

Attachment H.1 Raw Materials, Intermediates and Product Handling

Operations involve the storage and handling of fuel, engine hydraulic and lubricating oils and anti-freeze. Lubricating and engine oil and waste oils generated in plant servicing are stored in the Maintenance Workshop. There is a 3,200 litre self bunded diesel oil plastic storage tank adjacent to the electrical sub-station at south west boundary, which is used for fuelling the onsite plant items (forklifts, grabs etc.). Road vehicles are not refuelled at the facility.

The concrete bund around the tank was constructed recently. The original bund around the storage tank is tested every three years to confirm it is fit for purpose. The most recent tests, which were completed in November 2011, confirmed the tanks and pipework are fit for purpose and working satisfactorily. A copy of the integrity test report is included in this Attachment.

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**Greenstar Environmental Services Limerick
EPA Waste Licence W0082-02**

**Integrity Testing of storage bund.
As per Condition 3.11.5 of the EPA Waste Licence**

3.11.5 The integrity and water tightness of all the bunds and their resistance to penetration by water or other materials stored therein shall be confirmed by the licensee following its installation and prior to its use as a storage area.

Mobile bunds inspected:

- Storage Bund (1)

Water Tightness Test

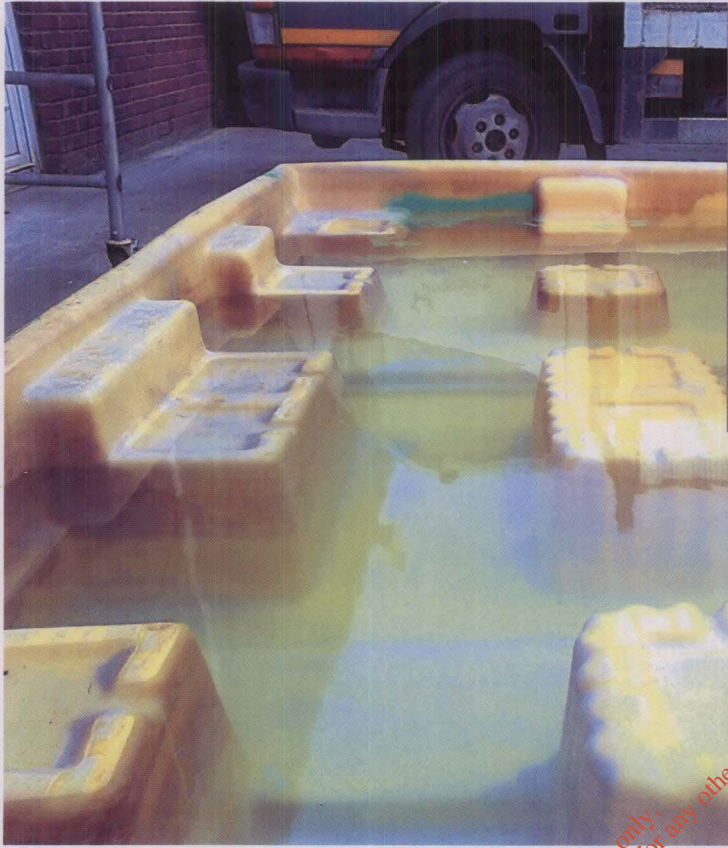
A water test was performed on the above bunds in accordance with the following guidance documents:-

BS 8007 (1987) – Design of Concrete Structures for Retaining Aqueous Liquids

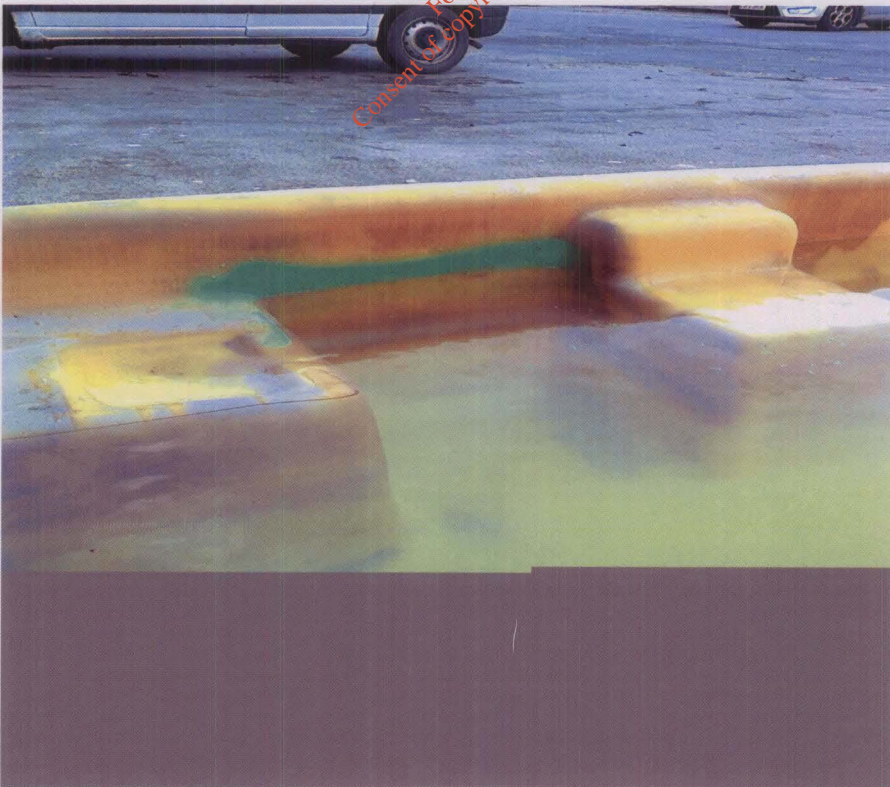
CIRLA Report 163 - Construction of Bunds for Oil Storage Tanks

On 14th November 2011 the storage bund was filled to an appropriate level (see photograph below), marked accordingly and photographed. Approximately 24 hours later on November 15th the bund was assessed and photographed.

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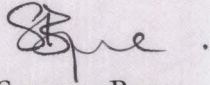
15th November 2011



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No drop in water levels was recorded in the diesel bund, quarantine bund or ad blue bund during the test period.

The integrity and water tightness of the bund is sound and are therefore fit for purpose.



Suzanne Byrne

Environmental Engineer

For and *on behalf* of Greenstar Environmental Services Ltd

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Attachment H.2 Waste Prevention

The facility is designed and operated to maximise the recovery of the materials accepted. As all of these materials are currently classified as waste the only opportunities for waste prevention relate to the small amounts of office and canteen waste generated in the office and welfare facilities.

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Attachment H.3 Recovery and Disposal of Waste Generated at the Facility

Waste generated by facility administration and maintenance activities includes office and canteen waste and waste oils and spent batteries. Greenstar implements waste prevention, minimisation and segregation procedures to minimise the amounts of wastes arising and ensure that as much as possible is recycled and recovered.

The fixed mobile plant and equipment is subject to on-site maintenance by a contract mechanic company. Waste oils and spent batteries are removed for disposal/recovery at licensed treatment/recovery facilities. Seepages from the waste handled in Building 2 are collected in a floor drain and stored in a tank inside the building before being sent to an-off site wastewater treatment plant.

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Attachment H.4 Waste Hierarchy

The foundation statement on national waste management policy “Changing Our Ways” was issued by the Department of the Environment and Local Government in September 1998. The statement firmly based national policy on the EU Waste Management Hierarchy, which in descending order of preference is: -

- Prevention;
- Preparing for Reuse;
- Recycling;
- Other Recovery (including energy recovery), and
- Disposal.

The statement was based on and supported by EU legislation that required the reduction in the volume of biodegradable waste disposed to landfill. EU Landfill Directive 99/31/EC set out the following reduction targets, which are based on 1995 figures:-

- Minimum 25% reduction by 2010 (includes 4 year derogation);
- Minimum 50% reduction by 2013 (includes 4 year derogation)
- Minimum 65% reduction by 2016 (derogation available but not taken).

The 2002 government policy statement ‘Preventing and Recycling Waste - Delivering Change’ identified initiatives to achieve progress at the top of the Waste Hierarchy to prevent waste arising and increase recycling rates.

In 2004 ‘Waste Management – Taking Stock and Moving Forward’, the significant improvement in recycling rates achieved since 1998 was recognised, but the need for further expansion was emphasised. The Statement confirmed that Ireland’s national policy approach remained ‘grounded in the concept of integrated waste management, based on the internationally recognised waste hierarchy, designed to achieve, by 2013, the ambitious targets set out in Changing Our Ways’.

The EU Waste Framework Directive 2008/98/EC was introduced to coordinate waste management in the Member States so as to limit the generation of waste and optimise the organisation of waste treatment and disposal.

The Directive, which also established the first EU wide recycling targets, was transposed into Irish Law by the European Communities (Waste Directive) Regulations 2011 (S. I. No.126 of 2011). By 2020, Member States must reuse or recycle 50% of certain categories of household waste and reuse, recycle or recover 70% of non-hazardous C & D waste.

The most recent Policy Statement ‘A Resource Opportunity Waste Management Policy In Ireland 2012’ is also predicated on the EU Waste Management Hierarchy and encompasses a range of measures across all tiers namely, prevention, preparation for reuse, recycling, other recovery and disposal.

The Statement sets out how the higher tiers can reduce Ireland's reliance on finite resources, virtually eliminate reliance on landfill and minimise the impact of waste management on the environment. It is a policy objective that when waste is generated, the maximum value must be extracted from it by ensuring that it is reused, recycled or recovered.

The current Waste Management Plan for the Limerick/Clare/Kerry Region 2006-2011 encompasses areas of planning, regulation, collection, recycling, recovery and disposal of non-hazardous wastes generated within the region. It is a policy objective to focus on encouraging householders and the private sector to maximise reuse and recycling in the Region and minimise disposal. It is a target to achieve a recycling rate of 45% for the Region by 2013.

The proposed change to the facility is consistent with the Waste Hierarchy as it will minimise disposal, which is at the bottom of the Hierarchy, and increase the amount that is recovered (energy recovery) and recycled.

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Attachment H.5 Waste Recycling & Recovery

The C&I wastes comprises mixed and segregated recyclables (paper, cardboard, glass, metal, green waste and wood). The mixed packaging is processed inside Building 1 to separate out the plastic, card and paper, which are then baled and stored prior to transfer to a suitable permitted/licensed off-site recycling outlet. Biodegradable wastes that are suitable composting are bulked and sent to an offsite composting facility. The remaining non-recyclable material is bulked up and sent to appropriate licensed disposal facilities.

The C&D waste comprises mixed wastes (rubble, stone, timber, metal etc.) and soil and stone. The material arrives in skips of varying sizes. The loads are inspected, with any plasterboard removed and placed in a dedicated skip located inside the building, and the remainder off loaded into an external C&D bay. The majority of the incoming waste is recovered and sent off-site either for re-use or recycling. The non-recyclable materials are transferred to a licensed landfill.

The residual waste is deposited on the floor of Building 2 and is fed into a hopper and conveyed to a baler where it is compacted into bales and wrapped in plastic sheeting. The wrapped bales sent to overseas waste to energy recovery plants. In the future it is envisaged that further processing of the waste may be required to produce a higher quality product, for example Refuse Derived Fuel (RDF), that is suitable for use as a replacement for non-renewable fossil fuel. This will involve the removal of poorly combustible materials so as to increase the calorific value.

Untreated timber pallets and untreated construction timbers removed from the C&D and C&I waste are shredded and sent either for use as a compost bulking/aeration agent, or as raw material in chipboard/MDF manufacturer. This activity has ceased, but may restart in the future.

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