump has been utilized, use vacuum truck to vacuum load liquid into truck and clean up containment sump using water and high pressure water washer to wash any remaining residue into sump outlet pit, and clean pit with vacuum truck to restore containment sump to operational condition.

Any disposable containment items used to aid spill cleanup will be disposed of in appropriate onsite bins

Should a spill occur on site:

- Check for danger
- Isolate the source of the spill
- Contain the spill
- Alert your supervisor
- Recover and dispose of the material
- Document the spill on the incident form