



# Midland Oil Refinery Ltd.

## 11. Method statement

### 1. RECONDITIONING

#### 1.1. Overview

##### 1.1.1. General

- Midland Oil Refinery Ltd. Halesowen has almost 50 years experience in the discrete batch recovery of used mineral lubricating oils from a wide range of industries such as plastics, steel, automotive, metalworking, heat treatment and power generation.
- The Halesowen site is accredited to ISO 9001:2000 and ISO 14001:2004 whilst all processes are covered by Pollution Prevention & Control (England & Wales) Regulations 2000 under permit number GP3135SD.

#### 1.2. Sampling and test

##### 1.2.1. General

- Prior to the collection of spent oils from unknown systems, representative samples are collected and analysed in Midland Oil's on-site laboratories to ensure compliance with site authorisation and to determine suitability for recovery and anticipated yield. All following procedures assume satisfactory results.

#### 1.3. Collection

##### 1.3.1. General

- Collection is by prior arrangement from the site of production and can be undertaken by Midland Oil's own vehicles and drivers or by an approved contractor. These collections will only be made by a Licensed Waste Carrier. Collection can be made in bulk, IBC's or drums.

##### 1.3.2. Health & safety

- **PPE:** drivers collecting the spent oil will wear standard PPE (overall, safety boots/shoes, bump cap/hard hat, safety glasses and oil resistant gloves).
- **First aid:** all Midland Oil vehicles contain first aid kit, eye wash bottles and fire extinguishers.

##### 1.3.3. Potential environmental impact

- **Spillages:** oils must not enter watercourses or be flushed into site drains. Oil-absorbent materials should be used to soak up any spillages and all Midland Oil vehicles carry spill kits for emergency use.

## 1.4. Transportation

### 1.4.1. General

Midland Oil's vehicles are modern and well maintained to minimise air/noise pollution and use ultra-low sulphur diesel. Best efforts are made to follow the most direct routes and/or combine collections and collections/deliveries to reduce environmental impact.

### 1.4.2. Driver qualifications

- All Midland Oil's drivers are ADR trained

## 1.5. Off-loading

### 1.5.1. General

- Upon arrival at Midland Oil's Halesowen site, representative samples are taken from the load to determine agreement with sample (ref 1.2.). All following procedures assume satisfactory results.
- Bulk materials are off-loaded into dedicated, segregated tanks. Packaged materials are off-loaded into designated storage bays. Refer to specific ISO 9001:2000 manuals for full details.

### 1.5.1. Health & safety

- **PPE:** all operatives off-loading the spent oil will wear standard PPE (overall, safety boots/shoes, bump cap, safety glasses and oil resistant gloves).
- **First aid:** first aiders and/or appointed persons are available on all plants, as are eyewash bottles and safety showers.
- **Risk assessment:** all procedures have been subjected to risk assessment(s)

### 1.5.2. Potential environmental impact

- **Spillages:** small/minor spillages may be flushed to site drains that connect with the on-site oil separation and effluent treatment plants. Oil-absorbent materials should be used to soak up larger spillages or where they are remote from access to drain points.

## 1.6. Processing

### 1.6.1. General

- The reconditioning process can include a number of stages, not all of which are applicable to all oils reconditioned by Midland Oil.
- **Water separation:** where incoming load has a high water content, the oil is allowed to stand until physical separation occurs. Heat may be applied to enhance this process. The water is then pumped/drained off to the on-site effluent plant.
- **De-hydration & sterilisation:** oils are heated in vessels to kill any bacteria/micro-organisms and remove excess water by evaporation.

- **Removal of oxidised products & decolourisation:** using diatomaceous earths and other surface-active treatments, added prior to filtration.
- **Filtration:** the de-hydrated oil is passed through plate filter presses to remove solids. Filter aids may be used if required.
- **Polishing:** additional filtration can be undertaken to 3 micron maximum where required.
- **Viscosity adjustment:** blend oils may be added to adjust viscosity to required/original specification.
- **Additive replenishment:** additive packages may be required to bring specification/duty back to the original standard.
- **Storage:** reconditioned oils are stored in segregated, dedicated tanks until required. They are loaded on to delivery vehicles through additional filters.

#### 1.6.2. Health & safety

- **PPE:** all operators will wear standard PPE (overall, safety boots/shoes, bump cap, safety glasses and oil resistant gloves)
- **Risk assessment:** all procedures have been subjected to risk assessment(s).
- **COSHH:** all process chemicals/additives have been subjected to COSHH assessment(s).

#### 1.6.3. Potential environmental impact

- **Spillages:** any spillages may be flushed to site drains that connect with effluent plant. Oil-absorbent materials should be used to soak up any spillages remote from access to drain points.
- **Emissions:** all emissions will be monitored and controlled according to the Halesowen site's PPC permit and Midland Oil's own operating procedures.
- **Waste materials:** residues from the reconditioning process (water and filter cakes) will be treated in the on-site effluent treatment plant and via licensed landfill. Waste oil that is unsuitable for reconditioning or using in the manufacture of other oil products will be blended as fuel.
- **Raw materials:** as this is a recycling/recovery process, raw material usage is low – generally, diatomaceous earths and proprietary additives.
- **Packaging:** reconditioned drums are used wherever possible (90%+ of total packaging used)

#### 1.6.4. Analysis

- **Sampling/monitoring:** monitoring samples are taken for analysis throughout the processing cycle. Refer to specific ISO9001:2000 manual for full details.
- **QC analysis:** after processing is completed, all products are subjected to full quality control analysis prior to pumping to segregated storage tanks, or direct to tanker, for return to customer.
- **Certificate of Conformity:** can be issued if required.

## **1.7. Delivery**

### **1.7.1. General**

- Delivery is by prior arrangement and can be undertaken by Midland Oil's own vehicles and drivers or by an approved contractor. Delivery can be made in bulk, IBCs or drums.

**1.7.2. Health & safety:** as per collection (ref 1.3.2.)

**1.7.3. Potential environmental impact:** as per collection (ref 1.3.3.)

### **1.8. Monitoring and audit**

- Covered by ISO9001:2000 and ISO14001:2004 procedures, which are available for inspection as required.

## **1.9. Training**

### **1.9.1. General**

- Training records for all Midland Oil's personnel are kept/audited via ISO 9001:2000 & ISO14001:2004 procedures

**End of reconditioning method statement**