SPEEDY FUELS & LUBRICANTS

From Us to You in No Time

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Reference: Speedy Fuels Ltd. Oil Storage Facility – Old Bath Road, Charvil, RG10 9QJ

This email follows up on the enquiry regarding Safety and Environmental controls being installed at the proposed Oil storage facility for Speedy Fuels Ltd. Old Bath Road, Charvil, RG10 9QJ.

Please do not hesitate to contact me if you have any further questions after reviewing the below which details the safety and environmental controls that will be in place before the site becomes fully operational.

Health & Safety and Environmental impact

In consideration of the Health, Safety and Environmental impact to the local surrounding areas and general public from the activities undertaken at the Speedy Fuels Ltd located at Old Bath Road, Charvil, the company has reviewed guidance from the following documents:

1. HSE HSG 176 guidance
2. Environment Agency Control of Pollution (Oil Storage) Regulations
3. Recommended practice, according to EEMUA 159 above ground storage

Speedy Fuels Ltd also understands that transport emissions are of concern, in order to minimise the impact from these, Speedy Fuels Ltd owned vehicles are equipped with modern Euro 6 engines and fuelled with Hydrotreated Vegetable Oil (HVO). HVO, a renewable and sustainable fuel, has been shown in studies to significantly reduce harmful tailpipe emissions compared to conventional diesel in a variety of road vehicles.

Key environmental benefits of HVO include:

- **Reduced Air Pollution:** HVO exhibits up to a 30% decrease in particulate matter (PM), up to a 30% reduction in hydrocarbons (HC), up to a 25% reduction in carbon monoxide (CO), and up to 10% reduction in nitrogen oxides (NOx) compared to standard EN590 Road Diesel. This is attributed to its high purity and the absence of aromatic compounds.
- **Lowered Carbon Footprint:** HVO can achieve up to a 90% reduction in net CO2 emissions, contributing to a more sustainable transportation solution.
- **Enhanced Environmental Profile:** HVO is non-toxic, odourless, and 100% biodegradable, further minimising its environmental impact

This aligns with Speedy Fuels' commitment to environmental sustainability and responsible business practices.

Safety controls

With reference to the Speedy Fuels, Old bath Road, Charvil depot; prior to the site becoming fully operational, the company shall ensure the highest levels of safety at the site are achieved based on a review and recommendations of the HSE HSG 176 guidance.

The site construction shall follow recommended practices of HSG 176 Storage of Flammable Liquids in Tanks.

Within the HSG 176 guidance, the company refer to the section referencing: “Higher Flashpoint Liquids “, of which was reviewed as the basis of the construction model for the site.

Reference paragraphs reviewed in the guidance; HSG 176 Storage of Flammable Liquids in Tanks, within the section “Higher Flashpoint Liquids “the company has considered the guidance and shall implement recommendations as a further submission answer below the references.

Higher Flashpoint Liquids

277. Where the flashpoint of the liquid is significantly above the highest operational temperature, some of the precautions described may be relaxed. Under these circumstances such liquids will not normally produce a flammable atmosphere. The risk assessment required under regulation 5 of DSEAR (see paragraph 17–18) should be used to determine which, if any, of the precautions can be relaxed. In general, a difference of at least 10 °C between the highest temperature and the flashpoint is recommended before such relaxations are permitted.

a) *The fuels stored on this site have a difference of >10^0C between the highest ambient storage temperature and the flash point of material stored*

b) *The storage facility operates at the ambient temperature for the area, depending on the time of year.*
c) *Therefore, the flash point of fuel being stored is well above the 10^0C between the highest temperature and the flashpoint, which allows for the recommended relaxations permitted within the guidance.*

Sources of ignition

279. Where the temperature of a liquid is not likely to be raised near to its flashpoint, and there is little likelihood of a flammable mist or spray occurring, the liquid may be considered not to give rise to a hazardous area. Protection of nearby electrical equipment is not then required. However, there should be no likelihood of local heating of the liquid, which might produce a flammable vapour.

a) *No local heating source exists on site that would produce a flammable vapour from the liquid.*
b) *The site shall operate a no smoking, no naked flame policy.*
c) *In addition, the fixed electrical equipment used on site for loading/unloading, lighting, pumps, tank monitoring etc, shall be ATEX approved.*
d) *The storage area will be classified as a Zone 0 within the tank head space & secondary containment*

280. For tanks containing higher flashpoint liquids at temperatures near to or above their flashpoint, electrical equipment within 1 m of tank vents and other openings should be protected to zone 2 standards. Equipment located in the vapour space inside such tanks should be to zone 0 standards (see L138, regulation 7 and Schedules 2–4).

a) *The electrical equipment within 1 m of tank vents and other openings shall be classified as a Zone 1 standards and*
b) *Equipment located in the vapour space inside such tanks & secondary containment shall Zone 0.*

281. Irrespective of storage temperature, installations where liquid can escape as a mist or spray may require explosion-protection of adjacent electrical equipment. An example is a pump used to fill or empty a tank.

a) *Fixed electrical equipment used on site for loading/unloading, lighting, pumps, tank monitoring etc, shall be ATEX approved.*

282. In all cases, precautions against the introduction of other sources of ignition such as smoking and hot work will be needed.

a) *The site will operate a no smoking, no naked flame policy.*
b) *All equipment, fixed, mobile or tools shall be ATEX approved.*
c) *The storage area will be classified as a Zone 0 within the tank and secondary containment.*
d) *Maintenance works shall be under a Permit to Work system for: general work, hot work, working at height etc*
e) *Tankers used for fuels to and from site are full ADR tankers and comply with ADR standards.*

283. Protection against vehicles acting as a source of ignition is not required for vehicles used or parked in storage areas containing only higher flashpoint liquids.

a) *Tankers used for fuels to and from site are full ADR tankers and comply with ADR standards.*

Location of tanks above ground

284. In Table 3 the separation distance from buildings etc, for tanks above 250 m3 capacity may be reduced to 10 m.

a) *The tank located closest to buildings etc, is 10m separation distance between the tank & the building,*

285. The recommended minimum separation distances for a tank containing higher flashpoint liquid are:

from another tank containing a higher flashpoint liquid: the minimum needed for safe construction and operation;

a) *The tanks spacing between tank to tank are 600mm, for safe construction and operation.*

from a tank containing a low flashpoint liquid: in accordance with Table 2.

The fuels stored on this site have a difference of >10^{0}C between the highest ambient storage temperature and the flash point of material stored

Environmental Controls

In consideration of the company's environmental impact through its business activities, particularly in preventing pollution to air, water, and land, the site shall comply with the Oil Storage Regulations.

In order to comply with the Control of Pollution (Oil Storage) Regulations, the company shall ensure that the site is constructed with suitable primary, secondary, and tertiary containment and drainage systems, along with emergency action prevention systems to prevent releases to land and water.

Primary and secondary storage containment shall be constructed of suitable materials and comply with the containment guidance of a minimum of 110% of the largest container's storage capacity or 25% of their aggregate storage capacity, whichever is the greater. In addition, the primary and secondary storage containment shall be maintained using the recommended practice, according to EEMUA 159 above ground storage, fitness for service inspection regime.

Speedy Fuels Ltd has further considered the release of air emissions and their impact on the local surrounding areas and the general public from its business activities. The company will implement suitable control measures for the storage containment to prevent the release of odors and VOC emissions during the storage tank loading and unloading of fuel to minimise the impact.

Requirements for storage of oil—general

3.—(1) Oil shall be stored in a container which is of sufficient strength and structural integrity to ensure that it is unlikely to burst or leak in its ordinary use.

- Tanks constructed of mild steel and painted with a protective coating.
- Tanks tested/inspected to EEMUA 159. Last internal inspections Dec 24

(2) The container must be situated within a secondary containment system which satisfies the following requirements—

(a)subject to paragraph (5), it must have a capacity of not less than 110% of the container's storage capacity or, if there is more than one container within the system, of not less than 110% of the largest container's storage capacity or 25% of their aggregate storage capacity, whichever is the greater;

- Tanks double skinned to contain 110% of the volume should the inner tank containing the fuel burst

(b)it must be positioned, or other steps must be taken, so as to minimise any risk of damage by impact so far as is reasonably practicable

- Tanks protected from damage or strike by vehicular transport by armco barriers

(c)its base and walls must be impermeable to water and oil

- The tank bund is made from mild steel which is impermeable to oil
- The tank and bund is sitting on a concrete base

(d)its base and walls must not be penetrated by any valve, pipe or other opening which is used for draining the system;

- No valve, pipe or opening penetrates the tank which will be used for draining. Any tap which penetrates the secondary containment will be double valved and capped off.

(3) Any valve, filter, sight gauge, vent pipe or other equipment ancillary to the container (other than a fill pipe or draw off pipe or, if the oil has a flashpoint of less than 32°C, a pump) must be situated within the secondary containment system

- No products stored on site with a flashpoint of less than 32^{o}C
- Tanks fitted with digital gauges with access at a central location
- Tanks vent pipe is directed into the secondary containment

(4) Where a fill pipe is not within the secondary containment system, a drip tray must be used to catch any oil spilled when the container is being filled with oil

- All fill lines have drip tray fitted below

(5) Where any drum is used for the storage of oil in conjunction with a drip tray as the secondary containment system, it is sufficient if the tray has a capacity of not less than 25% of—

(a)the drum's storage capacity; or
(b)if there is more than one drum used at the same time with the tray, the aggregate storage capacity of the drums

- Oils/Lubricant barrels and IBCs stored in building and arrived pre-filled
- Storage of flammable liquids in barrels will be restricted and no longer take place

Fixed tanks

4.—(1) Any fixed tank used for storing oil shall satisfy the following requirements:
(2) Any sight gauge must be properly supported and fitted with a valve which must be closed automatically when not in use

- Tank gauges are digital – no sight gauges

(3) Any fill pipe, draw off pipe or overflow pipe must be positioned, or other steps must be taken, so as to minimise any risk of damage by impact so far as is reasonably practicable and—

(a)if above ground, must be properly supported

- All pipework protected by Armco barrier
- Pipework supported with braces/supports

(b)if underground

- No underground pipework

(c)if made of materials which are liable to corrosion, must be adequately protected against corrosion.

- Tanks painted with 3 pack paint to prevent corrosion to maintain the lifespan of the tank shell.

(4) The tank must be fitted with an automatic overfill prevention device if the filling operation is controlled from a place where it is not reasonably practicable to observe the tank and any vent pipe

- High level alarm (audio/visual flashing beacon) – set at 80% of total volume
- High/high level alarm (audio/visual flashing beacon) – set at 450mm from tank ceiling
- If fuel hits high/high level, motorised valve to close preventing further filling of tank
- Secondary containment alarm (audio/visual flashing beacon) – Fuel however should not enter bund due to motorised valve shutting when hitting high/high level.
- In the event of a power cut the motorised valves will automatically shut preventing vehicles from filling tanks
- Tanks double valved with manual gate valve and motorised ball valve.
- Tanks isolated when site is closed – Procedure in place to switch off the power to the tanks which will close the motorised valves.
- Fill line fitted with manual shut off valves, automated motorised valve and dry break coupling to prevent spills.
- Fill procedure in place – Before filling the gauges will be checked. If the gauges are not operational then filling will not take place.

(5) Any screw fitting or other fixed coupling which is fitted and is in good condition must be used when the tank is being filled with oil.

- Tanks filled via 3" BSP fitting or dry break coupling
- Maintenance schedule in place to ensure fittings are in good condition and replaced if damaged/worn

(6) Where oil from the tank is delivered through a flexible pipe which is permanently attached to the container

- No flexible pipework permanently attached to the container

(7) Any pump must be—

(a)fitted with a non-return valve in its feed line;
(b)positioned, or other steps must be taken, so as to minimise any risk of damage by impact so far as is reasonably practicable; and
(c)protected from unauthorised use.

- Unloading pump fitted with non-return valve
- Protected by Armco barrier
- Pump power supply switched off at night which also closes motorised valve

(8) Any permanent vent pipe, tap or valve through which oil can be discharged from the tank to the open must satisfy the following requirements—

(a)it must be situated within the secondary containment system;
(b)it must be arranged so as to discharge the oil vertically downwards and be contained within the system; and
(c)in the case of a tap or valve, it must be fitted with a lock and locked shut when not in use.

- Tank vent discharges into secondary containment. In the event of an overflow this would direct oil into the secondar containment
- No vent, tap or valve can discharge to the open

(2) Subject to paragraph (3), if the container or, if there is more than one container within the secondary containment system, any of them is situated less than—

(a)10 metres away from any inland freshwaters or coastal waters; or
(b)50 metres away from a well or borehole

- Tanks sited >10 metres away from inland freshwater
- Tanks sited>50 metres from a well or borehole

Additional Controls

Odour/VOC

- Tank vents fitted with EMCEL tank breather vents to prevent odour and release of VOC's

General

- 20,000 litre full retention interceptor with HVO filter added Darcy Draintector protection
- Darcy Draintector shuts off outlet drain in the event of oil detection
- Large 240 litre spill kits in place – Extra supplies kept on site

Tanker filling equipment

- Site has 2 x industry standard ATEX IFC Inflow mechanical loading skids
- Fitted with emergency stop
- High level overfill prevention system connected to the tanker to automatically shut off if the tanker probe is reached
- Fitted with dry break couplings to prevent spill on disconnect
- Tanker earth monitoring. Will not allow delivery unless connected
- Vapour return with safety knockout