Product Uplift – Refuels HSSE Guidance

METHOD STATEMENT / PROCEDURE & RISK ASSESSMENTS – 2023 V10

Operation:	Uplift Operations - Gasoline
Contact:	Refuels
Contents:	Legislative Requirements Risk Assessments – General Risk Assessments – Environmental Uplift Procedure. Emergency Procedure.
References:	European Agreement Concerning the Carriage of Dangerous Goods By Road (ADR 2023) The Carriage of Dangerous Goods by Road Regulations 2009 The Health & Safety at Work Act 1974 EA Pollution Prevention Guidelines DSEAR (Dangerous Substances & Explosive Atmospheres Regulations 2002)

LEGISLATIVE REQUIREMENTS.	
VERSION DATE: 20/11/2023 V10	
Operation:	Product Uplift & Transport

Proposed activity:	Uplift Petrol / Gasoline UN1203 via tanker from cross contaminated storage.

Vocational training requirements:	ADR Dangerous Goods Driver Training Class 3 and Tanks. (ADR 8.2.1.1) Forecourt Safety Passport Vocational driving entitlement. (Class C, C+E)

Adequate instruction (in-house) training requirements:	ADR Security awareness training. (ADR 1.10.2.2) Completing safe deliveries training. (ADR 1.3.2.3) Dynamic risk assessment training. Driver emergency actions (ADR 1.3.2.3). Vehicle & Equipment Operational Training (Uplifting).

ADR Vehicle Specification:	'FL'. (ADR 9.1.2.1)
ADR Tank Specification:	LGBF or equivalent ADR Pressure Vessel. (ADR 4.3.4.1.1)

Vehicle Equipment ADR:	1 x wheel chock / scotch. (ADR 8.1.5.2) 2 x hazard warning triangles. (ADR 8.1.5.2) Minimum 12kg dry powder extinguisher total capacity. Minimum 2kg in vehicle cab. (ADR 8.1.4.1) 1 x times spill collecting container. (ADR 8.1.5.3) Adequate spill prevention equipment including drain cover, spill mats and booms. (ADR 8.1.5.3) 1 x plastic industrial shovel. (ADR 8.1.5.3) Plain Orange warning panel front. Orange warning panel both sides and rear containing UN (1203) & EAC (3YE). (ADR 5.3.2.1.1, CDG) Class 3 Placards and Environmentally Hazardous Placards both sides and rear of the vehicle. (ADR 5.3.1.4.1)

Other vehicle equipment:	Mobile telecommunications.

Specialist Advice:	Appointment of Dangerous Goods Safety Advisor DGSA. (ADR 1.8.3.1).

Driver equipment ADR:	Goggles. (ADR 8.1.5.2) Protective Gloves. (ADR 8.1.5.2) High visibility clothing. (ADR 8.1.5.2) Fire Resistant Overalls. Pocket Torch. (ARD 8.1.5.2) Eye rinsing liquid. (ADR 8.1.5.2)
Driver equipment other:	Hard hat. Protective boots. First Aid Kit.

Drivers Documentation:	Emergency Instructions In Writing. (ADR 5.4.3.4) The Transport Document. (ADR 5.4.1.1) The Vehicle Certificate of Approval. (ADR 9.1.3.5) Photographic Identification. (ADR 1.10.1.4) The Drivers ADR Vocational Training Certificate. (ADR 8.1.1.2) Equipment pre use inspection report. Drivers Procedure.

RISK MATRIX.

VERSION DATE: 20/11/2023 V10

Associated Documents	Likelihood:- The probability of the hazard occurring causing death or major injury.		Severity:- The most likely outcome (NOT THE WORST POSSIBLE)
	RISK = (L x S)	1 = Very unlikely, improbable, practically impossible 2 = Unlikely, remote, an unexpected or surprise event 3 = Possible, could happen but not often or regularly 4 = Probable, possible on occasions, NOT a surprise 5 = Almost certain, expected, possibility of repeat events	1 = Negligible, no loss, trivial injury, near miss, minor illness 2 = Slight, minor injury or illness, immediate first aid only 3 = Moderate injury or illness, reportable incident (3 days lost time or more) 4 = Severe, major injury or illness, temporary incapacity 5 = Fatality, permanent incapacity or disablement
	1 to 7 = LOW		
	8 to 15 = MEDIUM		
	16 TO 20 = HIGH		

ACTIVITY	HAZARD, THREAT	CAUSE	LEVEL OF RISK		L X S = High Med Low	CONTROL MEASURES	LEVEL OF RISK		L X S = High Med Low
			Likelihood L = (1-5)	Severity S = (1-5)			Likelihood L = (1-5)	Severity S = (1-5)	
GENERAL DRIVING	Vehicle accident resulting in jury to driver and or other road users. Possible environmental damage. Possible materials / property damage.	EQUIPMENT FAILURE. DRIVER ERROR. CONDITIONS. OTHER ROAD USERS.	L3	S4	**MED**	Daily driver vehicle defect reporting and inspection carried out. Vehicles subject to regular safety inspections. Ad-hoc vehicle inspections carried out. Vehicles subject to ADR test annually. Tanker equipment subject to ADR test every 2 years. Drivers work patterns fall within WTD and Drivers Hours Regulations and are monitored / analysed where applicable. Weather and traffic conditions are considered when routing vehicles. Drivers workload is considered during daily routing.	L1	S4	**LOW**
DRIVING OF VEHICLES	Physical criminal attack.	ATTACK PERPERTRATED FOR THE PURPOSE OF STEALING THE LOAD AND OR VEHICLE. ATTACK AS A RESULT OF ‘ROADRAGE’.	L2	S3	**LOW**	Vehicle doors and windows are to be shut and locked at all times. Drivers security training carried out as required by ADR. Security policy completed. Drivers ADR refresher training incorporating security. In cab telephones provided.	L1	S3	**LOW**

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ACTIVITY	HAZARD, THREAT	CAUSE	LEVEL OF RISK		L X S = High Med Low	CONTROL MEASURES	LEVEL OF RISK		L X S = High Med Low
			Likelihood L = (1-5)	Severity S = (1-5)			Likelihood L = (1-5)	Severity S = (1-5)	
VEHICLES MANOEUVERING IN TRANSPORT AREAS	Pedestrians being struck by vehicles moving in the depot.	UNSUITABLE PARKING UNSUITABLE PEDESTRIAN AREAS UNSUITABLE TRAFFIC MANAGEMENT – CUSTOMER SITES POOR VISIBILITY POOR DRIVING	L3	S4	**MED**	Non-admission of non essential personnel during operations. Vehicle hazard warning lights are to be used on customer premises. Maximum 10mph speed limit in all transport areas. Drivers are required to comply with any site rules in place. Customers are advised of minimum delivery requirements including transport risks.	L1	S4	**LOW**
CLIMBING IN AND OUT OF VEHICLE CABS	Driver being injured due to a fall or slip when climbing in and out of vehicle cabs. Chronic injury caused by repetitive strain when climbing in and out of vehicle cabs.	POOR TECHNIQUE. POOR EQUIPMENT. EQUIPMENT FAILURE. WEATHER / CONDITIONS.	L3	S3	**MED**	Driver induction training. Drivers circulars. Provision of non-slip boots. Regular vehicle safety inspections conducted. Vehicle & equipment defect reporting procedure. Audit / monitoring compliance.	L2	S3	**LOW**

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ACTIVITY	HAZARD, THREAT	CAUSE	LEVEL OF RISK		L X S = High Med Low	CONTROL MEASURES	LEVEL OF RISK		L X S = High Med Low
			Likelihood L = (1-5)	Severity S = (1-5)			Likelihood L = (1-5)	Severity S = (1-5)	
WORKING IN TRANSPORT AREAS	Drivers being struck by other vehicles whilst exiting, entering or working near to or in transport areas during deliveries.	UNSUITABLE PARKING POOR VISIBILITY POOR DECISION MAKING OTHER ROAD USERS UNSUITABLE TRAFFIC MANAGEMENT – CUSTOMER SITES.	L3	S4	**MED**	Driver induction training. Drivers circulars. Provision of non-slip boots. Driver complete a dynamic risk assessment. Requirement for drivers to wear high visibility clothing. Requirement for drivers to use vehicle hazard warning lights. Drivers are provided with warning triangles to warn other vehicles in operational areas. Appropriate scheduling of deliveries where appropriate. Customers are advised of minimum delivery requirements including transport risks.	L1	S4	**LOW**
PRE- OPERATION	Unsafe access, slips falls and other injuries caused by attempting to access delivery point.	UNSUITABLE CUSTOMER ARRANGEMENTS. GROUND CONDITIONS.	L3	S2	**LOW**	Drivers are required to inspect operational site prior to engaging in operation. Prohibition on operations that are unsuitable or unsafe. Drivers are required to wear hard hats when completing operations. Drivers are required to wear goggles or have hard hat visor down during operations. Provision of non-slip boots. Provision of induction training and refresher operational training.	L1	S2	**LOW**

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			Likelihood L = (1-5)	Severity S = (1-5)			Likelihood L = (1-5)	Severity S = (1-5)	
BULK UPLIFT OPERATIONS (HOSES)	Rupture of uplift hose/s resulting in splashing of driver.	INCORRECT OPERATION OF EQUIPMENT. EQUIPMENT FAILURE.	L3	S2	**LOW**	Inspection of vehicle equipment as part of the operational pre-use inspection. Prohibition on use of hoses that are damaged or either unfit or potentially unfit for use. Where possible completed within existing intercepted tanker area.	L2	S2	**LOW**
MANUAL HANDLING OF HOSES	The uplift hoses are both heavy and awkward to draw resulting in a risk of muscle strain to drivers when handled incorrectly.	INCORRECT OPERATION OF EQUIPMENT. GROUND CONDITIONS. LIFTING OF BULK DELIVERY HOSE.	L3	S2	**LOW**	Prohibition on lifting delivery hoses beyond 1.2 metres (height of tanker hose rack) for operations. Unsafe / unsatisfactory reporting procedure that incorporates a dynamic risk assessment. Prohibition operations that are unsuitable or unsafe. Operators are required to inspect site prior to engaging in operational routine. Provision of induction training. Provision of gloves.	L2	S2	**LOW**
PRODUCT HANDLING	Dermatitis caused by repetitive handling of Class 3 products (low level corrosive effect). Splashes to eyes and face. Inhalation of Class 3 vapours.	INCORRECT OPERATION OF EQUIPMENT. INCORRECT / FAILURE OF USE PPE.	L3	S2	**LOW**	Inspection of operational equipment before and every operation. Provision of induction training and refresher training. Provision of goggles and gloves. Prohibition of operations that are unsuitable or unsafe. Requirement for drivers to use PPE and report any spills, splashes or similar.	L2	S2	**LOW**

RISK MATRIX - ENVIRONMENTAL.

VERSION DATE: 20/11/2023 V10

Associated Documents	Likelihood:- The probability of the hazard resulting in Environment Damage.		Severity:- The most likely outcome (NOT THE WORST POSSIBLE)
	RISK = (L x S)	1 = Very unlikely, improbable, practically impossible 2 = Unlikely, remote, an unexpected or surprise event 3 = Possible, could happen but not often or regularly 4 = Probable, possible on occasions, NOT a surprise 5 = Almost certain, expected, possibility of repeat events	1 = Negligible, no loss or trivial loss 2 = Up to 10 litres 3 = Between 10 and 100 litres 4 = Between 100 and 1000 litres 5 = Over 1000 litres
	1 to 7 = LOW		
	8 to 15 = MEDIUM		
	16 TO 20 = HIGH		

ACTIVITY	HAZARD, THREAT	CAUSE	LEVEL OF RISK		L X S = High Med Low	CONTROL MEASURES	LEVEL OF RISK		L X S = High Med Low
			Likelihood L = (1-5)	Severity S = (1-5)			Likelihood L = (1-5)	Severity S = (1-5)	
UPLIFTING OPERATIONS	SPILLAGE DUE TO HOSE OR CONNECTION FAILURE, OR INSUFFICIENT ULLAGE IN RECEIVING TANK	EQUIPMENT FAILURE.	L2	S3	**LOW**	Hoses inspected by operators prior to use and recorded as serviceable. Connections and fittings inspected by operators prior to use and recorded as serviceable. Shortest appropriate hose selected for uplift. Drip tray placed at tanker manifold. Sufficient Ullage in receiving tank to be checked and confirmed by driver prior to commencing. The uplift will be continually monitored by operator. Emergency shutdown procedure in place. Spill kits appropriate for use with Petroleum Products are available as part of emergency equipment.	L2	S2	**LOW**

ACTIVITY	RISK	CONTROL & MITIGATION MEASURES	ADEQUATE
GASOLINE UPLIFT	FIRE & EXPLOSION CAUSED BY IGNITION SOURCES (SPARKS, FLAMES, STATIC ELECTRICITY & HEAT).	VEHICLE STANDARD & EQUIPMENT: Constructed to ADR / CDG vehicle requirements incorporating intrinsically safe wiring and power supply. Vehicle inspected and Certified to ADR standard annually: Certificate of Approval. Vehicle equipment incorporates continuity hoses for uplift operation. Earthing reel and stake deployed during operation. Equipment used during operation is ATEX rated appropriately for Zones 0,1 & 2. PEOPLE: Operators utilize non-static clothing (including footwear). Operators are to verify that site fire plan is in place and that they have been briefed on site fire emergency procedure prior to operation. Operators supplied with Fire Resistant Overall Clothing. OTHER EQUIPMENT: Minimum of 12kg (1 x 9kg and 1 x 3kg) Dry Powder Fire Extinguishers carried on vehicles. (BS EN: 3-1 1996) GENERAL Prevention of items (such as lighters and mobile telephones) in operational areas.	YES

PROCEDURE – GASOLINE UPLIFT:

1. Before commencing operations, the site operator will issue a permit or other written authority for under-taking COLD WORK ONLY and grant uninterrupted safe access to tank and work area(s).
2. All work area(s) to be roped off and barriers erected. Warning signs to be placed (i.e. NO SMOKING, NO ENTRY, PETROLEUM SPIRIT, FIRE RISK).
3. Operator will wear appropriate PPE: goggles, gloves, hard hat, safety boots & high visibility clothing.
4. Equipment to be used including: fire extinguishers, spill kits, hoses, couplings, earthing equipment, secondary sleeve / bund mat, temporary head bund and the TSU will be pre-use inspected.
5. Position the Tank Service Unit (TSU), place safety equipment ready for use. Place Dry Powder fire extinguishers in position and connect the TSU earthing lead to a secure and suitable point on the tank(s).
6. Verify with onsite operatives that equipment not required for operation is locked out and isolated.
7. The volume to be uplifted will be agreed with site operatives to be uplifted recorded on a K.T.L. "Transfer of Customer Product" form this will be signed by the client representative.
8. Ullage in the receiving tank checked and confirmed by the driver to be adequate/sufficient to receive the volume of product.
9. Install secondary spill capture device – where interception arrangements are in-adequate (for example – Interceptor uplift).
10. Drip tray placed at tanker manifold.
11. Connect extraction hose to tank uplift connections and verify with site operational personnel.
12. Connect extraction hose to TSU.
13. The petroleum product within the tank shall then be removed using the TSU's integral equipment by the following method:

    Via insertion tubes and hoses fitted with electrical earth continuity facility (The T.S.U. shall also be earth grounded) and the Alfons Haar product transfer pump or air pump to:

    a. Clean compartment on the TSU.
14. The TSU Operator will remain in control and monitor throughout the operation.
15. On completion of uplift of the required volume the operator will shutdown appropriate equipment. The hoses will be disconnected and stowed.
16. The earthing / grounding of the TSU will be removed.
17. WORK PERMIT WILL BE CLOSED.

PPE:

Goggles, gloves, hard hat, high visibility clothing.

Equipment:

Fire Extinguishers

Spill Kits

Temporary bund (impervious plastic sheeting, capture dunnage) of 1m x 0.5m installed at head.

Secondary portable spill capture / mat bund and or secondary hose sleeving.

Emergency Contact:

Refuels

EMERGENCY PROCEDURES:

1. If it is safe to do so, shut down operation, the vehicle and equipment including vehicle master switch.
2. Raise the alarm.
3. Remember your priority is to ensure that: life, environment and property in that order are preserved; you are not to put yourself or others at risk in attempting to deal with an emergency situation.

Spill

- Ensure there are no sources of ignition.
- Ensure that you are upwind of the incident and that you have clear access to an escape route.
- If safe to do so, use spill equipment to contain and control spill (paying particular attention to drains and watercourses).
- Notify your line manager.
- Complete incident report.

Fire

- Telephone 999.
- Do not attempt to deal with any fire involving the load.
- Ensure that you are upwind of the incident and that you have clear access to an escape route.
- If safe to do so, use vehicle fire extinguishers to control or extinguish fire.
- Notify your line manager.
- Complete incident report.

Injury

- Your priority when administering first aid are to:
  Save life.
  Prevent the casualty's condition from worsening.
  If possible aid in recovery.
- Complete incident report.

Notes:

Refer to your Emergency Instructions in Writing.

Emergency Contact:

Refuels