



**CODE OF PRACTICE FOR THE
SAFE DISTRIBUTION OF POLYOLEFINS
IN BULK**

V9 March 2021

FOREWORD

Everyone involved in operations for Ineos must work in accordance with the Ineos Group 10 Behavioural Safety principles:

1. We believe all incidents and injuries can be prevented
2. Everyone's first responsibility is to ensure they work safely
3. Everyone has the duty to stop work if they feel the situation is unsafe
4. The expectations and standards are the same for everyone on the site
5. Rules and procedures must be observed and respected
6. We should look out for each others safety and unsafe situations
7. All injuries and incidents /near misses must be reported and investigated
8. Risk assessment must be carried out prior to, during and on completion of work
9. All team leaders have a special responsibility for promoting and upholding these principles
10. We must always work within the limit of our competency and training

It is Ineos Olefins & Polymers Europe (O&P) policy that safety of operation must be paramount.

The implementation of this policy in the distribution field poses special problems because of the extent to which we are dependent on third parties and the difficulty of supervising distribution operations in the field.

We must nevertheless be quite satisfied that our distribution operations are carried out competently and safely, and in accordance with national legislation in force.

This Company '*Code of Practice for the safe distribution of polyolefins in BULK*' has been prepared to help fulfil this aim.

The Code should therefore be followed by those Departments of the Company concerned with distribution activities in Europe.

This Code of Practice is published on the INEOS O&P North Logistics SHE sharepoint site:

[Link to INEOS Sharepoint site](#)

It is also available to our Logistics Services Suppliers on the [logisticsmatters public site](#):

www.logisticsmatters.info or on the [Direct Link to the guideline](#)

This document is not published as a paper document. Therefore any paper documents must be treated as uncontrolled copies. Reference to the website above will always provide the most up-to-date copy. Changes to this document will of course be advised to a wide group of business and site based personnel.

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Distribution List

Copy No : **Issue To :**

One master copy kept by the Ineos O&P Logistics SHE Manager

Revision Details

<u>Rev No :</u>	<u>Details of Change</u>	<u>Date</u>
1.	First version prepared by Logistics Safety.	November 2008
2.	New logo Olefins & Polymers, new requirement safety harness for drivers, minor other changes.	August 2009
3.	Driving safety standard: max unloading temperature New emergency telephone number NCEC. Section 3: label for use of inert gas Section 5.3 cleaning obligations Section 6: subcontractors and subcontractors approval Section 11: sampling and risk of electrostatic discharges Appendix 2: new SQAS questionnaire and Ineos O&P template.	July 2012
4.	Major review. New requirements according to new ECTA/CEFIC guidelines (see page 5).	August 2014
5.	Included new CEFIC/ECTA guidelines related to unloading and cleaning of bulk trucks. Reference to the NEW logisticsmatters.info web site. All changes highlighted in BLUE.	October 2017
6.	Modified requirements with regard to: unloading with bypass (1.1/41) medical examination of drivers (1.3/64), registration of drivers (1.3/66) and use of mobile phones (1.5/76)	February 2018
7.	Implementation of mandatory requirement of European Cleaning document (ECD) issued by EFTCO approved cleaning stations audited according the SQAS system. (4.1) Cleaning according to the Polymer Industry cleaning standard (CEFIC/ECTA guideline) (4.1) SQAS mandatory (3.1) Ground operated vent valve mandatory (1.1/33)	January 2021
8.	Fixed fluidizing cones are accepted. (1.1/30)	February 2021
9.	Extra clarification about fluidizing cones. (1.1/30)	March 2021

SCOPE

This Code applies to

- a) The storage and handling of bulk goods at Intermediate storage facilities
- b) Transport by road or intermodal routes of bulk goods within Europe
- c) Loading, unloading and cleaning activities

Of polyethylene and polypropylene

ECTA/ CEFIC guidelines that are referred to in this Code of Practice are:

[Best Practice Guidelines for safe tipping of silo trucks/ trailers/ silo containers and bag-in-box containers](#)

[Safety and Quality Best Practice Guidelines for unloading Polymers in Bulk](#)

[Best Practice Guidelines for Cleanliness of Rotary Valve and Unloading equipment for Bulk deliveries](#)

[Best Practice Guidelines for the cleaning of dry bulk polymer transport tanks](#)

[Behaviour Based Safety Guidelines for training of drivers and safe driving of road freight vehicles](#)

[Best Practice Guidelines for the safe Working at Height in the logistics supply chain and allied sectors](#)

Other Ineos O&P documents which are applicable to transport of Polyolefins in Bulk are:

[Ineos O&P site logistics info and specific information](#)

Contains detailed info required for loading at the Ineos O&P sites
(addresses, contacts, opening hours, specific requirements etc..)

[Ineos O&P Code of Practice for sensitive applications](#)

Contains GMP requirements and lists with banned/critical prior cargoes

[Ineos O&P guidelines for the safe unloading of polyolefins in bulk](#)

[Ineos O&P guidelines for Working at Height, Risk of suspension trauma and rescue plan](#)

[Ineos O&P Guidelines for safe unloading of 20 Foot lined iso box containers](#)

these documents can be downloaded from:

<https://www.ineos.com/businesses/ineos-olefins-polymers-europe/logisticsmatters/polyolefins/logistics-codes-of-practice/>

This Code is based upon the best-recommended practices within the industry at the present time. Ineos O&P will keep abreast of industry developments, which may result in particular aspects of this Code being amended from time to time.

SECTION 1: **DRIVING SAFETY STANDARD**

The following comprises a basic set of safety requirements which must be met for all INEOS O&P activities including specs of vehicles (required and recommended) and driver requirements.

Where the vehicle requirements conflict with legal requirements in the country of registration of the vehicle, the latter shall be complied with and take precedence.

1.1: Minimum Vehicle Requirements

General Vehicle Requirements	
1.	Engines must meet, as a minimum, the Euro 5 norm. Euro 6 is preferred. For Euro 6 engines, drivers must be informed that regeneration of the particulate filter is not allowed on any Ineos O&P site.
2.	Vehicles and equipment shall be fit-for-purpose conforming to recognized specifications.
3.	All storage and box containers on delivery vehicles shall be securely anchored to the chassis.
4.	All equipment shall be in good working order with no visible leaks (e.g. hydraulic oil)
5.	All vehicles, and the equipment fitted to them shall be included in a maintenance program with the appropriate records maintained.
6.	All vehicles shall be fitted with tyres with tread depths in accordance with the statutory minimum. Remoulded, regrooved or remixed tyres shall not be used on steering axles.
7.	All vehicles have fully functioning brake systems with linings and brake discs meeting minimum wear tolerances.
8.	All vehicles fitted with left and right hand wing mirrors, and convex mirrors for blind spots.
9.	All vehicles fitted with operating headlights, direction indicators, tail/brake lights and windscreen wipers.
10.	All vehicles have an operable horn/ warning device.
11.	All delivery vehicles shall have hose/ tool stowage areas that allow these items to be safely secured to the vehicle
12.	All vehicles to be fitted with mudguards and mud flaps.
13.	All delivery vehicles larger than 12.5 tonnes shall have rear under run protection to protect against damage from rear end collision and to prevent contact by the colliding vehicle with the chassis rails.
14.	Vehicles shall be fitted with a three-point integrated seat belt for each occupant seat.
15.	All windows (doors, windscreen, and cabin rear) shall allow unimpaired vision (i.e. no cracks, etc.).
16.	All vehicles shall have stowage devices so that equipment is not free to move around in the cabin (e.g. jacks and tools).
17.	All vehicles shall carry a fit-for-purpose first aid kit.
18.	All electrical systems shall be in sound condition, securely fastened and with connections in appropriate junction boxes.
19.	Vehicles shall not exceed the legal axle loads as set down in the country or area of operation.
20.	All vehicles meet the emission standards in their country or area of operation.
21.	All vehicles meet the licensing requirements of the country or area of operation.
22.	All vehicles shall have an operational speedometer
23.	All vehicles must be fitted with an operational vehicle driving monitor (e.g. Tacho) that must be capable of recording individual driver's driving and resting hours, speed, harsh acceleration and harsh deceleration as a minimum.
Specific requirements for silo trucks	

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24.	Tank must be of the mono-tank raising bucket type, stainless steel or aluminium
25.	The gangway allowing for the inspection of loading holes will be fitted, as a minimum, with a collapsible guard rail which must be capable of being raised from ground level. However access along this gangway without a fall arrest system is not allowed at Ineos O&P loading sites ! Handrails fitted on top of trucks are NOT considered to be a suitable fall arrest system. Ladders are not an acceptable means to reach the top of trucks when the driver is not using a life line system.
26.	Each tank must be equipped with a cable for sealing
27.	The rear manhole must be fitted with a stainless-steel valve. The transition to the loading elbow must be smooth
28.	The loading elbow must be detachable to allow unloading on both right and left hand side.
29.	The air-injection pipe (2 inches) in the elbow will be fitted with a non-return valve, with elastomeric seal and detachable to allow inspection
30.	The rear manhole may be fitted with a fixed (welded) easy to clean fluidizing cone.  The rear manhole may be fitted with a demountable fluidizing cone type easy to clean /stainless steel/aluminium. The fluidizing cone must be removed for inspection of the SILO truck and will also be inspected separately. The cone can be re-installed after inspection.  The rear manhole may NOT fitted with a demountable fluidizing cone type not easy to clean / fabric, textile, nylon. See example: 
31.	The rubber of the manhole seals may not peel off or be damaged. White EPDM is recommended
32.	All manholes must close properly
33.	There must be a valve installed to release the pressure from the silo. It is mandatory that this valve can be operated from ground level. When flexible hoses are attached those must be detachable to allow inspection. Depressurizing the silo must be possible from ground level or by a vent valve operated at ground level (preferred option) or through the ground level manifold system or by bringing the outlet of the vent valve on top of the silo with a flexible hose to ground level (in this case the vent valve on top has to remain

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	open). In any case we don't want the driver to go on top of the SILO to open the vent valve.
34.	The tipping mechanism must be equipped with a Dead Man's Switch. <u>For new trucks</u> , it must be operable by means of a remote control system
35.	Trailers must be equipped with a level indicator, this enables the driver to check if the chassis position is level before commencing tipping. The level indicator must be at the rear end of the chassis
Specific requirements for tipping chassis and rotary valves	
36.	The tipping mechanism must be equipped with a Dead Man's Switch The buttons should be placed at the rear corner, this allows the driver to move out of the danger zone if an incident occurs.
37.	Each twist lock must be equipped with a twist lock indicator, minimum length 20 cm and painted yellow. It must indicate the open/ close position of the twist locks.
38.	Container chassis must be equipped with a level indicator, this enables the driver to check if the chassis position is level before commencing tipping. The level indicator must be at the rear end of the chassis
39.	Full width bolster bars or split bolster bars which are linked by means of a torsion bar prevent unequal rotation of the twist locks and ensure smooth movement of the container when pivoting in the tipping activity, therefore this is required for all <u>new tipping equipment</u>
40.	For cleaning purposes, all rotary valves must be fitted with safety grids which prevent that the driver is injured when his hand comes into contact with the rotating blades. The rotary valves must be fitted with interlocks which disengage the system once the safety grid is removed.
Compressor/ unloading hoses	
41.	Vehicles must be fitted with an independent unloading compressor in perfect working order. Unless site specific requirements apply, the suction capacity of the compressor must be above 900 m3/h (allowing approx. 22 tonnes / hour). The fresh air inlet for the compressor should be preferably located above the level of the truck. <u>The compressor must be fitted with an air cooler to keep the air temperature below 70°C. Unloading with by-pass, as only means to cool down the air, is not allowed.</u> The noise of the compressor may not exceed 85dB near the truck.
42.	Compressors must be of oil-free construction
43.	The air circuit will be equipped with a dust filter mounted downstream of the compressor. It must be able to easy take it apart in order to check the cartridge. It will be fitted with two manometers to control the pressure fall. The filter cartridge must be made entirely of metal, without any fibre likely to disaggregate. It must be strong enough to resist the impact of a compressor's part in case where the latter would be defective. Pressure-loss of the filter element will be under 100 millibars at full flow of the compressor 900m3/h. The cartridge will be of 5 microns
44.	The pipes, suction pipes, flexible hoses and quick-connection joints will be of constant diameter without any shoulders or dead zones. All elastomeric seals must be made out of WHITE PTFE or silicon. Flexible hoses between the tank and the frame will be equipped with quick-couplings in order to allow inspection. The tank pressurization piping will be equipped with: • a non-return valve, with elastomeric seal, installed as close to the tank as possible. • a removable section of pipe between the valve and the elbow allowing inspection. • a safety valve with a relief pressure of 2 bars
45.	Hoses must be electrically continuous The internal lining must meet the food contact directive. There may not be any reductions between the elbow and the unloading hoses.

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	Flexible hoses must be made of elastomers or stainless steel, with smooth bore, diameter 3 or 4 inch. When using a metal hose which can only be used in one direction, the couplings must be mounted so that the hose can only be fitted in the right direction. <u>All hose couplings must be fitted with safety clamps or locking pins for preventing the hose(s) to disconnect during the unloading process.</u> Unloading flexible hoses will be fitted with caps at both ends to prevent dirt to get into the cleaned hoses. Hoses must be stored in a compartment that can be sealed.
	Specific requirements for 'bag in box' bulk containers
46.	Bulk containers must be fitted with a 'safety liner' with the following characteristics: • Self venting capability • Ability to reach the documents from ground level • Ability to take a sample from the letterbox • The letterbox can be re-closed after opening
47.	The presence of a SAFETY LINER must be identified at the back(e.g. by means of tabs)

1.2: Recommended vehicle equipment (not mandatory)

48.	In countries where it is not yet a legal requirement, It is recommended that reflector strips (i.e. conspicuity tape) be fitted to the rear perimeter and sides of vehicles, consistent with local laws and regulations.
49.	In countries where it is not already a legal requirement, it is recommended that the vehicles are fitted with a backing alarm.
50.	Install in the trucks a satellite tracking/ communication system.
51.	Display the procedure to secure the twist locks at each corner block and at the hydraulic tip control box.
52.	In order to prevent tipping when the rear stabilizing legs are not lowered and before tipping starts, sensors that detect the position of the stabilizing legs or the weight on the stabilizing legs are installed. These can be interlocked with the tipping mechanism
53.	Heel plates on container tipping chassis do not provide additional safety but they are predominantly used as a locating guide when placing the container on the chassis bed.
54.	Toe plates on container tipping chassis these act as counter weights to ensure the twist lock is the "right way round" when the chassis is empty ahead of the container being positioned on the twist locks
55.	Front bolster bars on container tipping chassis ensure that the mass is spread across the full bottom rail of the container on the lifting section
56.	Side beams on container tipping chassis structurally link the front and rear bolsters on the chassis unit. These side beams operate as an additional safety feature in the unloading of BIB and delivery of free flowing products

1.3: Driver selection, information and training

57.	Drivers must be able to communicate in one of the languages used at the loading/unloading sites or they must at least be able to communicate by using a basic set of 142 expressions in English in accordance with the ECTA/CEFIC Guidelines: Best Practice Guidelines for safe (un)loading of road freight vehicles covering technical, behavioural and organisational aspects . (Also on the www.transperanto.org web site).
58.	The Haulier must have a policy in place for driver selection. This policy will include theoretical and practical evaluations (including medical exams) that drivers must pass according to their route, products and type of vehicle, as well as other elements that prove a positive attitude towards all aspects of HSSE. The policy will clearly define the required profile for a driver regarding age, experience, physical condition, etc...
59.	All drivers must possess a valid driving license for the class of vehicle being operated and inform their supervisor of any change to the status of their license.
60.	The Haulier must provide to each own driver and <u>each Fully Integrated Sub contractor (FIS)</u> a Drivers Manual , which includes the company's safety policy, all operating procedures including loading and unloading, emergency response procedures, customer specific requirements etc.
61.	All drivers (own and FIS) must receive a General training which must comprise 1. An induction training to familiarise them with the vehicle and equipment, the procedures for loading and unloading, and the operation of any ancillary equipment 2. Training in procedures during loading, transport and unloading, 3. Appropriate re-instruction following any change or modification of vehicle or equipment. Haulier's training programmes should also take account of the lessons learned following any accident or incident during loading, transport or unloading. There may be a need to retrain individual drivers or the driving workforce as a whole following the outcome of an accident/incident investigation
62.	All drivers (own and FIS) shall successfully complete an on-road driving assessment as part of their recruitment/selection.
63.	All drivers (own and FIS) must attend a Behaviour Based Safety training on DRIVING in accordance with the ECTA/CEFIC guidelines: Behaviour Based Safety Guidelines for training of drivers and safe driving of road freight vehicles
64.	All drivers must be medically assessed on joining the company and with a minimum follow up as defined by national law to assure that they have the functional capacity to operate a vehicle safely. This medical assessment needs to cover eyesight, hearing and physical mobility. If a change in their medical condition occurs, which affects their ability to drive, they must immediately inform their supervisor and cease operating a vehicle until medically re-assessed..
65.	At these locations where trainings are reasonable accessible, it is recommended that drivers carrying Ineos cargoes attend a Large Goods Vehicle Rollover Training Course. It must allow drivers to experience the practical effects of the onset of vehicle rollover.
66.	There must be an up-to-date register of all own drivers and drivers of FI sub contractors who drive on INEOS O&P Business
67.	A system must be in place to monitor driving quality (e.g. by means of tacho)and appropriate actions must be taken to improve driving quality.

1.4: Fatigue, Drugs and alcohol abuse

68.	It must be ensured that reward mechanisms do not provide an incentive for drivers to drive excessive hours (which could lead to them driving whilst tired or fatigued) or drive at excessive speed.
69.	Drivers are obliged to stop driving if they are tired or fatigued. They should either make alternative travel arrangements or have an appropriate period of rest/sleep before driving.
70.	The driver training programme must include a part on the risks of tiredness and fatigue. (example of a training package can be obtained from Ineos O&P and is also available on www.logisticsmatters.info)
71.	There must be records of attendance at driver tiredness/ fatigue awareness trainings.
72.	A system must be in place to monitor adherence with the max driving hours' rules (EU Directive) and appropriate actions must be taken to address all cases of non-adherence.
73.	There must be a drugs, alcohol and Substance Abuse Policy which has been formally advised to all drivers
74.	Ineos O&P expects any driver that is required to take medication that is recognised as having the potential to affect driving performance to report the matter to his management immediately
75.	Where the country legal system allows, hauliers should implement a random drug and alcohol testing programme. Drivers identified as failing to comply with the above must be banned from Ineos work.

1.5: Use of Mobile Phones

76.	Ineos O&P strongly recommend hauliers to discourage their drivers from using mobile phones while a vehicle is in operation.
77.	A mobile phone policy covering the above must be in place. and available in the drivers manual.
78.	The above rule shall be included in inductions, job orientations and driver training programs
79.	Where country legislation allows, Ineos O&P require hauliers to conduct checks on the adherence to this policy by carrying out spot-checks. These checks should include checks on the equivalence between telephone bills and vehicle data recorders

1.6: Seat Belts

80.	Seat belts must be worn by all vehicle occupants in vehicles performing transportation services for Ineos O&P. This also includes driving on Ineos O&P sites or at Customer's premises.
81.	A seat belt policy must be in place backed up by a disciplinary policy and a programme for compliance checking
82.	Regular spot checks must be done by the haulier to ensure that seat belts are being worn
83.	Hauliers must ban from Ineos O&P work any drivers identified as failing to wear a fitted seat belt whilst the vehicle is in motion

1.7: Communicate the main Ineos O&P safety requirements to drivers

84.	A document with the main Ineos O&P safety requirements is attached in <u>appendix 1</u>
85.	Driver safety instructions which apply at all Ineos O&P sites: <u>Appendix 2</u>

SECTION 2: PERSONAL PROTECTIVE EQUIPMENT (PPE)

- 2.1 The Haulier must ensure that it's employees use, according to the activity, the Personal Protective Equipment (PPE) that has been supplied to them by the company. PPE must be appropriate and recommended for each activity, must be in good working order and must be replaced upon presenting signs of wear. The haulier must maintain a register of periodical inspections of PPE.
- 2.2 Ineos O&P have defined the **minimum** requirements for PPE when drivers or operators are engaged in Logistics activities involving Ineos O&P products. The locations where these PPE requirements apply are indicated below. **More stringent PPE requirements may apply at other locations** (e.g. at customer premises). The PPE requirements do not apply when driving on the public road except for the Hi Vis jackets which must be worn when the driver has to leave his truck in case of problems.

PPE requirements:

Minimum:

- **Fall arrest harness**
- **Light eye protection (safety glasses)**
- **Safety shoes**
- **Helmet**
- **Hi-vis jacket**
- **Gloves**
- **Overall (see below)**

Site specific Requirements Overalls (for drivers) :

Site	Location	Standard overall	FRC Overall
Grangemouth	PLS Logistics	X	
Köln	Logistics area	X	
Lavera	Whole site		X
Lillo	Logistics area	X	
Geel	Logistics area	X	
Sarralbe	Logistics area	X	
Rosignano	Logistics area	X	
Bamble	Logistics area	X	

Definitions:

Fall arrest harness	According to EN 361 See note 1 below
Light eye protection	Safety glasses to EN 166F or equivalent
Safety Shoes	Ankle high, chemically resistant with steel toe and sole and anti static sole to EN 345 or equivalent
Helmet	Helmet to EN397 or equivalent.
Hi-vis(ibility) Jacket	Jacket to EN 471 class 2 or equivalent. To be worn when specifically required on sites and when working on (public or private) roads, during shunting operations and at places with bad visibility.
Standard Overall	One or two piece overall

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**FRC (Flame Retardant)
Overall**

One or two piece overall with long trousers and long sleeves.
Antistatic according to EN 1149 (EN 1149-1 or pr EN 1149-3)
and flame retardant according to EN 531 (A, B1, C1, E1).

Note 1:

1. Harnesses may not be fitted with shock absorbing lanyards or extension leads which are longer than 30 cm.



OK



Not OK



Not OK

2. Harnesses need to be inspected [on a regular basis \(minimum yearly\)](#) and in accordance with the applicable legislation. [Records of these inspections must be kept.](#)
3. Drivers need to visually inspect their harness on defects and damage before each use.
4. Drivers need to receive training. This training must comprise
 1. How a harness must be put on and how it must be worn
 2. The risks of being suspended after a fall in an incorrect applied harness
 3. The risks of suspension trauma

SECTION 3: SQAS

- 3.1 All hauliers must obtain a valid SQAS report (Safety Quality Assessment System) for all individual depots which are used for Ineos O&P service.
- 3.2 The SQAS reports are evaluated by Ineos O&P by making a comparison between the report and the minimum Ineos O&P requirements. An evaluation report is then sent to the haulier.
- 3.3 The haulier **must submit and action plan** for all reported deviations against the Ineos O&P requirements.
- 3.4 The Ineos O&P Contract Managers are responsible for monitoring the haulier's improvement programmes to ensure that all required actions are completed within the agreed timescales.
- 3.5 Although a formal evaluation of the haulier's safety and quality management systems is required at intervals not exceeding three years, Ineos O&P will also monitor the performance of hauliers on a continuous basis. Records of safety and quality non-conformances will be reviewed at the **Quarterly Performance Review (QPR) meetings**. **In addition, SHE compliance audits may be carried out by Ineos O&P to check compliance against this Code Of Practice.**
- 3.6 Info on SQAS, including the SQAS questionnaires, is available on the CEFIC website: www.sqas.org

Section 4: Cleaning requirements silo trucks and rotary valve unloading equipment

Code of Practice for Sensitive Applications

- 4.1 All silo-tank vehicles must be clean, odourless, dry and fit for purpose when presented for loading. The LSP (or their driver) must present an EFTCO European Cleaning Document (ECD) (see www.eftco.org) which identifies each of the EFTCO codes required according the "Polymer Industry cleaning specification" to the reception area of the loading site. The cleaning document must also bear the following statement "Tank and ancillaries cleaned to the "Polymer industry cleaning specification".
- Without this cleaning document (ECD/EFTCO) issued and filled in by the cleaning station, the transport vehicle will not be loaded.
- The actual loading date may not be more than 2 (two) working days after the issue date of the cleaning document. (For example: cleaning on a Thursday → loading possible till the following Monday)
- 4.2 The system for auditing and evaluation of this module is similar to the 'Transport Service' module but as only the hauliers have the contractual arrangements with the cleaning stations, they must evaluate the SQAS reports in order to asses the Quality, Safety, and Environmental standard of their cleaning stations. The hauliers must insist on an improvement action programme. Info on SQAS cleaning, including the SQAS questionnaires, is available on the CEFIC website: www.sqas.org
- 4.3 Hauliers are required to meet the specific obligations on Good Manufacturing Practices (GMP). These requirements are described in the Ineos O&P Code of Practice "Sensitive applications" which can be found on the on the Logisticsmatters website. One of the main elements in this COP are the lists of 'banned' and 'critical' prior cargoes.
- 4.4 The cleaning and inspection requirements of silo trucks are described in the ECTA/CEFIC Best Practice guidelines for the cleaning of dry bulk polymer transport tanks. Hauliers are expected to fully implement these guidelines.
- 4.5 The cleaning and inspection requirements of rotary valves and related equipment (Bag In Box deliveries), are described in the ECTA/ CEFIC Best Practice Guidelines for Cleanliness of Rotary Valve and Unloading equipment for Bulk deliveries. Hauliers are expected to fully implement these guidelines.
- 4.6 Drivers must be trained in the application of the above named guidelines.

SECTION 5 SUBCONTRACTING

5.1 Hauliers are permitted to use subcontractors provided the following principles are met:

- **Fully integrated subcontractors**: These are fully integrated in the main haulier's management system and therefore fully under control of the main haulier. These sub contractors are typically driving exclusively for the main haulier. These sub contractors must meet the same requirements as the main haulier (receive driver's manual, driver training, drivers receive direct instructions from the haulier etc...).
- **Non Fully Integrated subcontractors**: These sub contractors are not fully integrated in the main haulier's management system and it is the main haulier's responsibility to assess the sub contractor against their standards by using the SQAS system **or** to carry out own audits, and to follow up the performance of the sub contractors. The main haulier also must have a system to communicate the Ineos safety requirements to the sub contractors.
- **Spot subcontractors**: These are normally used in exceptional cases and the main hauliers have normally no contractual arrangements with these companies. Spot chartering is only allowed on exceptional basis

5.2 Ineos does not permit the use of secondary subcontractors. A prohibition on the use of secondary subcontractors must be included in all transport contracts.

SECTION 6: REPORTING NEAR MISSES, INCIDENTS AND ACCIDENTS

6.1 Near miss reporting

Near misses are unsafe situations which, in slightly different circumstances, could lead to an accident (unsafe situations, unsafe conditions, unsafe acts, etc..)

All drivers are encouraged to report near misses. Examples are:

- * No free access to the loading/ unloading area
- * Discharge area not level and stable
- * Unloading from the public road
- * No adequate height clearance for tipping
- * No operator present during unloading and no instructions in case of emergency
- * Risk of unloading into wrong silo
- * Inlet connection of silo at unsafe position
- * Unloading into small receptacles (e.g. Octabins..)
- * Driver must take top sample without adequate fall protection
- * Heavy traffic close to tipping silo

.....

A standard form to report near misses is attached ([appendix 3](#))

6.2 Incident/ accident reporting

- 6.2.1 In the event of an incident or an accident during transport, handling, loading and unloading activities Ineos O&P must be informed immediately, **even when the load is not affected**.
- 6.2.2 The International Ineos O&P emergency telephone number is: **+ 44 (0) 1235 23 96 70**
This is the NCEC centre. As this Call Centre uses interpreters, the caller can speak his/her native language.
- 6.2.3 Ineos O&P require that the haulier must also be able to respond rapidly and effectively if one of its vehicles is involved in an accident emergency. The haulier must have an emergency plan covering response to an accident at any point on the route that the vehicle travels.
- 6.2.4 In the event of a road accident, Ineos O&P will require the haulier to complete the ' checklist for investigating Road accidents' which is attached in [Appendix 4](#)

SECTION 7 LOADING AND UNLOADING REQUIREMENTS

7.1 BBS loading/ unloading programme (recommended – not mandatory)

90 % of all injuries are a result of unsafe actions, poor decisions and at risk behaviour. A Behaviour Based Safety program will help to improve the safety culture, provided it is fully supported by the management.
For this purpose, ECTA/ CEFIC have developed BBS loading/ unloading guidelines. See Best Practice Guidelines for safe (un)loading of road freight vehicles covering technical, behavioural and organisational aspects. Chapter 1.

7.2 Driver unloading requirements

ECTA/ CEFIC have developed Best Practice Guidelines for Safe tipping Silo trucks/ trailers, silo containers and bag-in-box containers

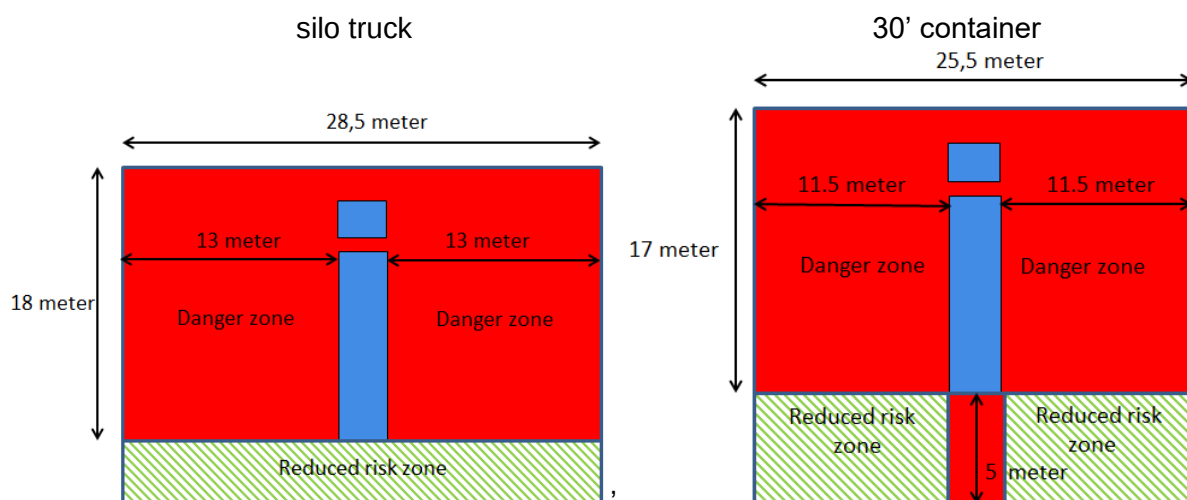
In annex 2 of above named guidelines, the minimum requirements to be met by the driver are:

Nr	Safe unloading procedure: DRIVER
1	Drivers must be trained in safe unloading of bulk silo's/ containers and must be informed about the risks
2	Driver wears required PPE
3	If the driver is requested to take a top sample, he uses the working at height facilities which are provided to do this safely (e.g. life line system, mobile safety stairs etc..)
4	Brakes on tractor and trailer are applied (before lowering the rear landing legs)
5	Wheel chocks are placed
6	In case of a container delivery: it is checked that the 4 twist locks are fully engaged in the corner castings, the hand nuts are well tightened and fully locked with a locker system. Also semi-automatic twist locks must be manually tightened !!
7	The rear legs are checked for wear, cracks, deformation and damage
8	The rear legs are extended to the ground. (In case a leg does not run smoothly up and down, the unloading process is stopped and a check by an expert is done)
9	The air in the air suspension is dumped so that the trailer completely rests on the stabilizing legs
10	The stabilizing legs are used to level the trailer (see level indicator). The stabilizing legs are approximately 90° to the ground and have to be free of tension.
11	To avoid tension of the stabilizing legs the brakes on tractor and trailer have to be applied again after dumping air pressure of the air suspension
12	The earthing cable is connected
13	The unloading hose is connected to the correct silo - safety clamps are installed on all (reducing) couplings
14	The silo/ container is tipped in several stages (to keep the centre of gravity as low as possible). No tipping at the start of the unloading. Tipping in several stages until 2/3 of full tipping capability. Tipping to max height only for last 2 tons. <u>Exception: powders which may cause avalanche risk require immediate tipping to the max height.</u>
15	The driver stays in the reduced risk zone of the truck, but outside the danger zone 13 m (silo truck), 11,5 meter (30' container) or 9 meter (20' container) left and right of truck. in addition 5 m behind the truck for containers). Exceptions: - to operate the tipping switch. - to re-adjust the pressure of the air compressor. - to check the tipping equipment.
16	In case of changing conditions which may create a dangerous situation (people entering the danger zone?, high wind speeds..) the unloading is stopped and the silo/ container is lowered

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17	Lowering a loaded silo/container should be done with great caution regarding the forces that are present in the tipping ram.
18	After discharge: valves are closed, the compressor is switched off and the silo/container is lowered to its horizontal position. Earthing cable and hoses are disconnected. Rear legs are retracted..
19	There is No unloading into small receptacles in case of insufficient capacity in the silo (Octabins, Big Bags..)
20	All incidents are reported
21	All unsafe conditions (e.g. uneven ground for tipping), near misses (people moving in danger zone), technical problems (e.g. unwinding rear legs) etc are reported
22	Spilled product is cleaned up immediately

The danger- and reduced risk zones are:



All drivers must receive training in the application of these unloading requirements

7.3 Vehicle Earthing requirements

7.3.1 Loading

During loading silo trucks or Bag in Box containers, static charges are generated onto the product due to friction during the long chute.

In case of silo trucks, the charges can flow away by proper earthing of the truck but for Bag in Box containers, the plastic liner, which is made of electrically non conductive material, will cause the electrostatic charges to remain within the liner.

Polyethylene and polypropylene in **granular form** do not represent any risk of dust explosion. If the static charges generated during loading can not flow away, the stored energy may rise up to several thousands of volts but sparks generated when a person touches the product (e.g.; to take a sample) have very low energy and therefore do not constitute any hazard apart from an 'unpleasant' feeling.

In case of **powder** loading there is a potential risk of dust explosion which depends very much on the particle size, the specific resistance, the minimum ignition energy, the air humidity etc...

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The zones in which powders are handled should be ATEX classified and therefore adequate measures need to be taken to avoid ignition of dust clouds. Earthing of all the equipment including the truck is therefore a requirement. As mentioned above, earthing of Bag in Box containers has little value but should still be done. Additional measures could be taken like keeping the product under inert atmosphere. Also, operators/ drivers should not be standing near the manholes as an ignition in the truck will very likely cause a flash fire which could hurt a person nearby.

7.3.2 Unloading

When discharging silo trucks or Bag In Box containers, the charges accumulated on the resin will be much higher because of the pneumatic conveying and the friction of the granules with the hoses and (long) lines. Proper earthing of all metal parts in the transport system: lines, silos, rotary valves etc... is therefore obligatory both for granules and powder. Electrostatic sparks may still be generated in the storage silo but the earthing requirements are mainly meant for personal protection.

7.3.3 Summary

For loading silo trucks or Bag In Box containers:

- 1: With granules which do not contain flammable vapours, earthing **is NOT** a requirement.
- 2: With granules which may contain flammable vapours earthing **IS** a requirement
- 3: With powders, earthing **IS** a requirement

For unloading granules and powders from silo trucks or Bag In Box containers:

earthing **IS** a requirement.

Drivers/operators must be aware of the risk of electrostatic discharges when taking samples after loading a truck

7.3.4 Earthing specs

- Earth lead to connect the vehicles: 16 mm² tri-rated
- All metal parts of the loading/ unloading system must be bonded.
- Grounding connections (bridges) on flanges
- Resistance to earth of the whole system: Max 10 Ohms and yearly test.
- For powders, the system should preferably be fitted with an earth proving device (red/ green light)
- Install earthing plates with pictograms both on the truck and at the unloading place.

SECTION 8 ROLES AND RESPONSIBILITIES

The roles and responsibilities of the site versus the transport company and the driver versus the unloading operator during loading and unloading operations are clearly defined in the ECTA/CEFIC Best Practice Guidelines for safe (un)loading of road freight vehicles covering technical, behavioural and organisational aspects. Chapter 2.

A summary of the main ones, which are applicable to bulk/granules/powder transport, are listed below:

Site	Transport company
Operators: communicate in the local language and through a limited number of expressions in English .	Drivers: communicate in the local language or through a limited number of expressions in English .
Communicate site requirements to the transport company Communicate safety procedures to the drivers upon arrival.	Communicate the site requirements to all involved people.
Provide safe conditions for working at height	Must comply with the 'Working at Height' requirements
Avoid taking samples If required : must be done by qualified site personnel using adequate safety precautions	Drivers are instructed not to take product samples

Operator	Driver
Operators should witness the (un) loading activity	Drivers should witness the (un) loading activity
Ensure that manoeuvring areas are kept clear to avoid congestion. When asked, the operator has to provide assistance for manoeuvring.	For manoeuvring, the driver should ask for assistance if needed
If openings are (to be) sealed , the operator (un)seals the equipment and checks seal numbers mentioned on the transport documents	If openings are sealed, the driver checks the seal placement and seal numbers mentioned on the transport documents
For silo containers or Bag in Box containers: check that the 4 twist locks are fully engaged in the corner castings, the hand nuts are well tightened and fully locked	For silo containers or Bag In Box containers: check that the 4 twist locks are fully engaged in the corner castings, the hand nuts are well tightened and fully locked

Operator	Driver
Responsible for correctly connecting/fitting product hoses and vapour return or nitrogen/air pressure lines to the storage tank/ silo. unless site procedures stipulate otherwise (such as unaccompanied transports)	Responsible for making the connections to the vehicle, unless site procedures stipulate otherwise
In co-operation with the driver, ensure that the maximum permissible vehicle gross weight is not exceeded. It is recommended to issue a load distribution plan which is signed by the driver.	In co-operation with the operator, ensure that the maximum permissible vehicle gross weight is not exceeded. During loading of the vehicle, the driver should take all possible precautions not to exceed the maximum permissible axle weights

All drivers must know their roles and responsibilities.

SECTION 10 WORKING AT HEIGHT

10.1 General Principles

10.1.1 It is the Company policy that working on top of vehicles can only be allowed when proper fall protection systems are in place.

10.1.2 In order to achieve this, one must focus on the hierarchy of

- Avoid going onto the top of vehicles
- Top access in a confined area (fall protection systems)
- Use of PPE (fall arrest systems)

10.1.3 Handrails fitted on top of trucks are NOT considered to be a suitable fall arrest system. Also, ladders are not an acceptable means to reach the top of vehicles.

10.1.4 Drivers may not accept to go on top of their vehicle without proper fall protection.

10.1.5 Going on top of vehicles without proper fall protection must be reported as a Near Miss.

10.2 Fall Protection systems

10.2.1 Fall protection systems must fully enclose the driver/ operator: e.g. folding stairs with safety cage. Access to the top must be achieved by using a safe fixed or mobile stairs with handrail. The ladder fitted on trucks is not considered a safe means of access when no life line system is used.

10.3 Fall Arrest Systems

10.3.1 If no fall protection systems are available, a suitable fall arrest system (e.g. safety harness) is acceptable provided it has been properly tested and that clear instructions for the use of it are in place and known by the persons using it. Also, a plan must be in place to rescue people who hang in the harness. People working with fall harnesses must be aware of the risks of suspension trauma and the contents of the rescue plan.

10.4 Best Practice Guidelines

Information about safe working at height practices are described in:
Best Practice Guidelines for the safe Working at Height in the logistics supply chain and allied sectors

Information about the risks of Suspension trauma are described in the
Ineos O&P guideline: Working at Height, Risk of suspension trauma and rescue plan,

SECTION 11 SAMPLING

11.1 One must **avoid taking samples** from trucks.

11.2 If still required, it is recommended that samples are **taken from ground level**



11.3 If top sampling can not be avoided, this can only be allowed when, as a minimum, a proper **FALL ARREST system** (e.g. fall harness) is in place. If this requirement can not be met, sampling from the top is not allowed. In that case, it is recommended that a Near Miss report is raised in order to start the investigation process to look for an alternative safe solution.

11.4 When taking top samples one must take into account the risk of electrostatic discharges:

- Plastic granules/powders accumulate static charges during transfer operations. The total energy stored can go up to 10kV. Plastics can keep this charge for a long time.
- Earthing of the truck during loading will not prevent this charge accumulation as:
 - 1: The loading time is much shorter than the time needed for the charge to dissipate completely.
 - 2: The plastic liner in the Bag In Box containers prevents the charge to dissipate to the metal container wall
- When a sample is taken, from the top, the charge may be released via the human body by means of a spark
- The electrostatic discharge has not enough energy to kill a person but it is painful and sudden movements of the person as a result of the shock could lead to injuries.
- When a sample is taken with a metal scoop, the metal should always touch the hatch so that the charges can flow away via the silo (make sure the truck is earthed first).
- An alternative is the use of a non conductive sampling device (e.g. a plastic beaker on a wooden rod) : see picture



APPENDIX 1 : MAIN INEOS O&P SAFETY REQUIREMENTS FOR DRIVERS/ SUB CONTRACTORS

INEOS Olefins & Polymers Europe

When you drive for Ineos Olefins & Polymers, please read and apply the instructions below.

These safety requirements are there because we care for your safety !!!

- 1: During driving , you are **not allowed** to use your mobile phone!
Studies have shown that If you phone while driving, even hands-free, your chance of having an accident increases by a factor of 4 !!



- 2: Always **wear your seat belt**. One out of every 5 road fatalities could have been avoided if the driver had been wearing his seat belt !!



- 3: Always use the **available stairs and platforms** when working at height
Put on your safety harness



- 4: **Drugs and alcohol are forbidden** ! Avoid using medicines which can cause significant daytime sleepiness. Lack of sleep can have fatal consequences when you are driving. **Stop driving in time** !



- 5: Report all unsafe loading and unloading conditions. By doing something about it, we can avoid accidents !



- 6: Always wear the required **Personal Protective Clothing** during loading and unloading: Overall, safety goggles, helmet, safety shoes, gloves, HIRIS jacket and safety harness.
Some sites require a Flame Retardant Overall.

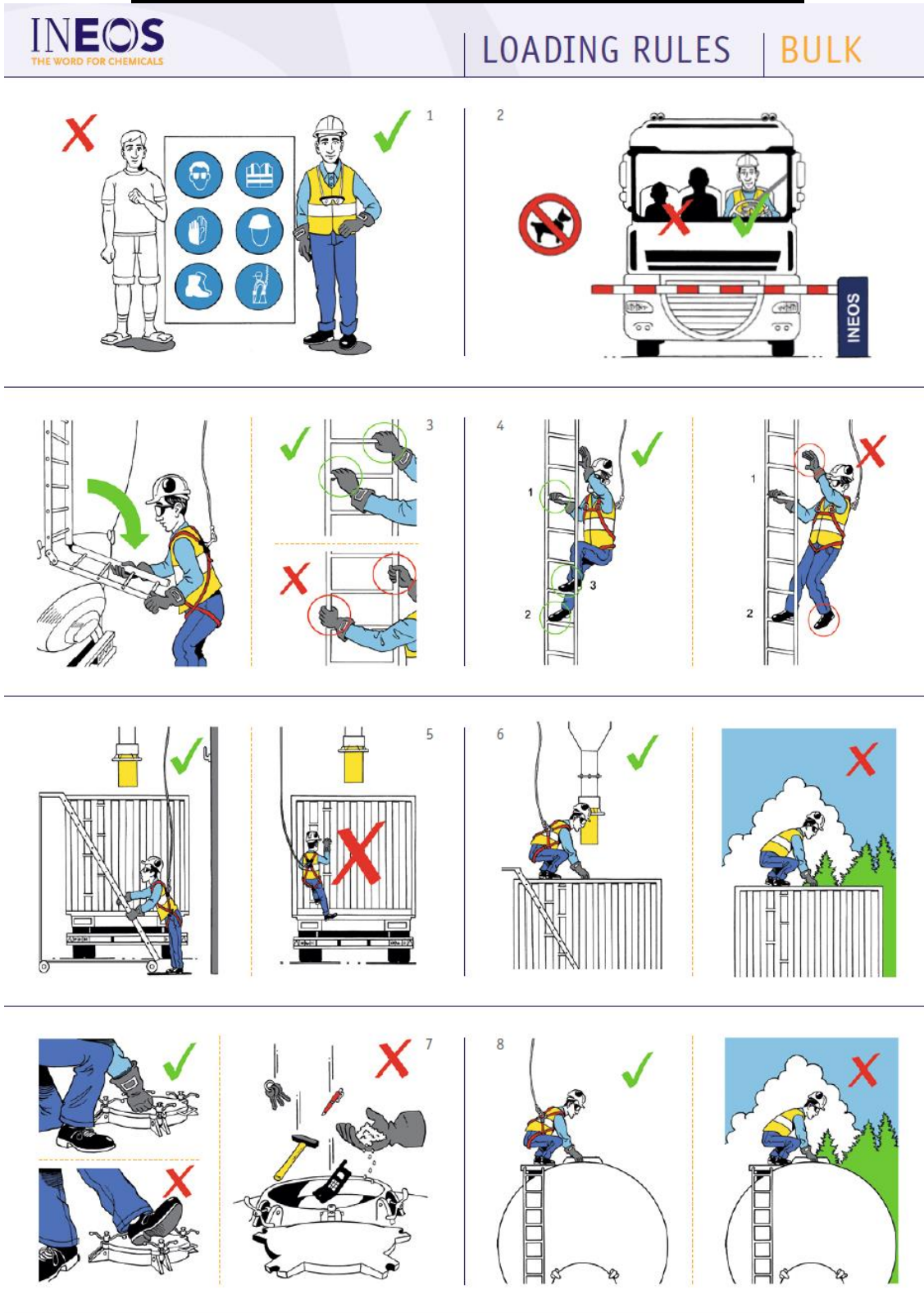


- 7: And Finally: drive safely ! Adapt your speed in curves and roundabouts !



HAVE A SAFE TRIP !!!

APPENDIX 2 : DRIVER SAFETY INSTRUCTIONS THAT ARE APPLICABLE AT ALL INEOS O&P SITES



APPENDIX 3 : FORM TO REPORT NEAR MISSES

UNSAFE CONDITIONS ?

Ineos ref nr:	
Customer name:	
Date:	
Name Haulier:	
Name driver:	

Loading location

	Yes	No	Comment
Have you encountered unsafe situations during the loading? If yes, please state which.			

Journey

	Yes	No	Comment
*Have you encountered unsafe situations during the journey? If yes, please state which.			

Delivery location

	Yes	No	Comment
PACKED 			
*Free access to the unloading area?			
*Unsafe conditions noticed? If yes, please describe.			
BULK 			
*Free access to the unloading area?			
*Discharge area level and stable?			
*Unloading away from public road?			
*Adequate height clearance for silo?			
*Adequate lighting?			
*Is unloading point marked with name of product or silo number?			
*Is there an operator present during unloading?			
*If no operator present, do you know what to do in case of an emergency?			
*Unloading into small receptacles (e.g. Octabins)?			
*Is the driver required to take a sample from the top?			
• If yes, are fall protection systems available?			
*Unsafe conditions noticed? If yes, please describe.			

APPENDIX 4

CHECKLIST FOR INVESTIGATION ROAD ACCIDENTS

Checklist Road accidents

1: Data

Location of accident:	
Date of accident:	
Alliance involved:	
Haulier involved:	
Type Vehicle involved:	
Product/ ref nr:	
Product quantity:	
Loading place:	
Destination:	
Tractor/ trailer plate nrs	
Name driver involved	
Other vehicles involved	
Other people involved	

2: Accident description

Description accident:	
Driver declaration	
Cause of accident according to driver	
Speed at time of accident ?	
Driver injuries	
Other people injured ?	
Load damaged/ spillage	
Other damage ?	
Road conditions	
Cruise control switched on ?	
Driver under time pressure ?	
Immediate actions taken	
Recovery operations	
Media attention	
Road blocked ?	
What happened to the product ?	

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3:Time log and communications

Date/time	Description	Info source

4 Road/Vehicle Accident Checklist

Cat.	Question	Yes	No	Comments/ Evidence/ Applicability
D R I V E R	Did the driver; 1. Hold a valid licence for the class of vehicle involved in the incident? 2. Use the vehicle for Ineos business 3. Was familiar with this specific vehicle?			
	Did the driver complete an Ineos approved driver-training programme?			
	Is there any evidence to suggest the driver drove the vehicle below the expected standard?			
	Is there evidence to suggest the driver might have been impaired in any way? (Fatigue, drugs, medicines, alcohol...)			
	Was the driver medically fit ?			
	Where seat belts fitted and correctly worn by all vehicle occupants?			
	Was any communication device in the vehicle used during any time of the journey?			
V E H I C L E	Was the vehicle involved "fit for purpose"			
	Was the vehicle in good operating condition?			
	Is there a record of the 1. Drivers recent work record 2. Vehicle recent work record			
	Was the load including passengers secure and within legal and/ or design limits for the vehicle?			
	Was the vehicle; A) Stationary? B) Utilising "Right of Way"? C) Manoeuvring? D) Other			
	Describe the weather conditions at the time of the incident using either; Good, Average or Bad			
	Had the driver completed this journey and or task previously?			
3rd Party	Was a third party Involved?			
	Did 3 rd Party driver and/ or Vehicle conform to all legal regulations/ requirements			
	Has anyone indicated liability			

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5: Driver Tiredness:

Duty History	Duty hours	Total work Time	Driving hours	Rest
Day of crash				
Day before crash /				
2 Days before crash /				
Sleep History	Sleep periods		Naps	comments
Day of crash				
Day before crash				
2 Days before crash				

6: Info Sub contractor

Description of company	
SQAS, ISO9000, others....	
Fixed subcontractor/ spot subcontractor	

7:Info driver:

Name	
Age	
Years of experience in driving heavy vehicles	
Years worked for this haulier	
Training history	
Last medical test	

8:Info vehicle

Last technical inspection tractor	
Last technical inspection trailer	
Tractor first registered	
Trailer first registered	
Tyres report	
ABS fitted ?	
Anti roll over systems fitted ?	

9: Ineos O&P safety policy

How is the Ineos O&P safety policy communicated to the drivers	

10: Other info
