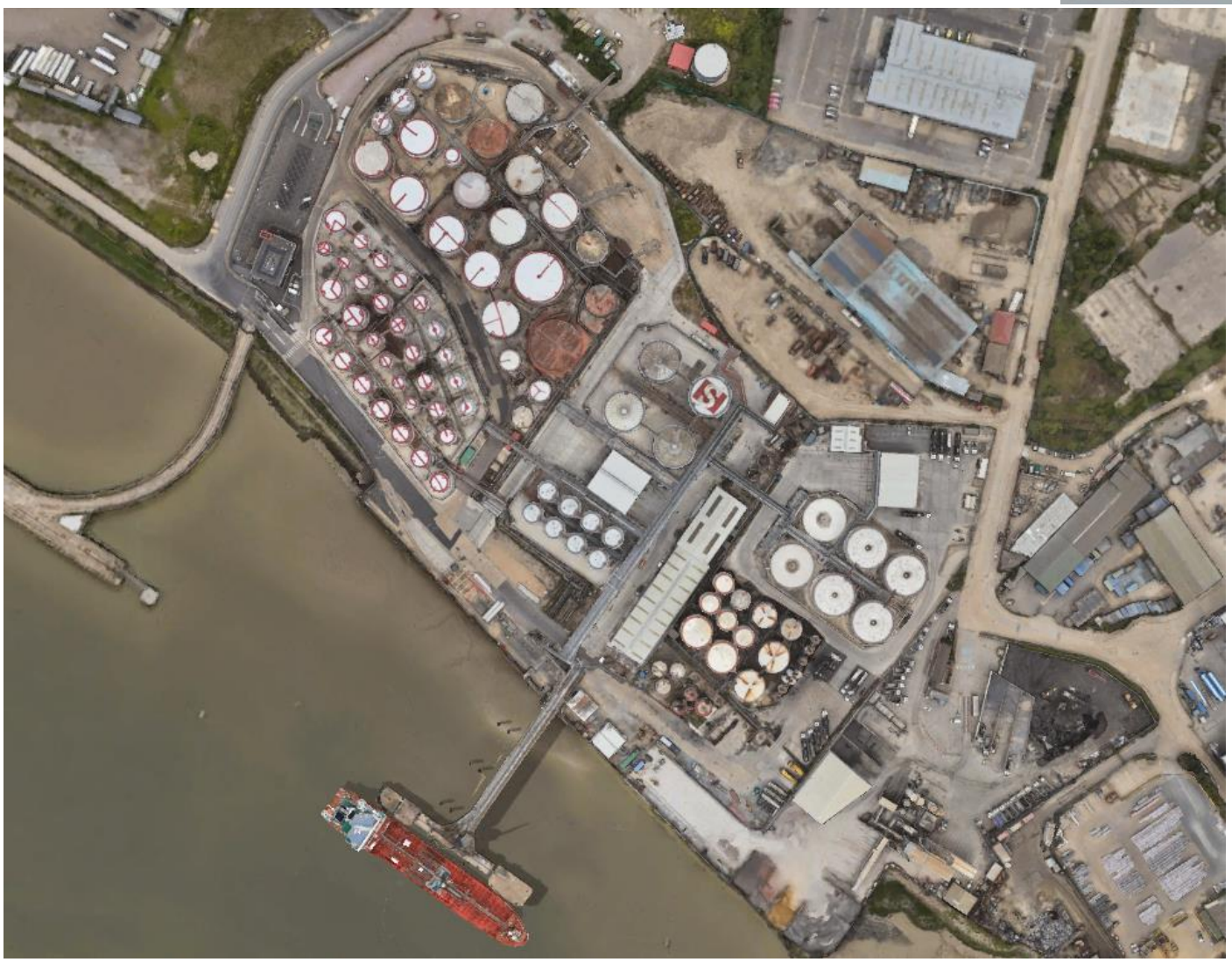

OPERATING TECHNIQUES WASTE PERMIT VARIATION APPLICATION

Report for: Stolthaven Dagenham Ltd

Ricardo ref. ED18482 Issue: 1 29/05/2025

Ricardo Energy & Environment, Gemini Building, Fermi Avenue, Harwell, Oxfordshire, OX11 0QR, UK | +44(0)1235 75 3000 | ee.ricardo.com
Registered company no. 08229264 | VAT no. GB 212 8365 24

Customer:
Stolthaven Dagenham Ltd

Contact:
Mark Roberts, Gemini Building, Fermi Avenue, Harwell, Didcot, OX11 0QR, UK

T: +44 (0) 1235 753 611
E: mark.roberts@ricardo.com

Customer reference:
ED18482

Author:
Mark Roberts

Approved by:
Alice Burrows

Date:
29/05/2025

Ricardo reference:
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Ricardo is certified to ISO9001, ISO14001, ISO27001 and ISO45001.

CONTENTS

Glossary

Abbreviation	Definition
BAT	Best Available Techniques
BAT-AEL	Best Available Techniques – Associated Emission Level
BATc	Best Available Techniques Conclusions
BREF	Best Available Techniques Reference document
COMAH	The Control of Major Accident Hazards Regulations 2015
CMS	Continuous Monitoring System
CMMS	Computerised Maintenance Management System
CIP	Clean in Place
DAA	Directly Associated Activity
EHSM	Environmental, Health and Safety Management System
ELV	Emission Limit Value
EMS	Environmental Management System
ENE	Energy Efficiency
EA	Environment Agency
EPR	The Environmental Permitting (England and Wales) Regulations 2016
ETP	Effluent Treatment Plant
EWC	European Waste Catalogue
HGV	Heavy Goods Vehicle
IED	Industrial Emissions Directive
MAPP	Major Accident Prevention Policy
OMP	Odour Management Plan
MSDS	material safety data sheet
SMS	Safety Management System
SHEQ	Safety, Health, Environmental and Quality
TCM	Technically Competent Manager
TP	Tank Pit
UCO	Used Cooking Oil

1. INTRODUCTION

Ricardo was commissioned by Stolthaven Dagenham Ltd (SDL) to support a bespoke permit variation application for its permitted facility in Dagenham, hereafter referred to as “the facility”. Under the Environmental Permitting (England and Wales) Regulations 2016 (as amended), the facility already has the benefit of a bespoke environmental permit referenced EPR/WE4467AC issued on 22 October 2024, see the Appendices.

This report presents an assessment of the compliance and implementation of the appropriate measures for the proposed changes to the storage and treatment of the waste operations.

The existing waste management activities involve the reception, transfer, storage and treatment of up to 300,000 tonnes per annum of non-hazardous used cooking oil (UCO), acid oil, food waste and animal fat (tallow), pending further onward transfer for recovery into biodiesel.

This application is for the following changes and additions to the existing permit:

- The mixing and blending of liquid wastes that have the same characteristics, see section 4.5.
- The addition of 6 non-hazardous liquid wastes, see Table 3-1: Summary of current and proposed changes to Facility.
- The increase in the number of storage tanks used, see Appendices.
- The increase in the quantity of waste allowed on site at any one time to **115,000 tonnes.**
- The increase of the annual quantity of waste accepted at the facility to **500,000 tonnes**.

There will be no changes to the processes and procedures for the acceptance, handling, storage and management of wastes. No hazardous waste will be accepted, treated or stored and the proposed additional wastes are not classified as hazardous. The facility currently operates in full compliance of its permit and management systems and is routinely inspected by the local Environment Agency (EA) team.

Non-waste activities, involving the storage of chemicals and fuels, are undertaken at the facility. The facility currently operates as an upper tier site under the Control of Major Accident Hazards Regulations 2015 (COMAH), which aims to prevent and mitigate the effects of major accidents involving dangerous substances which can cause serious damage/harm to people and/or the environment. Under COMAH, risks to the environment are considered as well as risks to people.

SDL holds and maintains an Environmental, Health and Safety Management System (EHSM) which supports the Major Accident Prevention Policy (MAPP). The implementation of the MAPP is aimed at minimising the risk from hazardous substances capable of causing a major accident. Since being acquired by SDL in 2012, the facility has seen vast investment and upgrading to meet, and in some areas exceed, the latest COMAH regulatory requirements.

SDL holds and maintains a company environment management system (EMS) accredited to ISO 9001 and ISCC certification 2022 and is committed to continual improvement of its engineered infrastructure and operating techniques.

2. LISTED ACTIVITIES

2.1 PRIMARY ACTIVITIES

The facility’s primary waste activities are listed in Table 2-1: Current and Proposed Activities (proposed activities highlighted in bold).

Table 2-1: Current and Proposed Activities

Description activities for waste operation	Limits of Activities
R3: Recycling/ reclamation of organic substances which are not used as solvents	**No more than 500,000 tonnes of non-hazardous wastes per annum to be stored.**
R12: Exchange of wastes for submission to any of the operations numbered R1 to R11	**No more than 115,000 tonnes of waste to be stored on site at any one time.**
	The mixing and blending of wastes for storage purposes, only if they consist of the same characteristics.
R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	All storage of wastes is to be undertaken in engineered and sealed storage tanks, located in impermeable bunds with 110% capacity of the largest tank.
	Physical treatment shall consist of steam heating conducted within the storage tanks.
	All waste shall only be stored pending transfer off site for recovery purposes.
	Wastes shall not be stored longer than 6 months.
	There shall be no importation, treatment or storage of hazardous wastes.

2.2 DIRECTLY ASSOCIATED ACTIVITIES

Directly associated activities (DAA) are defined as operations that have a technical connection with the primary activity/s, are carried out at the same site as the primary activity/s and have the potential to cause pollution. The existing DAA are not to be changed listed in Table 2-2: Existing Directly Associated Activities

Table 2-2: Existing Directly Associated Activities

Directly Associated Activity	Description of Specified Activity
980kWh boiler	Operation of a 980 kWh natural gas fired boiler for the generation of steam for the heating of tanks containing wastes.
Effluent treatment plant	Contaminated liquids such as fire water or spillages are contained in the site's sealed drainage system. The liquids can be diverted to the onsite effluent treatment plant (ETP), then discharged to foul sewer under a Thames Water trade effluent discharge consent, dated 1st February 1999.
Surface water	Collection and discharge of uncontaminated surface water to surface water drains.

3. PROPOSED CHANGES

The facility, shown in Figure 1 and Figure 2 below, currently imports, stores and treats (heats) up to 300,000 tonnes per year of wastes, namely, Tallow (animal fat), used cooking oil (UCO), food and acid oil waste.

This permit variation proposes that the facility shall import, store, mix and treat (heat) up to 500,000 tonnes per year, including the following additional wastes:

- Plant-tissue waste.

- Sludges from washing, cleaning, peeling, centrifuging and separation.
- Wastes from solvent extraction.
- Sludges from on-site effluent treatment.
- Wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals - wastes not otherwise specified.
- Wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics - wastes not otherwise specified.

The EWC list of waste codes for these wastes have been set out in Table 4-1.

Further storage capacity and additional storage tanks are proposed, these are detailed (highlighted in grey) in the storage plan detailed in the Appendices.

The storage locations for these waste types are shown in Figure 3-1 and Figure 3-2.

Figure 3-1: Site Operations Storage Plan (main facility)

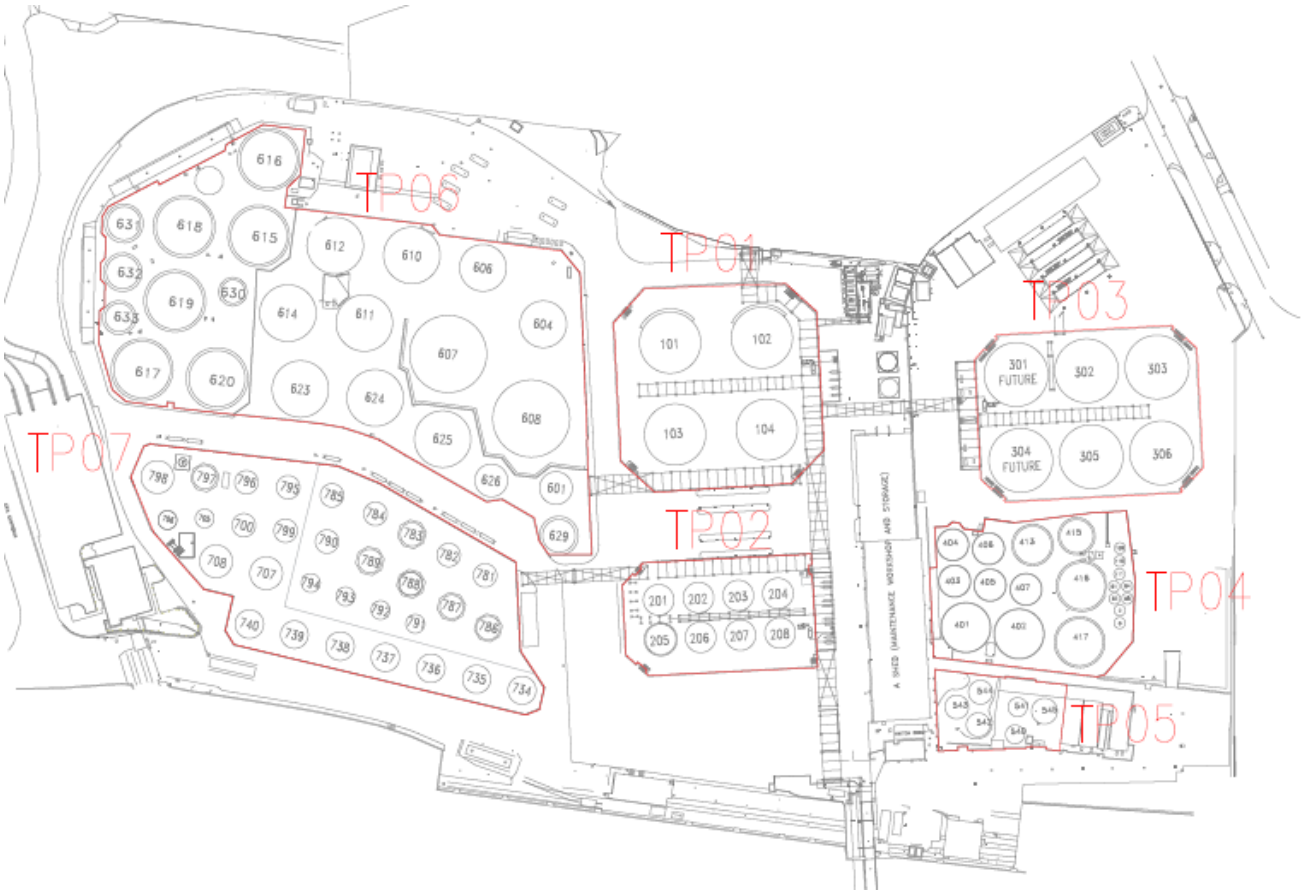


Figure 3-2: Site Operations Storage Plan (Northwest area of the facility)

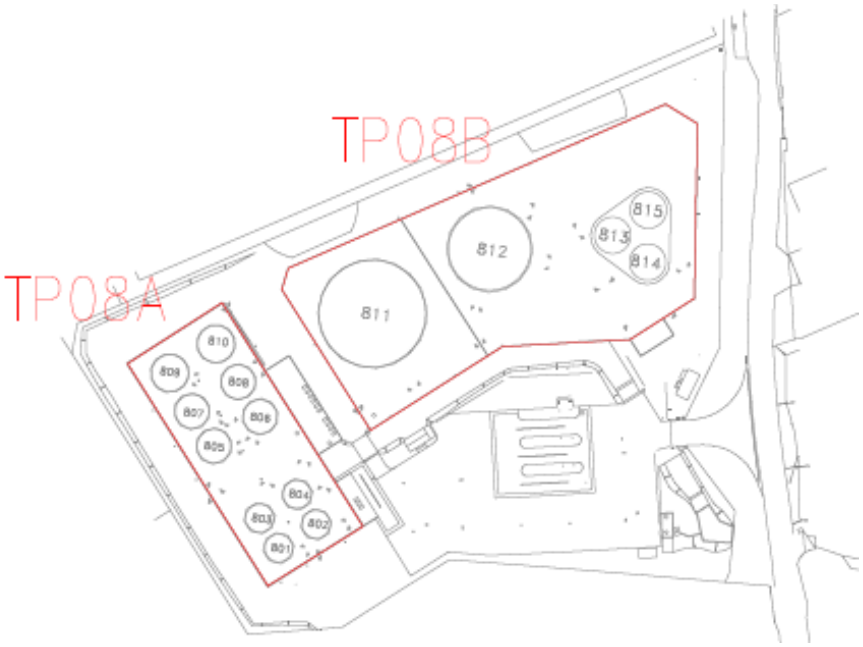


Table 3-1: Summary of current and proposed changes to Facility (proposed changes in bold text)

Item	Details
Site address	Stolthaven Dagenham Ltd, Choats Road, Dagenham, RM9 6PU
National Grid reference (site centre)	TQ 48822 81930
Site area	2 ha
Total annual quantity of waste accepted at the facility	**500,000 tonnes**
UCO storage capacity (at any time)	**55,000 tonnes**
Food waste storage capacity (at any time)	10,000 tonnes
Tallow storage capacity (at any time)	10,000 tonnes
Acid oil storage capacity (at any time)	10,000 tonnes
Plant tissue waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing (at any time)	**10,000 tonnes**
Sludges from food, plant, tobacco preparation or processing (at any time)	**10,000 tonnes**
Waste from organic chemical processes, corn oil and glycerin from biodiesel and mixtures of vegetable oils, fats and soaps (at any time).	**10,000 tonnes**
Total storage of waste at any one time	**115,000 tonnes**
Operating hours	24 hours a day, 7 days a week

The facility's procedures and infrastructure for the acceptance of waste, transfer by pipe, storage, heating and onward transfer, shall remain the same with no changes. Additional proposed waste activities include the mixing and blending of wastes for the purpose of operational efficiency and storage space utilisation. All wastes will only be mixed if they have been sampled and assessed, to confirm they have the same characteristics.

The facility will continue to accept, receive and store wastes pending onward transfer to other permitted facilities for recovery and refining into biodiesel. The wastes will be transferred to and from the facility by road tankers and by marine shipping tankers which will dock alongside the facility on the River Thames.

All wastes will continue to be sent for recovery and not disposal. No hazardous waste is accepted, treated or stored at the facility. The following activities will take place:

1. Waste transfer (incoming) pre acceptance.
2. Waste acceptance and assessment.
3. Waste handling and transfer by pipe.
4. Mixing / blending of wastes with similar characteristics.
5. Storage in tanks.
6. Constant gentle heating of tanks by steam raised from an on-site natural gas boiler.
7. Waste transfer by pipe (outgoing).

The proposed changes to operations will impact on the management of wastes specifically for the handling, mixing and blending of wastes, these changes are detailed in section 4.5.

4. OPERATING TECHNIQUES

4.1 PRE-ACCEPTANCE

There is no change to the existing pre-acceptance procedures as part of this permit variation. Pre-acceptance procedures will continue to be implemented by SDL's staff. All staff are provided with pre-acceptance training and refresher training is conducted on an annual basis. All training records are maintained and retained for the lifetime of the permit.

SDL's staff ask the following questions of the waste producer/customer:

- The waste producer/customer contact details and/or account information.
- The description of the waste.
- The waste's List of Wastes Regulations code, also known as the European Waste Catalogue code (EWC).
- The source of the waste and the process that it came from.
- The nature, composition and physical form of the waste.
- The quantity (in tonnes).
- Proposed transfer method and container type.
- Proposed transfer time and date.
- Any potential risks or special storage and handling requirements.
- The material safety data sheet (MSDS) or COSHH data sheet.
- An estimate of future load quantity and frequency.
- Results of any waste sampling and analysis undertaken.

SDL's staff will continue to check the waste is allowed to be accepted at the facility under the permit conditions and that the facility has the capacity to receive the quantity of waste proposed.

The majority of the waste received at the facility are from regular account customers, which provides reasonably consistent waste types and quantities. Some waste is transferred from Olleco in these cases SDL communicate with Olleco to make sure pre acceptance checks are completed and waste transfer information is sent in advance of transfers.

All waste transfers and the relevant information will continue to be uploaded and recorded by SDL's staff onto an internal stock tracking system called 'Alias'. This allows for all waste and products that are in the care of SDL to be tracked, including its description, quantity, storage location and any potential hazards or risks posed.

All waste sampling results are recorded and retained on the Alias system and records retained for the duration of the permit.

4.2 WASTE ACCEPTANCE

There will be no change to the existing waste acceptance procedures, as part of this permit variation. Waste will continue to be transferred to the facility only once pre acceptance checks have been completed. Following the pre-acceptance checks, storage capacity checks are conducted by SDL's staff.

Upon arrival, HGV tankers are directed to the weighbridge and weighed in and shipping tankers dock on the River Thames dock.

All waste loads are accompanied with a paper or electronic waste transfer document or, if imported from another country, an annex VII document in compliance with International Waste Shipments requirements. Prior to the transfer of waste to the facility's storage tanks, the information is reviewed by trained staff, to make sure the documents:

- Are completed correctly.
- Contain information consistent with the pre acceptance information provided by the customer.
- Contain a description, EWC (list of waste) code and quantity that are consistent with the waste load.
- Confirm that no hazardous waste is present in the load.

Any non-conformance, error or missing information is recorded and immediately addressed with the customer or delivery driver. Minor typos or errors may be easily rectified immediately by contacting the delivery driver or customer. More significant issues, such as absent or incorrect information, require the transfer to be postponed until further investigation and resolution. Any non-conforming or misdescribed wastes are rejected, in which case the producer is contacted and the waste load returned immediately.

The following additional wastes are proposed to be added to the existing permit, listed in Table 4-1: List of waste codes and descriptions of wastes.

Table 4-1: List of waste codes and descriptions of wastes

EWC Code	Waste Descriptions
02 01 03	Plant-tissue waste
02 03 01	Sludges from washing, cleaning, peeling, centrifuging and separation
02 03 03	Wastes from solvent extraction
02 03 05	Sludges from on-site effluent treatment
07 01 99	wastes not otherwise specified (corn oil and glycerin from biodiesel)
07 06 99	wastes not otherwise specified (mixtures of vegetable oils, fats and soaps)

4.3 WASTE MEASUREMENT AND REPORTING

There will be no change to the existing waste measurement and reporting procedures, as part of this permit application. All wastes received and exported from the facility will continue to be accurately measured by volume or weight and record entries are made in tonnes.

All road tanker loads incoming and outgoing are weighed on the site's weighbridge and the records retained, the weighbridge is regularly calibrated.

All loads piped from shipping tankers, or piped from the adjacent Olleco site, are measured by using a fiscal flow meter fitted in the pipeline. The meter provides an accurate measurement of the quantity of waste entering or leaving the site via pipework. All waste is monitored and traced at all times, and the data is recorded and retained on the Alias tracking system for the lifetime of the permit.

Waste quantity data is used to provide a waste return to the EA within one month at the end of each quarter. The return details the quantity of waste (tonnes) received and removed from the facility and the details of the technically competent management. The waste return information is retained by SDL for the lifetime of the permit.

4.4 WASTE SAMPLING

The will be no change to the existing waste sampling procedures, as part of this permit variation. All waste arriving at the facility, either by shipping or HGV tanker, will continue to be sampled prior to being transferred to the facility and accepted. Ensuring the waste is suitable and is acceptable under the permitted conditions and does not pose a risk to human health or the environment. HGV tankers are directed from the weighbridge to the unloading bay. This area is constructed with impermeable surfacing and will have the benefit of sealed drainage. Spill-kit equipment is deployed around this area in case of small spillages. All on-site staff are trained in the use of spill equipment.

There is a 10-mph speed limit at the facility and a one-way system is enforced to prevent possible accidents/ collisions.

Incoming HGV tankers are held in a parking waiting area and representative samples taken from each individual tank by a site chemist wearing appropriate personal protective equipment (PPE), using the ISO 5555 sampling procedures. The International Standard describes methods of sampling crude or processed animal and vegetable fats and oils. All loads and tankers are dipped, and representative samples taken in accordance with ISO 5555.

Samples are analysed, at the facility's on-site laboratory, for moisture, impurities and free fatty acids (FFA). A visual inspection and odour check is also be conducted. The analysis is undertaken by a trained chemist. The chemist confirms whether the waste contains unacceptable levels of contamination, whether it matches the waste description and EWC code in the duty of care documentation and whether it complies with waste permit conditions. The chemist immediately reports the findings of the analysis to the site operator to confirm whether waste transfer/unloading can proceed.

All sample and analysis information and results are recorded and retained on Alias.

Compatibility is ensured by a set of verification measures and tests in order to detect any unwanted and/or potentially dangerous chemical reactions between wastes (e.g. polymerisation, gas evolution, exothermal reaction, decomposition, crystallisation, precipitation) when mixing, blending or carrying out other treatment operations. The compatibility tests are risk-based considering, for example, the hazardous properties of the waste, the risks posed by the waste in terms of process safety, occupational safety and environmental impact, as well as the information provided by the previous waste holder(s).

4.5 MIXING AND BULKING OF WASTES

Wastes will only be mixed and blended for the purpose of bulk storage only, there will be no chemical treatment of waste. All waste received at the facility is tested and analysed in accordance with the waste acceptance procedures, see section 4.4 above.

Waste shall only be mixed following testing; further assessment is then carried out to ensure they have the same characteristics and are compatible. Testing will be designed to detect any unwanted and/or potentially dangerous chemical reactions between wastes (e.g. polymerisation, gas evolution, exothermal reaction, decomposition, crystallisation, precipitation) when mixing or blending. This will help prevent the risk of any adverse reactions, pollution risks or offsite emissions.

The facility shall only accept non-hazardous waste no hazardous waste will be accepted, this will prevent any hazardous wastes mixing with non-hazardous wastes.

Wastes identified to be transferred for mixing and bulk storage the following procedures will take place:

- All wastes received at the facility will be sampled and tested prior to being accepted by the site chemist, this will determine its chemical characteristics.
- Prior to acceptance all documentation accompanying the waste load will be reviewed the site chemist, such as the waste transfer note, MSDS or any previous analysis results.
- Prior to mixing/blending the sampling results and accompanying data will be reviewed, then compared against the receiving wastes data by the site chemist.
- All loads will be assessed against its associated waste transfer note documentation, to determine its physical appearance, description and EWC list of waste code.
- All waste assessment and classification will be conducted in accordance with procedures detailed in WM3 technical guidance.
- Prior to mixing the waste analysis comparison procedure shall review and compare the following factors: asses to ensure chemically compatible, the same waste type (materially the same), the same characteristics, and EWC code.
- Immediately prior to transfer the receiving container or tank volume will be assessed and calculated to prevent overfilling.
- All transfers will be monitored by trained operatives, see section 4.7.
- All transfers and mixing will be recorded and retained on the facilities recording system Alias tracking system.

If identified Individual waste streams will be stored separately and the mixing of waste will not be carried out if the waste's composition or characteristics will be changed or altered.

4.6 WASTE REJECTION PROCEDURES

The will be no change to the existing rejection procedures, as part of this permit variation. If a waste sample's analysis fails the requisite criteria and is deemed unacceptable, unduly contaminated, or non-conforming waste, a second representative sample is obtained to retest the waste. If the second waste sample fails then the failure is reported to SDL's customer services team, who contacts and informs the customer/producer that the load has failed the waste acceptance procedures and cannot be accepted. The customer is informed that they must organise the transfer of waste back to their site within 24 hours. If the customer fails to organise the transfer of waste off site, an appropriate permitted waste site is identified and the load transferred to it.

The sample analysis results from all waste loads accepted or rejected are recorded and retained on the Alias tracking system.

4.7 WASTE HANDLING, TRANSFER, UNLOADING AND LOADING

The will be no change to the existing waste handling, transfer and unloading procedures, as part of this permit variation. SDL has years of experience and a proven track record in the safe management of the unloading, storage and transferring of bulk liquid chemicals at the site.

SDL has current robust COMAH safety standards, waste procedures and infrastructure already in place at the site and the operating processes and procedures.

All transfers of waste to and from the facility will continue to be supervised and controlled by appropriately trained site operatives. All operatives wear appropriate PPE and follow the site-specific discharge procedures. The handling and unloading techniques and procedures vary depending on the transfer method.

HGV road tanker transfers – All vehicles manoeuvring around the site must abide by the 10mph vehicle speed limit and road signage. All road HGV tankers entering and leaving the site are required to be weighed on the weighbridge and all associated waste transfer paperwork will be checked.

The HGV is directed to a designated unloading bay by an SDL operative.

Flexible piping is connected by the driver, under SDL supervision, and valves and connections are checked. Waste is pumped via the pipes and into allocated storage tanks. Drivers are instructed by SDL operatives on the emergency shutdown procedures and blocked filter procedure. The driver completes the discharge, close down valves and uncouple piping, under SDL supervision. The detailed road tanker procedures are detailed in SDL's safety management system (SMS), see the Appendices.

The drainage systems within the HGV delivery area are concreted and engineered in a manner to provide sealed containment from spillages should they occur. Any spillages in this area are controlled and contained within the site tertiary containment.

Shipping tanker transfers – After docking, waste acceptance and sampling, waste loads from shipping tankers are pumped in pipework to the storage tanks.

A waste discharge plan details the quantities involved, such as the multiple filling of tanks and their sequence. Pre-transfer checks are essential to make sure that the facility has the storage capacity prior to unloading.

Any marine craft incidents on the river are controlled by the Port of London Authority and are outside of the influence of SDL. However, site personnel are trained by the local fire brigade to tackle small fires, and the site's jetty has a firewater drench system that is regularly inspected by the Port of London Authority and the Local Fire Authority.

Section 5.34 of the SMS and MAPP provides the procedures for ship to shore transfers.

Transfer pipelines along the jetty and on site are prepared, pressure tested and checked, to prevent any leaks or spillages. Spillage kits are located in yellow bins on the jetty, containing absorbent granules, clay mat covers and absorbent booms.

All pipework on site is located above ground, except in a small section under road at Hindsman Way. This links the pipework from the main site to the tank pit 8A and 8B at the site.

Above ground pipework allows for ease of inspection and monitoring during transfers, to quickly identify possible leaks.

Engineering work on pipelines and the installation of new pipelines are completed to appropriate welding codes and are radiographically inspected.

As part of the site's ongoing Mechanical Integrity Programme, all pipelines are inspected regularly and hydraulically tested, as required. The tests are witnessed by a competent third party.

There are a minimum of two isolation valves on pipework between tanks, or between a tank and the jetty.

The transfer of all piped wastes into and out of the facility will be tracked and monitored by a fiscal meter fitted in the pipeline. This data will be recorded and retained on the Alias tracking system.

During transfer, pipes, tanks, valves and the jetty line are monitored and inspected every hour, to check for potential leaks which would be quickly detected. As soon as a leak or spillage is detected, the transfer is stopped, relevant isolation valves closed and the issue investigated. Communication is maintained at all times between the operator, jetty operator, operations supervisor, charge hand and operations manager, to make sure that there is a safe and efficient transfer. Flow rates are controlled, for multi tank filling, by the operations supervisor.

The detailed procedure for shipping tanker transfers is contained in SDL's SMS, see the Appendices.

Following the completed transfer, all valves are closed and pipework disconnected, tanks are dipped and sampled following transfer and after the settling period.

Direct piping

Waste UCO transfers from the adjacent Olleco facility will be pumped a short distance over the Northern boundary fence. All pipework and systems are located above ground to allow for constant monitoring and inspection for leaks. SDL will communicate with Olleco to make sure pre acceptance checks are completed and waste transfer information is sent in advance of transfers. Once pre acceptance and sampling results have been accepted, then the waste will be pumped from Olleco to the SDL facility in sealed pipes and then diverted to the allocated storage tank(s). The control and pumping of the waste will be operated by an Olleco operative, who will have good clear communication with the SDL operatives to indicate when tanks are full, to avoid overfilling and prevent leaks or spillages.

4.8 WASTE STORAGE

All waste liquids transferred and received at the site will continue to be pumped and piped into various storage tanks located across the facility. SDL has around 100 storage tanks at the facility of which 10 are currently used for storing wastes. As part of this permit variation an additional 34 tanks will be used for storing wastes. Typically, not all of the tanks will be used at the same time, allowing for spare storage capacity if necessary. Storage capacity is always checked as part of the pre-acceptance checks, to ensure there is always spare capacity. The mixing of wastes shall only occur where the waste is tested, assessed and confirmed as similar in characteristics.

The tanks allocated for storage of waste are located within areas shown in Table 4-2: Proposed additional storage tanks and technical specifications.

Table 4-2: Proposed additional storage tanks and technical specifications

Tank Number	Volume m^3	**Location (area/zone)**	Heating coils fitted
629	799	Tank pit 6	No
601	814	Tank pit 6	Yes
626	801	Tank pit 6	Yes
625	3146	Tank pit 6	Yes
608	4460	Tank pit 6	No
607	4422	Tank pit 6	No
604	1574	Tank pit 6	No

Tank Number	Volume m^3	**Location (area/zone)**	Heating coils fitted
611	2364	Tank pit 6	No
606	2,200	Tank pit 6	Yes
610	2342	Tank pit 6	Yes
612	2346	Tank pit 6	Yes
615	2359	Tank pit 6	Yes
616	2348	Tank pit 6	Yes
617	3158	Tank pit 6	Yes
618	2341	Tank pit 6	Yes
619	2343	Tank pit 6	Yes
620	3158	Tank pit 6	Yes
631	1075	Tank pit 6	Yes
632	1089	Tank pit 6	Yes
633	792	Tank pit 6	Yes
734	692	Tank pit 7	No
735	692	Tank pit 7	Yes
736	687	Tank pit 7	Yes
737	686	Tank pit 7	Yes
738	686	Tank pit 7	Yes
739	695	Tank pit 7	Yes
740	683	Tank pit 7	Yes
401	2110	Tank pit 4	No
402	2108	Tank pit 4	No
403	976	Tank pit 4	No
404	976	Tank pit 4	No
405	976	Tank pit 4	No
406	787	Tank pit 4	No
407	976	Tank pit 4	No

Table 4-3: Existing storage tanks and technical specifications

Tank Number	Volume m^3	**Location (area/zone)**	Heating coils fitted
Tank 301	5,500	Tank pit 3	Yes
Tank 304	5,500	Tank pit 3	Yes
Tank 623	3,196	Tank pit 6	Yes
Tank 624	3,196	Tank pit 6	Yes
Tank 630	485	Tank pit 6	Yes
Tank 614	2,386	Tank pit 6	Yes
Tank 413	813	Tank pit 4	Yes
Tank 415	615	Tank pit 4	Yes
Tank 416	1,256	Tank pit 4	Yes
Tank 417	1,273	Tank pit 4	Yes

All waste storage will continue to be in accordance with the Control of Pollution (Oil Storage) (England) Regulations 2011.

All storage tanks are located within tank pit (TP) bunds. The impermeable bunds are designed to fully contain liquids following a catastrophic tank failure, with 110% containment of the largest tank.

Bunds are emptied by either gravity outflow through a shut-off valve, which is otherwise kept closed, or using a pump.

Visual inspections of the bunds are conducted to look for possible damage and accumulation of rainwater. To maintain the 110% containment capacity, accumulated rainwater is pumped out immediately to an oil interceptor and to the effluent treatment plant for treatment before discharging to foul sewer.

All tanks holding wastes are clearly labelled with their contents and a non COMAH product.

All tanks holding waste are free venting to atmosphere, vents are engineered and fitted at the top of each tank and at a high level. There is no expectation that the newly proposed wastes will generate odour issues during filling. No odour complaints have been received since waste operations have begun, should an odour complaint be received then the odour management plan will be followed, see the Appendices.

All storage tanks holding waste are newly installed and built to Standard EN 14015 specifications for the design and manufacture of site built, vertical, cylindrical, flat-bottomed, above ground, welded steel tanks for the storage of liquids at ambient temperature and above.

The tanks are fit for purpose and engineered as follows:

- Compatible with the chemical and physical properties of the liquid to be stored.
- Protected to avoid excessive over and under-pressurisation and operated within limits established to ensure that this is achieved.
- Designed and constructed to withstand impacts on their integrity from normal operations and foreseeable events.
- Designed, constructed and installed to prevent failure due to corrosion or chemical interaction. The corrosion allowance must reflect the anticipated attack from the products stored.

Tank design conditions include the following:

- Maximum design temperature not less than 93°C and minimum 0°C.
- Minimum design pressure 15mbar and minimum vacuum -5mbar.

- Material of construction (for carbon steel tanks) - ASTM 131 Gr B or equivalent.
- Maximum filling speeds are 1 m/s until the filling nozzle of the tank is submerged, and thereafter 3 m/s for low flash and 7 m/s for high flash products.

All contractors, technicians and materials used for construction of tanks, pipes and systems are verified and checked for technical engineering competence, by SDL's Safety Health and Environment Quality Officer. For larger construction projects, a commissioning checklist is written, followed and completed. Leak testing is undertaken and safety systems and valves are checked. New storage tanks are hydrostatically tested during commissioning.

All tanks and transfer systems have internal control systems fitted consisting of level, temperature and pressure loops. These are routinely calibrated on a six or twelve-month basis. All storage tanks are fitted with radar level gauges and high-level alarms to prevent overfilling. In the event of a power failure, high level alarms would become active. Members of the site operations team monitor these systems at all times.

All tanks are inspected and tested by appropriately trained maintenance operatives; this is as part of a routine maintenance programme. Routine inspections include checks for leaks, cracks, corrosion, general wear, faulty valve or pumps, and system failures. The frequency is based on manufacturers' recommendations and operating experience. Simple maintenance regimes are carried out by site personnel; more complex activities requiring specialised skills or tools are carried out by contracted maintenance organisations. If any problems or issues arise from any site operations, operatives are required to immediately report it to the site manager. The matter is then prioritised and logged for action by the site's maintenance team.

Details of all maintenance work requested, completed and outstanding are held by the Maintenance Manager / Supervisor. In most cases, the records are held electronically on the company's Computerised Maintenance Management System (CMMS) called 'Ultimo', but paper copies are also retained on site.

Infrastructure and systems are designed and installed to the stated standards/ codes shown in Table 4-4: Design codes.

Table 4-4: Design codes

Equipment/structure	Standard/Code
Building, Dead and Imposed loading	BS 6399
Bunds	CIRIA 736
Cables	To various BS EN Standards
Colour code	BS 1710
Concrete construction	BS 8110
Corrosion	NACE
Documentation	ISO 9001
Drainage systems	BS 8301
Erection	National Structural Steelwork Specification and Eurocodes
Instruments	DIN 50049, EN10204 and DIN55350

4.9 BOILER AND HEATING

There will be no change to the operation or specification of the boiler as a result of this variation. The boiler will continue to operate as follows; a single natural gas fired boiler with a thermal input of 980KWh. The boiler does not qualify as a medium combustion plant (MCP).

4.10 SITE CONTAINMENT AND DRAINAGE SYSTEMS

There is no change of the site containment and drainage systems as a result of this variation. All waste storage tanks are engineered in accordance with the facilities existing three-stage (primary, secondary and tertiary) containment and drainage system.

The systems are designed and engineered to prevent the release of contaminated and potentially polluting liquids into the surface water drainage system and environment.

Treated effluent is discharged to foul sewer under a trade effluent discharge consent registered with Thames Water.

The wastewater aeration tank contents are tested regularly and additionally as required by circumstances. The wastewater quality is tested against the requirements of the trade effluent discharge consent. After treatment, the wastewater is discharged to the foul sewer, in Chequers lane, which transfers it to the local Wastewater Treatment Works. The facility's drainage plan is provided in Appendices.

The site operations team undertake a daily visual inspection of all the drainage systems and any observed abnormalities / defects are reported to the maintenance team to repair.

5. TECHNICAL STANDARDS

The proposed facility's primary activity is the storage of non-hazardous liquid waste, which is subject to the appropriate measures for waste storage at a regulated facility permitted to store, mix, treat or transfer (or both) non-hazardous or inert waste. As such, the facility and its procedures have been designed and are operated in accordance with the key technical standards laid out in the following documents:

- Appropriate measures for waste storage at a regulated facility permitted to store, treat or transfer (or both) non-hazardous and inert waste.
- Best available techniques (BAT) conclusions for Waste – BAT conclusion 2 table, technique f.
- The Environmental Permitting (England and Wales) Regulations 2016 (as amended).
- Developing a management system: environmental permits.
- Control and monitor your emissions for an environmental permit.
- Relevant EA Guidance e.g., Environmental Risk Assessments, Site Condition Reports, Odour and noise/vibration Management and Fire Prevention Plans.

6. MANAGEMENT TECHNIQUES

6.1 ENVIRONMENTAL MANAGEMENT SYSTEM SUMMARY

SDL already holds and maintains a comprehensive company Environmental Management System (EMS) aligned to operating under the standards and requirements of the COMAH Regulations 2015.

The EMS principally comprises a Major Accident Prevention Policy (MAPP) and Safety Management System (SMS). These provide comprehensive accident and incident control measures, health and safety controls and environmental risk assessment and management.

SDL also has ISO 9001 accreditation. SDL's EMS is provided in the SMS and Mapp and Technical Aspects.

This contains and specifies the following:

- MAPP & SMS aspects section 4 – aimed at minimising the risk from substances causing a major incident or accident, see Appendices
- Technical aspects section 5 – design, construction, operational and maintenance technical standards, see Appendices
- Environmental Assessment (section 6) – Major accident scenarios, substances, releases, pathway and receptors, prevention and mitigation measures, engineering and infrastructure.

SDL operates under the requirements and conditions of COMAH, so therefore already has in place technically trained managers, who are experienced in operating a compliant facility.

The facility will continue to provide technical competence, with two managers holding the relevant technical competency (technically competent manager- TCM) for the operation of a waste facility of this type.

SDL will review and implement any new additional wastes, tonnage increases, additional storage tanks and mixing and blending activities to their site-specific EMS, this will comply with the requirements of Environment Agency guidance - Develop a Management System: environmental permits. The EMS is reviewed by the General Manager annually and in response to any changes to the site, operations or equipment (including

permit variations), or any accident, complaint or breach of the permit. The company's own ISO 9001, MAPP and SMS will also be updated to include the proposed waste activities at the Dagenham facility.

The environmental risk assessment forms the core of the EMS and is the basis of all associated policies and procedures, which are aimed at the continuous improvement of the environmental performance of the facility.

This permit variation application specifically the additional waste types increase in volume and mixing activities will impact and increase the operational pollution risks posed by the facility. But the facilities existing engineered infrastructure, EMS, procedures and control measures, will mitigate and minimise any potential additional risks.

In summary, the EMS will continue to include the following key elements as required by the EA EMS Guidance[1]:

- Site infrastructure plan, showing the locations of the following:
  - buildings, and other main structures
  - storage facilities for wastes
  - items for use in accidents and emergencies, e.g. spill kits
  - entrances and exits that can be used by emergency services
  - Inspection or monitoring points
  - Any discharge points
  - any contaminated land and remediation infrastructure
  - sensitive receptors in the vicinity of the site, including surface and ground water
  - site surfacing and drainage systems, including rainwater attenuation
  - utilities
- A detailed breakdown of site operations and the associated risk management measures for each stage/activity
- Process flow diagram and plant operation
- Cleaning and maintenance regime plan
- Site management training, competence and attendance
- Waste storage plan (additional waste storage tanks added).
- Waste mixing and blending process.
- Contingency plans to cover breakdowns, enforced shutdowns and other changes in normal operations, e.g. due to flooding or other extreme weather
- Accident prevention and management plan
- Online security (protection against online security threats)
- Climate change
- Complaints procedures
- Staff roles and responsibilities and competence/training records
- Record keeping
- Compliance audit against environmental permit
- EMS review and updates

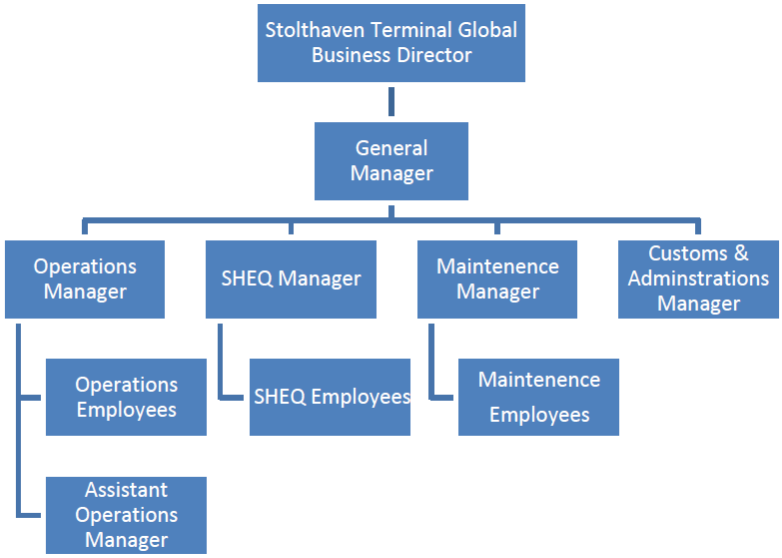
The EMS is internally audited annually by a qualified Lead Auditor independent of the element being audited. The company's Safety, Health, Environment & Quality department will also carry out an audit once every two years. The results of all audits carried out on these documents will be reviewed at the yearly Management Review Meeting.

6.2 MANAGEMENT STRUCTURE & RESPONSIBILITIES

To ensure the effective implementation and subsequent monitoring of the Health and Safety Policy throughout the company, it is necessary to define the duties and accountabilities of all persons. These are set out in the MAPP section 4.4 roles and responsibilities in the Appendices.

[1] https://www.gov.uk/guidance/develop-a-management-system-environmental-permits

Figure 5: SDL Dagenham Organisational Chart



Responsibility for the facility's operation as a whole has been assigned to the General Manager, who controls:

- Daily operation via the Operations Manager.
- Health and safety via the QSHE Manager.
- Site administration and customs via the customs and administration manager.
- Maintenance via the Maintenance Manager.

The Operations Manager has been assigned with primary responsibility for the facility operation. The QSHE Manager has responsibilities for the Quality, Safety Health and Environmental aspects for the site. The Maintenance Manager is responsible for management of site maintenance and engineering aspects which include the planned maintenance program.

Two site managers hold an appropriate waste technical competency management qualification as required, from an approved training provider. They will continue to provide appropriate TCM attendance and cover as required under the permit.

All site operatives assist in the day-to-day operation of the facility, they are responsible for the health and safety of themselves and other employees. Their main role is as follows:

- To carry out assigned tasks and duties in a safe manner and in accordance with instructions and company rules, regulations and codes of practice.
- To be aware of any inappropriate unsafe practices or conditions, which could lead to a major accident, or if in any doubt about the safety of any situation, consult their supervisor or manager.
- Take reasonable care for the Health and Safety of their self and of others who may be affected by their acts or omissions. Ensure impact on the environment of the employees' activities is minimised.
- Be aware of the company procedures and their own role in the event of any emergency situation.

A policy of cross training and multi-skilling allows for personnel to change roles to allow for absences and periods of high activity. Operators may be supported by agency labour, restricted to non-safety critical tasks.

Each team of operators is controlled by a supervisor, a role which has been assigned to site operatives who have gained substantial operating experience with the company and who have demonstrated their ability to take control over individuals whilst carrying out their duties. Supervisors are responsible for co-ordinating operating activities within their teams as well as closely monitoring the performance of those under their control. There is an on-going dialogue between Supervisors and the Operations Manager.

The facility is manned 24/7 with manning levels as business and operations require. The minimum level for shipping operations is one supervisor, one chargehand and two operators. There are eight multi-discipline maintenance personnel on site. Specialist contractors can be called upon to assist with relevant maintenance work, as required. The maintenance team mainly works day shifts with relevant arrangements in place to cover planned out of hours / emergency works.

6.3 STAFF COMPETENCE AND TRAINING

SDL recognises training as one of the most important pre-conditions for the safe running of the site activities. The site aims to continue to ensure that all employees are in possession of the knowledge, skills and experience necessary to perform their role in accordance with the company's procedures, and in full compliance with all the environmental regulations.

The site has experienced and competent managers in place operating under the current waste permit and COMAH regulations and conditions. Two site managers are trained in appropriate waste technical competency management (TCMs), which will be renewed and maintained as required.

Newly employed staff receive induction training to make them aware of, and familiarise themselves with site rules, safety rules, the MAPP and a general overview of the site hazards, reporting procedures, use of PPE, on-site emergency procedures and first aid arrangements, good personal and industrial-hygiene standards and general good housekeeping requirements. Plant-specific training details the specific hazards of the area where the individual will be working.

Refresher training is undertaken when a performance gap highlights the need, when operational changes warrant it and at a predetermined date according to the nature of the task. SDL has in place a training matrix to provide sufficient detail to visualise the level of competence achieved by each individual plant operative and facilitate the planning process for training.

There are several site employees that have been trained as Emergency First Aid at Work (EFAW) training course and the required number present on site at all times as required by the HSE. All site employees are provided with training in the use of fire extinguishers, further details are provided in the facilities FPP.

All site operatives are made aware of the environmental permit and management systems and copies will be held on site and made available to all at all times. Operatives are also be provided with appropriate training in emergency and incident response. The level of training is tailored to the individual's needs, and whether they have a specific role within the emergency procedures. This training can take various forms, including classroom sessions, table-top exercises, walk-throughs, and self-study courses. Whilst some of this training is related to specific roles, much is common to everyone, including awareness of COMAH, Environmental Permit and waste handling requirements, including the MAPP and SMS, and an overview of emergency plans, site systems, alarms, reporting and responses. Training schedules are reviewed annually as part of the Management Review Meeting. All training records are recorded in the employee's personal file and retained on site.

All contractors employed on site for specific maintenance tasks are fully inducted and supervised, including being issued relevant information related to site hazards and risks such as expected health and safety requirements to mitigate major accident hazards.

6.4 SITE MAINTENANCE

The basic maintenance philosophy is that equipment will continue to be maintained such that it is fit for purpose and such that its effective availability will be maximised.

Items of plant equipment and control systems are assessed to identify those whose failure would cause an unacceptable risk to the environment or health and safety; this assessment is undertaken both at the design stage and at subsequent periodic reviews taking into consideration results of risk assessments, industry best practice, UK regulations and guidance (such as PSSR, LOLER, PUWER, ATEX) etc.

Method Statements support the procedures for individual maintenance tasks. Both routine and planned maintenance are managed through the computerised maintenance management system known as Express Maintenance. All critical systems and infrastructure classified as critical are identified and have routine maintenance.

The day-to-day responsibility for maintenance on the site lies with the Maintenance Manager. Workloads are carefully managed. Work is assessed and only appropriately skilled and qualified operators are tasked with carrying out particular tasks.

Operatives constantly evaluate and review servicing inspections, in order to minimise the risk of plant failure, breakdown or emergency incident.

Apart from breakdowns, all maintenance work is pre planned and scheduled using CMMS.

Corrective maintenance is conducted following a defect report from operatives following daily checks around the plant or routine internal testing. Any fault or defect found with a piece of equipment will result in the

generation of an Engineering Work Request. If an unsafe condition exists, immediate attention will be required to correct the fault and / or mitigate the consequence.

6.5 ODOUR MANAGEMENT PLAN

SDL believes that the additional wastes, waste quantities and mixing activities will not pose any additional risks of odour. The existing waste permit and COMAH storage operations at the facility (the bulk storage of liquid products) have not generated any odour complaints. However, SDL has fully considered and implemented measures to mitigate any release of odour and the offsite impact. These measures include that all waste transfers are conducted from sealed tankers via sealed pipework into engineered storage tanks, reducing the release of odour during the transfer.

As part of this variation application the facilities odour management plan (OMP) has been reviewed and any changes to the waste operations have been added. We do not predict that the additional wastes, waste quantities or mixing operation will not pose any increased risk of odour.

The odour management plan clearly identifies all potential sources, any activities causing odour, waste handling and transfer techniques, any offsite sensitive receptors, the wind direction and proactive odour monitoring.

An odour complaints procedure has been produced which explains clear procedures for responding to complaints. This includes report logging, investigation procedures, communicating with the complainant, working with regulators and planning and undertaking remedial works if required. It provides the details of the site's odour release mitigation measures which are to best available techniques (BAT) appropriate measures standards. SDL's odour management plan is provided in:

- Appendix F - Odour Management Plan.
- Appendix G - Odour complaints procedure.

6.6 RAW MATERIAL CONSUMPTION

There will be no change to the raw material consumption as a result of this variation. On a day-to-day basis, the facility does not use significant quantities of mains water for facility processes. Water is used for steam production, in a closed loop system, where the steam and condensate are recycled. The only water usage will be for general staff welfare and kitchen facilities and the commissioning of new tanks and carrying out leak detection on pipework and systems.

The only other raw material to be utilised by the facility is mains gas, which is piped in from the main supplier, the consumption of gas is likely to increase due to the additional waste storage.

6.7 ENERGY EFFICIENCY AND CONSUMPTION

An energy efficiency plan has been developed which will look at organisational and technical measures aimed at using energy efficiently, this forms part of the facility's EMS.

The site has already implemented the following measures to increase its energy efficiency and consumption:

- Site electrical supply changed to 100% from renewables.
- Reduced the tracing temperature on bitumen pipework, saving 1200MWh & £100,000/annum.
- Removed various hand towel dispensers and installed hand dryers, reducing CO_2 emissions and saving £1,300/annum.
- Variable speed drives on pumps reduced by 10% saving 40MWh and £2,000/annum.
- Area 6 floodlights changed to LED saving 48MWh and £7,000/annum.
- Site nitrogen contract reviewed and changed, saving £15,000/annum.

SDL recognises the importance of continual improvement and is committed to reducing the impact of its business on the environment, by managing energy consumption and reducing waste. SDL has committed to future goals which consist of the following:

- Heat recovery from site compressors for heating water (95% of the compressor waste heat to be captured).
- Aeration of effluent tanks changed from site air to local aeration, possible saving of £20,000/annum.
- TP07 LED lighting upgrade.
- Using solar energy and heat pumps to heat storage tanks.

All energy systems, water usage, and wastewater produced at the facility will be reviewed each year and recorded.

Table 6-1: Estimated Energy Consumption in 2022

Site	Gas (giga joules)	Electricity (GWh/yr)
SDL Dagenham	20,298	36,274.71

6.8 AVOIDANCE, RECOVERY AND DISPOSAL OF WASTES

There will be no change to the avoidance, recovery and disposal of wastes as a result of this variation. SDL recognises the requirement to always consider and implement the principles of the Waste Hierarchy under the Waste Framework Directive. The facility continues to only accept and store non-hazardous waste, which is only stored pending their onward transfer for further recycling or recovery. No wastes shall be recovered or disposed of on site.

6.9 ACCIDENT PREVENTION AND EMERGENCY PROTOCOLS

There will be no change to the facilities accident prevention and emergency protocols, as a result of this variation. The facility's main aim under COMAH is to control the major accident hazards from dangerous substances handled, stored and used at the Dagenham site, to limit the potential effects to both people and to the environment. SDL has comprehensive and robust pollution prevention and incident control measures already in place, which are required and implemented under the COMAH Regulations.

The facility will continue to implement these measures and as part of this variation there will not be any changes to the overall control measures and processes. The control measures will continue to be underpinned and detailed in SDL's Health, Safety and Environmental Management System (HSEMS). The implementation of this policy is aimed at minimising the risk from hazardous substances capable of causing a major accident and to promote continuous improvement.

The facility's MAPP and SMS management systems form part of the HSEMS. These identify and consider all the potential foreseeable accident and incident risks, the potential pathways and offsite receptors and describe the measures and procedures in place to mitigate the risks. The MAPP and SMS are provided in Appendix C - Section 4 SMS and MAPP.

Appendix D - The aims and principles of the MAPP and SMS are:

- To identify control measures to implement in order to prevent major accidents to people and to the environment.
- To implement mitigation measures to limit the effects of any accidents that do occur.
- The continual improvement in reducing the risk of major accidents.
- To ensure that all relevant information is supplied to SDL's employees, contractors, neighbours, the public and enforcing authorities as appropriate.
- To comply with all the relevant legal requirements.

The implementation of the MAPP is aimed at minimising the risk from hazardous substances capable of causing a major accident; specifically, the MAPP addresses the following areas:

- The roles and responsibilities of persons involved in the management of major hazards.
- Organisation and personnel.
- Hazard identification and risk assessment.
- Operation control.
- Management of change.
- Planning for foreseeable emergencies.
- Process safety improvement measures.
- Measuring performance.
- Audit and review.

SDL's MAPP and SMS section 5 provides the technical aspects across the facility for the design, construction, operation and modifications.

Section 6 provides an environmental risk assessment and provides clear control infrastructure, measures and procedures to mitigate the risks, by identifying the source, pathway and receptors at risk. These processes and procedures also apply to the handling, transfer and storage of wastes.

It is recognised that the waste storage operations pose a potential risk to the environment (land, air and water) and harm to human health. The table below details the operational risks, their sources and control measures:

Table 6-2: Environmental Risk Assessment

Risk Source	Description	Control Measures
Vandalism and Arson	Potential risk of unauthorised access, vandalism, or arson.	-24/7 manned security presence -Security guard on-site at all times -Two-metre metal palisade security fence -CCTV surveillance
Gas Leak[2]	Leak from mains gas pipe feeding boilers (only one associated with waste operations).	-Gas pipework and boilers located in the northeast, away from storage areas
Significant Leaks/Spillages	Infrastructure failure, human error, or vehicle collision could cause major spills.	-Effluent pit for initial containment -Redundant tank used to store pumped-back liquid -Excess liquid pumped to an empty storage tank if pit is overwhelmed
Minor Spillages	Minor spills from routine operations.	-Immediate clean-up using absorbent materials -Spillage kits (yellow bins) placed strategically across terminal and jetty -Kits include: absorbent granules, clay drain mats, oil absorbent mats, and booms -Staff trained in spillage response, deployment and use.
Marine Transfer Spillages	Spillage during liquid transfer from marine vessels on River Thames.	-Yellow bins with spillage equipment along river wall (clay mats, booms, granules) -All site staff trained in emergency response measures
Flooding	Site is in a flood zone, risk of infrastructure damage and waste leakage.	- All tanks are bunded, sealed, fixed down, and heavy - Full tanks stable against floodwaters
Fire	Fire risk from stored waste materials (low risk but cooking oil flammable at high temperatures).	-Waste heating limited to 35–60°C, continuously monitored by ATG system -24-hour manning and CCTV for fire detection -Fixed firefighting system (uses River Thames water) -Site-wide fire hoses -Back-up generator for firewater pumps -Firewater pumps tested weekly -New firefighting system with 3 cooling water pumps and 2 foam pumps in Area 1 -EA-approved fire incident action plan -Regular fire brigade drills and quarterly fire exercises -Personnel externally trained every 3 years -Fire extinguishers located strategically across site -Fire water runoff contained within either the secondary bunds, the tertiary drainage system or empty storage tanks.

[2] Gas will be mains fed, rather than stored on site.

A further risk environmental risk assessment is provided as part of this permit variation application. The facility implements the following further control measures and infrastructure, to reduce the risk of pollution or harm to human health, but also to prevent an incident/event from escalating into a major accident/incident:

- Operational activities are supervised and are controlled by written procedures.
- Appropriate training of all site contractors and site operatives to ensure all safety operating systems, processes and procedures are operated correctly.
- Comprehensive training of operatives in the reporting and responding to incidents.
- Tanks are fitted with high level alarms to prevent overfilling.
- Secondary containment bunds designed to take into account loading on the walls if the largest vessel failed catastrophically.
- A sealed drainage system with secondary and tertiary containment, which also retains fire water runoff.
- Installation of level gauges and instrumentation including pump shut off switches.
- Jetty water drench scheme to control outbreak of fire.
- Manifolds located within bunded areas to contain spills and leaks.
- Contractors work under a permit system and must supply risk assessments and method statements. Work that occurs within a flammable area requires that the atmosphere is tested for the presence of flammable vapours and oxygen content.
- Road tanker driver/operator is in attendance when loading and offloading operations in progress.
- Pressure relief valves are installed where appropriate to control loss of containment.
- Ullage of tanks checked before transfer operations are begun.
- New NFPA (National Fire Protection Association) approved firefighting system with tank drenchers and foam pourers installed on Area 1 tanks.
- CCTV cameras have now been installed across the site to further improve operational monitoring and security.
- All incident scenarios considered risk rated and mitigation measures put in place.

6.10 CONTINGENCY PLANNING AND PROCEDURES

All waste received at site is pre-planned prior to being transferred and received by the facility. Pre-waste acceptance procedures include the checking of availability of storage tanks and the capacity to accept the waste loads as set out in section 4.1. Therefore, the likelihood of waste being accepted with no capacity is low. In the unlikely event that there is a mechanical breakdown or serious incident preventing the acceptance of waste, then waste is not accepted and is returned to the customer and producer. In the event of a serious incident all incoming waste loads cease until fully remediated and operational. In the event of a boiler suffering a mechanical breakdown, then a secondary boiler is utilised as a backup, to ensure the continued production of steam and heat to the tanks and stored wastes.

Routine maintenance inspections and works are undertaken to help reduce unforeseen mechanical breakdowns.

All waste leaving the site is sent for further recycling and recovery at other permitted waste facilities. This includes the processing of the wastes into bio diesel and other similar recycling processes.

6.11 DECOMMISSIONING AND CLOSURE

SDL will prepare a site closure plan in line with Environment Agency Guidance in the event of cessation of operations on site. The Site Closure Plan will confirm how the site will be decommissioned to return it to a satisfactory state upon the cessation of activities. Records will be maintained of the location of facilities and infrastructure, as well as the services and sub-surface structures installed during the operating phases of the facility.

De-commissioning will be in compliance with procedures outlined in the Site Closure Plan. During the de-commissioning process, operational records will be reviewed and assessed against the Site Condition Report documented in this permit application. If areas of deterioration during the operation of the site are identified

these areas will be remediated as appropriate and the site will be returned to a satisfactory state as defined at the permit application.

7. EMISSIONS AND MONITORING

7.1 POINT SOURCE EMISSIONS TO AIR

There will be no change to the operation of the boiler as a result of this variation.

The 980kWh gas fired boiler and the emissions to air is in accordance with the following conditions:

- Operated in accordance with its manufacturer's instructions.
- The operator must keep periods of start-up and shut down as short as possible.
- There must be no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993[3].
- The stack is vertical and unimpeded by cowls or caps.

7.2 POINT SOURCE EMISSIONS TO SURFACE WATER

There will be no point source emissions to surface water, as part of this variation. Only clean surface water from around the weighbridge is permitted to be discharged directly offsite to the mains surface water drainage network. No waste transfer, treatment, or storage activities will occur in this area.

Clean surface water runoff and other uncontaminated external yard areas is captured by the tertiary drainage system. These flow into an oil interceptor, then into the surface water drainage system off site. This system has the benefit of a number of isolation valves, which allow for the system to be closed off, in case of significant spillage or for fire water retention. The drainage layout and general arrangements are shown in the Appendices

7.3 POINT SOURCE EMISSIONS TO SEWER

Wastewater from the facility's tertiary drainage system will continue to flow to road gulley drains, to an oil interceptor, then an effluent treatment plant and finally an aeration tank. The wastewater aeration tank discharge is tested regularly. The wastewater quality is to be tested against the requirements of the Consent to the Discharge of Trade Effluent.

After treatment the wastewater is discharged to a 375mm main foul sewer along Chequers Lane. This transfers it to the Thames Water Sewerage Treatment Works. The wastewater discharged into the sewer from the effluent treatment plant is controlled under the confines of the Thames Water Trade Effluent Consent issued and controlled by Thames Water. The discharge consent has a number of limits and conditions, these can be found detailed in Appendix H - Thames water trade effluent discharge consent TRIV0A14.

Foul sewerage generated at the site is discharged directly into the foul sewer that runs across the terminal and connects to the foul sewer in Chequers lane.

7.4 POINT SOURCE EMISSIONS TO GROUNDWATER

There will continue to be no point source emissions to groundwater from the facility.

7.5 POINT SOURCE EMISSIONS TO LAND

There will continue to be no point source emissions to land.

7.6 FUGITIVE EMISSIONS

The facility's processes and procedures will continue to be implemented, and its infrastructure constructed, to prevent fugitive emissions. Potential fugitive emissions, such as those to air or surface water, are likely to be only due to accidents or incidents. The site's secondary and tertiary drainage system is designed to capture and contain any firewater, spillages or serious leaks.

Good housekeeping practices on site, constant monitoring, regular operative training and technically competent management ensure that any leaks or spillages are reported, contained and cleared up

[3] http://www.legislation.gov.uk/ukpga/1993/11/section/3

immediately. Other than a small extent of pipework running under a road, all pipework is located above ground so that leaks are easier to detect and fix.

The only wastes accepted at the site are waste oils, which do not create litter. Dust emissions from the facility will be kept to a minimum by regular road sweeping and speed limits for vehicles entering and leaving the facility.

A monitoring system on the boiler would alert operatives to any natural gas leaks.

Yellow bins containing spillage equipment are located close to storage area(s) and/or delivery points. The actions to be taken in the event of a spillage are set out in the facility's EMS.

- Storage tanks are vented directly to atmosphere via a pipe located at the top of the tank. During filling, tanks displace air from them and vent the air to atmosphere. If the facility receives an odour complaint, then the odour complaint procedure will be followed. Remedial action will be immediately taken if the odour is found to be from the facility. A review will take place to see if a future emission can be avoided. SDL's odour management plan is detailed in Appendix F - Odour Management Plan.

Appendix G - Odour complaints procedure.

Since the operation of the permit no odour complaints have been received.

To assist in the prevention of fugitive emissions from the facility, the following measures are employed and detailed in the site's MAPP and SMS for regular inspection and maintenance.

- All tanks, pipes, valves, seals and gaskets will be regularly inspected during transfer to make sure no leaks or emissions.
- All deliveries of waste from HGV road tankers will be supervised at all times.
- All tanks, pipes, valves, seals and gaskets will have routine maintenance carried out.
- Any faults, corrosion, cracks or failure shall be reported and logged immediately, and remedial maintenance work carried out to rectify the issue.

7.7 COMPLAINTS AND POTENTIAL PERMIT BREACHES

Any potential reports and complaints about fugitive emissions or potential off-site emissions such as noise, pests, vermin, dust, odour or vibration, will continue to be recorded, investigated, and appropriate remediation actions implemented as necessary.

All staff are trained to identify and report such incidents when they occur, as detailed in the MAPP and SMS. In the unlikely event of an offsite emission and a complaint, the site staff record the complaint and undertake a full investigation into the source. Any emissions are assessed and appropriate measures put in place to rectify and prevent future emissions. The EA shall be notified without delay following the detection of:

(a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;

(b) the breach of a limit specified in the permit; or

(c) any significant adverse environmental effects.

7.8 ODOUR

Regulated activities at the installation will continue to be managed in accordance with a site-specific odour management plan, this has been updated and is included with this application. See section 6.5 for the details on the OMP, see the Appendices.

7.9 NOISE AND VIBRATION

The following noise and vibration control measures will continue to be in place:

- The operator has a low noise purchasing policy for buying new equipment.
- The operator has a policy to carry out regular noise risk assessments and to take action to reduce the risks.

A noise assessment undertaken concluded that site staff are unlikely to have noise exposures above the lower and upper exposure action values. Therefore, it was concluded that there would be no significant adverse impact to sensitive receptors. There will be no change to the noise and vibration risks as a result of this variation. In the event of a complaint, the complaints procedure will be followed.

8. APPENDICES

- Appendix A – Permit EPR/WE4467AC.
- Appendix B - Waste Storage Tank site plan.
- Appendix C - Section 4 SMS and MAPP.
- Appendix D - Section 5 Technical Aspects.
- Appendix E - Drainage plan.
- Appendix F - Odour Management Plan.
- Appendix G - Odour complaints procedure.
- Appendix H - Thames water trade effluent discharge consent TRIV0A14

T: +44 (0) 1235 75 3000
E: enquiry@ricardo.com
W: ee.ricardo.com