Code of Practice

Loading bitumen at refineries

Manual 23, September 2010

sabita

excellence in bituminous products

Manual 23

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* These manuals have been withdrawn and their contents have been incorporated in a manual entitled: *The use of modified binders in road construction* published as Technical Guideline 1 by the Asphalt Academy.

** This manual has been withdrawn and its software programme incorporated in TRH12: *Flexible pavement rehabilitation investigation and design.*

*** These manuals have been withdrawn and their contents have been incorporated in a manual entitled: *Bitumen stabilised materials* published as Technical Guideline 2 by the Asphalt Academy

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Introduction

The Southern African Bitumen Association (Sabita) and its members acknowledge that they have an obligation to provide for the health and safety of their employees, society in general, and to protect and conserve the environment in which they operate.

As a leading industry association, Sabita has therefore taken the initiative to ensure that the manufacturing, marketing and transportation of bituminous products take place in accordance with the highest acceptable standards.

The transportation of dangerous goods by road is governed by a number of statutory requirements. Many of these are often written in very wide and generic terms and compliance with the standards is poorly enforced.

Sabita will therefore ensure, through this document, that operations take place in compliance with all statutory and industry-specific requirements. For this reason, all Sabita members that operate bitumen bulk road tanker loading facilities, and members that are bitumen transport providers, have pledged their commitment by becoming signatories to this Code of Practice.

Signatories have also agreed that no organisation will be allowed to partake in any of the relevant activities or operations if such organisation is not willing to declare compliance.

Signatories to this Code of Practice**:**

SAPREF - Shell/BP Refinery, Prospecton, Durban;
CALREF - Caltex/Chevron Refinery, Milnerton, Cape Town;
NATREF - Sasol/Total Refinery, Jan Haak Road, Sasolburg;
ENREF - Engen Refinery – Tara Road, Wentworth, Durban.
Unitrans Fuel & Chemical (Pty) Ltd.

Contents

1. General

1.1 Objective

The general overall objective of this Code of Practice (CoP) is to provide a single uniform standard, including specifications and procedures, for the loading of bitumen into bulk road tankers.

The procedures contained in this document are stated in generic terms and the intention is not to enforce standard forms, operating systems and procedures at individual loading facilities. It is however expected that the principles will be applied universally while each facility will still retain its own identity and specific additional requirements if necessary.

However as much standardisation as possible is desired and the signatories to this document have agreed that this CoP constitutes the *minimum* requirements for loading bitumen at facilities under their operational control.

The specific objectives of this document are to:

a. Provide standards and procedures in connection with the loading of bitumen into bulk road tankers at bitumen bulk loading facilities throughout southern Africa;
b. Provide minimum standards for the training of those involved;
c. Provide standards and procedures regarding the handling of incidences of non-compliance with the requirements of this CoP;
d. Ensure that Health Safety and Environmental (HSE) risks associated with bitumen loading and transport operations are managed to a level of As Low As is Reasonably Practicable (ALARP);
e. Provide all involved with the required information, knowledge, guidance and assistance in order to develop a culture of operating at best-practice levels;
f. Provide background information regarding certain principles and philosophies employed.

1.2 Scope

This CoP applies to all bulk road tanker operators that load bitumen at any of the bulk bitumen loading facilities in southern Africa. The CoP also covers all relevant bulk road tankers including (but not restricted to) the following categories:

- Contractor vehicles carrying on behalf of Sabita members;
- Contractor vehicles carrying on behalf of any other client of the manufacturer or marketer;
- Vehicles owned by Sabita members.

1.3 Statutory compliance

a. The requirements and application of this CoP may not be in contravention with any applicable act or regulations;
b. All vehicles, equipment and the application and use thereof will be in accordance with current South African legislation;
c. All drivers referred to or implied in this document will comply with current relevant South African legislation in regards to their actions and the requirements set for a driver of a Dangerous Goods vehicle.

1.4 Definitions and abbreviations

1.4.1 Definitions

Item	Definition
Bonding	With reference to static electricity, bonding means the interconnection of two bodies so that any potential difference between them is eliminated.
Bottom Outlet Valve (BOV)	Often also referred to as an emergency valve. This valve opens into the compartment and has a spring-return. It seals the compartment off at tank floor level. In an accident the external valve body can shear off, leaving the valve seat and product intact.
Bitumen	A generic term including the following products: • Penetration grade, R-grade or hard grade bitumen - UN3257; • Polymer modified biumen - UN3267; • Cutback or fluxed bitumen - UN1999; • Bitumen emulsion - UN1999.
Bulk Road Tanker (BRT)	A vehicle designed, manufactured and equipped in accordance with recognised and acceptable standards and specifications, and in this context, specifically for the transport of bitumen.
Contractor	See Transport Provider.
Converted dolly	A suspension set that converts a semi-trailer into a drawbar trailer by coupling to the semi-trailer kingpin. By law it is a separate vehicle and requires lights, a chevron and a number plate.
Drawbar trailer	A trailer drawn in such a manner that it transfers no load to the drawing vehicle.
Driver	In the context of this CoP, the person who is solely responsible and accountable for the safe operation of a BRT loading at a bitumen loading facility.
Dry-break adaptor	The "male" coupling which, when disconnected from the "female", seals itself to prevent spillage of the liquid.
Dust-cap	Relative to a drybreak adaptor, it is regarded as the third method of closure as required by ADR. Therefore cannot be simply a gadget to keep someone from pilfering product. It physically has to seal the loading adaptor to provide a liquid tight seal.
Earthing	The connecting of an insulated object to earth so that external electrical charges are conducted away and do not accumulate on the object.

Emergency release	A mechanism used to shut the compartment bottom valves simultaneously in an emergency from a position of least danger. In practice it is used to shut the complete product delivery control system down.
Emergency vent	A vent fitted to the tank to relieve abnormal pressure build-up inside the compartment (e.g. when the tanker is involved in a fire). This vent releases the pressure to the atmosphere and prevents the tank from rupturing due to the pressure build-up exceeding the tank design pressure.
Employer	In the context of this document means the transport contractor, oil company or a marketer loading his own product.
Gland	A fitting used where electrical cables enter into enclosures. The fitting grips the cable and seals the cable entry.
Gross capacity	The overall capacity of the compartment or tank when filled to a point where there is no ullage space left above the liquid.
Interlink tanker combination	Two semi-trailers operated in combination. The rear semi-trailer is coupled to the front semi-trailer in the same manner as the front is coupled to the truck tractor.
Junction box	An enclosure used to make electrical connections.
Loading facility	Any of the recognised product loading facilities, being: SAPREF – Shel/BP Refinery, Prospecton, Durban CALREF – Caltex/Chevron Refinery, Milnerton, Cape Town NATREF – Sasol/Total Refinery, Jan Haak Road, Sasolburg ENREF – Engen Refinery, Tara Road, Wentworth, Durban.
Loading area	The area known as the "loading gantry" where bitumen is loaded into the BRT.
Loading process	This includes the total process from the time the driver and vehicle first report for loading until the driver and vehicle exit the gate.
Normal office hours	07h30 to 17h00 Monday to Fridays.

Oil company	One of the major oil companies operating in South Africa, namely: BP SA (Pty) Ltd; Chevron SA (Pty) Ltd; Engen Petroleum Ltd; Sasol Oil (Pty) Ltd; Shell SA (Pty) Ltd; Total SA (Pty) Ltd.
Operating Passport (OP)	Abbreviated as OP. A document issued to the driver acknowledging that he/she meets the requirements and will allow him/her access into the loading facility in order to load a tanker. May be known by different names at various loading facilities.
Professional Driving Permit - Dangerous Goods (PrDP-D)	Issued by the Department of Transport as a driving licence which is valid for two years.
Pup tanker	A small trailer, usually with a fixed, non-articulating drawbar, drawn by a semi-trailer by means of a suitable hitch. It often transfers load to the semi-trailer and is thus technically also a semi-trailer.
Pressure and Vacuum (PV)	Refers to a device that can "breathe in and out" to maintain pressure equilibrium in a tank.
Rigid tank truck	A BRT that has a fixed tank fitted to a freight carrier chassis.
Safe Loading Pass (SLP)	A pass issued by an oil company to acknowledge that the tanker meets the minimum technical, roadworthiness and "fit for loading" standards.
Semi-trailer tanker	A trailer that transfers part of its mass to the drawing vehicle. It is drawn by a truck tractor.
Side under-run protection	These are lightweight rails, parallel to the ground and fitted along the sides of a vehicle, to prevent pedestrians and cyclists from being trapped in front of the wheels of the vehicle. The rails are normally fitted in areas where no other equipment is fitted such as fuel tanks that could serve the same purpose.
Switch loading	When loading a product of intermediate or high flash point or low vapour pressure into a compartment that contained a product of low flash point or high pressure on the previous load.
Transport provider (TP)	Synonymous with haulier, transport operator or transport contractor. Any company operating BRTs from or at a bitumen bulk vehicle loading facility.

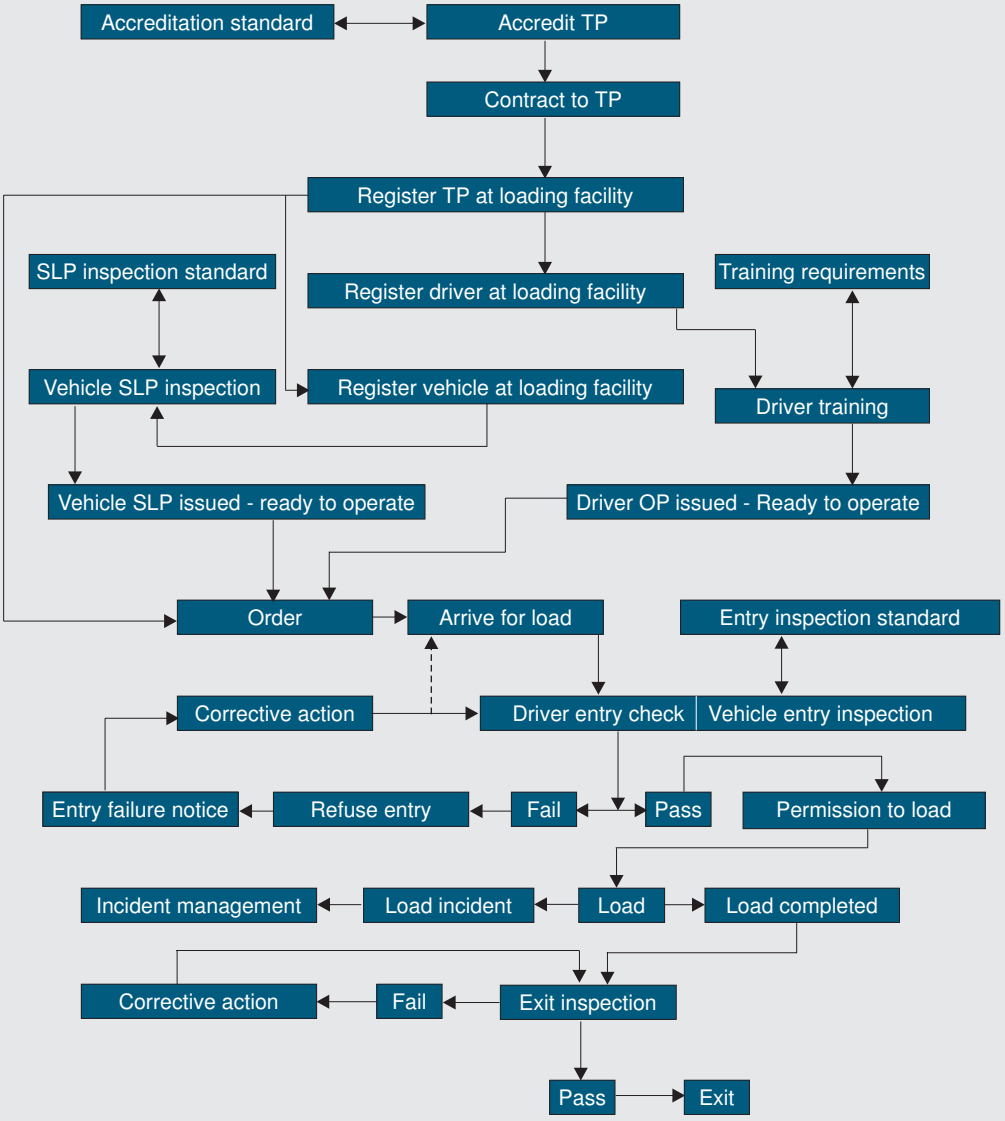
Truck tractor	Vehicle used to draw a semi-trailer (or combination of tankers of which the one coupled to the truck tractor is a semi-trailer). Often incorrectly referred to as a "Horse".
Ullage	The free space above a liquid inside a tank or compartment.
Vehicle	A BRT including: • a truck tractor; • semi-trailer; • pup tanker; • front interlink tanker; • rear interlink tanker; • rigid tank truck; • drawbar trailer tanker; • convertor dolly. *Note that these are all separate vehicles.*
4-pole battery isolator	A battery isolator that will isolate both the "Live" and "Earth" circuits. Often called a double-pole isolator.
5th wheel	The coupling fitted to a truck tractor used to attach the semi-trailer for drawing purposes.

1.4.2 Abbreviations

ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road;
ALARP As Low As is Reasonably Practicable;
API American Petroleum Institute;
SABS South African Bureau of Standards;
SANS South African National Standards;
MSDS Material Safety Data Sheet;
UN United Nations;
IP IP Code or IP Rating: **International Protection Rating**, (sometimes also interpreted as **Ingress Protection Rating**)

1.5 Process diagram

1.5.1 The following diagram provides an overview of the process flow of this Code of Practice



2. Registration requirements

2.1 Objective

The objective of this section is to describe the requirements and processes for registration of a transport provider, bulk road tankers and drivers that shall be authorised to operate at and from a bitumen bulk loading facility.

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2.2 Registration of drivers

2.2.1 Requirements

A mandatory prerequisite condition for registration is that the employer of the driver (or owner of the vehicle if the driver is an independent contractor) shall be registered as a transport provider at the loading facility. In order to register a driver must:

a. Be in possession of a valid SA ID or passport;
b. Be in possession of a valid PrDR-D or the applicable document if the driver is not resident in South Africa;
c. Be competent in operating the bulk road tanker and the equipment thereon, for which he/she will be responsible;
d. Be able to read and write English with a reasonable degree of competency;
e. Have successfully completed the applicable site specific induction and other training as required.

2.2.2 Registration process

a. The employer of the driver must apply for registration to the responsible person at the loading facility by completing the specified application form. The following documents will accompany the application:
    i. A copy of the valid SA ID or passport;
    ii. A copy of the valid PrDP-D or the applicable document if the driver is not resident in South Africa;
    iii. A certificate from the employer confirming the competence of the driver to operate the vehicle and the equipment thereon. Inclusion of a recent relevant employment and experience

record is strongly recommended in order to assist in determining the training requirements.

b. All documentation will be presented in the form of either certified copies or original documents;
c. Upon receipt of the application and relevant documentation, the driver will be registered at the loading facility, but will not be issued with the OP until such time as the relevant training has been completed successfully;
d. Upon completion of the training, an individual OP applicable to the specific loading facility will be issued, allowing the driver to enter and operate at the facility.

2.2.3 Validity, suspension and withdrawal of driver registration

a. The driver will remain registered at the loading facility for as long as required provided that all conditions for registration are maintained;
b. The OP will be suspended and withdrawn in the event of expiry of the required documents (e.g. the PrDP, etc) or an incident or transgression for which the driver was found to have been responsible;
c. The OP will only be reinstated once the necessary proof of compliance has been submitted or the conditions stated at the time of withdrawal have been met. This will include presentation of the valid renewed documents, proof of disciplinary action taken by the employer and proof of appropriate re-training;
d. The OP will be suspended after a period of inactivity by the driver of six months at the loading facility. In such case, validity of all documentation will be verified and the site-specific induction and other training will be repeated before the OP is reinstated;
e. The OP may be cancelled (withdrawn permanently) in which case the driver will not be allowed to operate at the loading facility again.

2.2.4 Documentation required

a. Driver Registration Application;
b. Operating Passport applicable to facility.

2.3 Registration of a Bulk Road Tanker (BRT)

2.3.1 BRT registration requirements

To be registered at the loading facility the BRT must:

a. Have a valid licence;
b. Have a valid operator card;
c. The company operating the vehicle must be registered as a Transport Provider at the loading facility.

2.3.2 Vehicle registration process

a. Each vehicle will be registered individually. Vehicles registered may include:
   i. Truck tractors;
   ii. Rigid tank trucks;
   iii. Semi-trailer tankers;
   iv. Pup tankers;
   v. Drawbar trailer tankers;
   vi. Front interlink tankers;
   vii. Rear interlink tankers;
   viii. Converter dollies.

b. The application must be made on the specified application form to the responsible person at the loading facility. The following documents will be submitted with the application:

   i. The loading facility application form completed and signed by the operator;
   ii. A certified copy of the valid licence disc;
   iii. A certified copy of the operator card;
   iv. If the operator is not the owner, i.e. the vehicle is on loan/hire from a third party, a signed acknowledgement by the owner that the vehicle is on loan and may be used and registered by the operator at the loading facility;
   v. A certified copy of a weighbridge certificate clearly showing the ‘un-laden’ mass of the vehicle with a driver and a full fuel tank/s;

vi. A completed Vehicle Data Sheet containing the following information:
    - Make of chassis (e.g. Nissan, Mercedes Benz, Tank Clinic, GRW, etc.);
    - Chassis model designation (e.g. 2628, R460, etc. Not required for a trailer);
    - Vehicle type (rigid tank truck, truck tractor, semi-trailer tanker, pup tanker, drawbar trailer tanker, front interlink tanker, rear interlink tanker, converter dolly);
    - Manufacturer of tank (e.g. GRW, Tank Clinic, etc.);
    - Year of first registration for tanker;
    - Date of tank manufacture;
    - Tank design standard;
    - Main material of manufacture for tank (e.g. aluminium, stainless steel, etc);
    - Product type suitable for (e.g. solvents, fuels, black products, etc);
    - Drive configuration or suspension layout (6x4, 4x2, 6x2, single/single, single/tandem, tandem/tandem, tandem, tridem);
    - Registration Number (Licence number);
    - Operator Fleet Number;
    - Operator;
    - Owner;
    - Contract for (e.g. Sasol/Shell/Total etc) or *ad-hoc* used to sub-contract for which contractor;
    - Gross volume of tank and compartments;
    - Number of compartments;
    - Allowable volume by compartment, by product;
    - Un-laden mass of complete vehicle;
    - Permissible mass by axle/axle unit;
    - Manufacturer's rating by axle/axle unit and GVM;
    - Design pressure;
    - Date of last pressure test;
    - Maximum loading flow rates;
    - Licence expiry date.

c. It is the responsibility of the operator to ensure that information regarding the vehicle is updated as required. It might occur that a vehicle be denied entry if physical information displayed on the vehicle does not match that as submitted at the time of registration.

Such changes of information will also take place by means of the specified application form;

d. Registration of the vehicle at the loading facility does not mean that it will be allowed to operate. For this, a successful SLP inspection will be required.

2.3.3 Withdrawal or suspension of vehicle registration

Once registered, a vehicle will remain registered at the facility for as long as required provided that vehicle "fitness to operate" is maintained in accordance with these requirements.

2.3.4 Documentation required

Vehicle Registration Application and data sheet.

2.4 Registration of Transport Providers (TP)

2.4.1 Requirements for the registration of Transport Providers (TP)

a. The TP must submit a relevant completed application together with the required supporting documents;

b. The TP must provide proof of HSE accreditation from the appropriate bitumen marketing companies;

c. Should a TP not hold the main transport contract from a company and is used as a sub-contractor by a TP who does hold the main contract, the same proof of accreditation will be submitted as if he is the main contractor.

2.4.2 Registration procedure for Transport Providers

a. The TP will complete the appropriate loading facility application and attach the following documents:

   i. The bitumen marketing company HSE accreditation;
   ii. A schedule with the following information:
      - Registered name of the company with registration number;
      - Physical address;
      - Postal address;

- Telephone and fax number;
- Name and contact details (telephone, mobile, fax and e-mail) of the responsible person;
- Names and contact details of at least two other contacts;
- Details of company/client for whom bitumen will be loaded at the facility;
- The contact details of the clients responsible person.

iii. Proof of registration in terms of the Workmen's Compensation Act.

2.4.3 Change in details of Transport Provider

It is the responsibility of the TP to advise the loading facility of any changes in the relevant required details.

2.4.4 Documentation

Application for registration – Transport Provider.

3. Entry and Exit Requirements

3.1 Objective

The objectives of this section are:

a. To detail the standard and procedure related to a Safe Loading Pass inspection and the awarding thereof;
b. To detail the requirements to be met by drivers and vehicles when entering the facility to load;
c. To detail the standard and procedure for the vehicle inspection that will be applied at every entry.

3. 2 Safe Loading Pass (SLP) requirements and procedures

3.2.1 Purpose of the SLP inspection

a. To ensure that the vehicle complies with the minimum technical specification (Chapter 4) for a BRT that transports bitumen;
b. To inspect the general condition of the tanker in terms of "fitness-for-loading" and road-worthiness.

3.2.2 Pre-requisites for the SLP inspection

The vehicle must be registered at the loading facility or an application for registration at the loading facility must have been submitted.

3.2.3 SLP inspection standard

a. The vehicle will be inspected for compliance with the minimum technical specification (Chapter 4) and in accordance with the items as listed in the specification;
b. The vehicle will be inspected for general condition, "fit-for-loading" and roadworthiness;
c. The inspection standard and criteria are detailed in the SLP inspection sheet included in this CoP as Annexure 6.

3.2.4 Procedure

a. The SLP inspection will take place at the location as designated by the responsible person at the applicable loading facility;
b. The vehicle will be presented in a clean state;
c. Upon completion of a successful SLP inspection, an SLP will be awarded (one for each vehicle in a combination);
d. The SLP will be displayed in an easily accessible position and will be reasonably protected from damage;
e. Each vehicle will display only the SLP applicable to THAT VEHICLE. *(e.g., the truck tractor will not display SLPs for the trailers in a combination. These will be displayed on each individual trailer).*

3.2.5 SLP validity and withdrawal

a. The SLP will remain valid for a period of 12 calendar months;
b. The vehicle will be presented for an SLP inspection prior to the expiry date of the current SLP;
c. The new SLP will be valid for twelve months from the first day of the month following the month during which the inspection took place;
d. An SLP may be suspended or withdrawn in the event that the vehicle is found to be in breach of the technical requirements, has been involved in certain incidents or has been regularly rejected at entry inspections;
e. If an SLP is suspended, certain conditions will be attached to the suspension. These conditions will determine what corrective action must be taken, whether the SLP will be re-instated after inspection of the corrective action only, or whether the vehicle has to undergo a complete SLP re-inspection.

3.2.6 Documentation

a. SLP inspection sheet;
b. SLP disc.

3.3 Driver entry requirements and procedure

3.3.1 Driver entry requirements

a. The driver will:

   i. Be registered at the loading facility;
   ii. Be in possession of his PrDP-D if South African or applicable driving licence if a non-resident;
   iii. Be in possession of a valid SA ID or passport;
   iv. Present a copy (not a photocopy) of the bitumen loading order;
   v. Be in possession of the required Personal Protection Equipment that will include:
      - Heavy duty PVC gloves;
      - A heavy duty fire retardant type overall;
      - Petroleum resistant safety shoes with non-skid soles;
      - A suitable hard hat;
      - Face shield.

b. Not be under the influence of alcohol or drugs;

c. Be the holder of a valid OP for the relevant facility and applicable to the category of bitumen that will be loaded.

Note. *Some facilities could have a driver registered with an OP for loading white products, e.g. at Natref. This does not automatically make the driver eligible for loading of black products.*

3.3.2 Driver entry procedure

a. The entry procedure will be in accordance with the applicable site-specific requirements. At a minimum the site-specific procedure will include the following elements:

   i. Verification of driver credentials;
   ii. Inspection of safety equipment;
   iii. Verification of loading order/authority to load;
   iv. Checking for alcohol or drug usage.

3.3.3 Documentation requirement

Driver entry checklist and declaration.

3.4 Vehicle entry requirements and procedure

3.4.1 Vehicle entry requirements

a. The vehicle will:

   i. Be registered at the loading facility;
   ii. Display a valid licence disc;
   iii. Display a valid operator card;
   iv. Display a valid SLP which must not carry a “suspended” or “withdrawn” status;
   v. Be fully compliant with all Load Safety Critical (LSC) items at entry inspection.

3.4.2 Vehicle entry procedure

a. Upon arrival at the loading facility, the vehicle will be inspected with regards to “fit-for-loading” condition in accordance with the requirements of the applicable entry inspection sheet;
b. If the inspection result is **GO**, the vehicle may enter the loading facility;
c. If the inspection result is **NO GO,** the vehicle will not be allowed to enter and a report given detailing the reason for rejection.

3.4.3 Documentation requirement

Vehicle entry inspection sheet.

3.5 Vehicle entry and “fit-for-loading” inspection standard

3.5.1 Purpose of the vehicle entry inspection

The purpose of the vehicle entry inspection is as follows:

a. To ensure that the vehicle is in a “fit-for-loading” condition prior to loading;
b. To ensure the vehicle is generally fit for operation and does not present any safety hazards for the road-using public.

3.5.2 Standards and criteria of the vehicle entry inspection

The vehicle will be inspected against the criteria detailed below. Note that non-compliance with items marked 'LSC' will result in a **NO GO** decision and vehicle entry will be refused:

Vehicle entry inspection criteria		
Item	**Requirement**	**Remarks**
A	**Signage and documentation**	
i	Display of valid SLP (for each vehicle in the combination).	**LSC**
ii	Display of valid roadworthy certificate disc.	
iii	Display of valid Fire Certificate (Fire Permit) is applicable.	
iv	Display of Dangerous Goods (Hazchem labels) notices appropriate for the product to be loaded, in good condition and with required telephone numbers.	**LSC**
v	Display of **No Smoking, No Naked Lights** and **No Cellphones** signage.	
vi	Document holder in cab with TREM card, Material Safety Data Sheets for relevant products and Dangerous Goods manifest.	
vii	Verification of Left On Board (LOB) product.	**LSC**
viii	Valid "order and authorisation of load" documents.	**LSC**
ix	Certificate of cleanliness, including water free check.	**LSC**
B	**General vehicle roadworthiness**	
i	All road lights in place and in good working order.	
ii	Tyres in good condition and no obvious signs of under-inflation.	**LSC**
iii	Windscreen in sound condition and the driver's line-of-sight not impeded by any damage.	
iv	External rear view mirrors present and in good condition.	
v	Starting of engine under own power.	**LSC**
vi	Chevron in place and visible.	
vii	Red reflective triangles in place.	
viii	Reflective marking tape on sides and rear of vehicle present and in good condition.	
ix	Number plates and rear number plate light in place and operational.	
x	Tank manufacturer's plate, chassis plate and compartment load plates.	**LSC**
xi	No signs of severe oil leaks from engine or driveline.	**LSC**

xii	Hooter in working order.	**LSC**
xiii	No visible/audible signs of defective exhaust system.	**LSC**
C	**Vehicle "fit for loading" condition**	
i	Battery isolator in place and suitably marked.	**LSC**
ii	Condition of electrical wiring, especially cable entries to junction points.	
iii	Correct number of fire extinguishers in working order, securely stowed.	**LSC**
iv	Two wheel chocks.	
v	Battery cover in place and in good condition .	
vi	Bonding points (earth lugs) in place and clearly marked.	**LSC**
vii	Condition of fixed tank top access ladder.	**LSC**
viii	Tank top handrail fitted and operational.	**LSC**
ix	Presence and condition of spill-box drains (check for signs of blockage.	
x	Drains terminate away from ignition sources (hot vehicle components.	**LSC**
xi	Dust caps of bottom outlet couplings in place.	
xii	Bottom valves closed.	
xiii	Manholes closed and latched.	
xiv	Check for signs of leaks on the tank body.	
xv	Vehicle generally in reasonably clean condition.	
xvi	No loose items on tanker top or vehicle chassis.	

3.5.3 Permission to enter and load - GO/NO GO decision criteria

The ultimate decision to allow or refuse entry to a vehicle shall always be at the discretion of the loading facility. However, in order to establish clear unambiguous minimum criteria for compliance in terms of this CoP the following **GO/NO GO** criteria shall be applied:

a. **ALL** items listed as “Load Safety Critical” (LSC) on the Vehicle Entry Inspection Sheet shall always be fully compliant;

b. **GO – Vehicle may proceed to loading area**
This means that all LSC items on the inspection sheet were found to be **IN ORDER** (fully compliant);

c. **NO GO – Entry refused. Vehicle may not proceed to loading area:**
This means that one or more of the LSC items on the inspection sheet were **NOT IN ORDER** (not compliant) and shall be rectified before entry to the loading area may be reconsidered;
d. A **NO GO** decision and refusal to enter will not automatically result in the withdrawal of the vehicle's SLP. However, a **NO GO** sanction against a vehicle is in effect a suspension of the SLP. An endorsement to such effect shall be recorded by the Loading Facility representative (in a register maintained for this purpose) and the Transport Provider shall be informed as soon as possible by e-mail or other appropriate means of communication;
e. The vehicle must be presented for re-inspection, to the loading facility that refused entry, to verify that the defective items have been rectified. Results of the inspection and reviewed status shall be communicated to the affected Transport Provider.

3.5.4 Documentation

a. Vehicle Entry Inspection Sheet;
b. Vehicle Safe Loading Pass.

3.6 Vehicle exit requirements and inspection

3.6.1 Purpose of the exit inspection

The purpose of the exit inspection is to ensure that the vehicle leaves the loading facility premises in a safe condition and that all of the documentary requirements and requirements specific to the load have been attended to.

3.6.2 Requirements for exit after loading

Before a vehicle exits the loading facility, the following requirements must be met:

a. The vehicle must 'pass' the exit inspection;
b. It must be verified that the loading of bitumen was completed in accordance with the trip and loading instruction and all requirements stated thereon have been met;

c. All required system and documentation requirements must have been duly completed.

3.6.3 Exit inspection criteria and requirements

At a minimum the exit inspection will cover the following:

a. Permissible vehicle and axle mass-loads have not been exceeded;
b. Tank and bottom outlet integrity with regards to leaks;
c. All loose equipment stowed safely;
d. Fire extinguishers stowed;
e. Bottom outlet dust caps fitted and sealed if required;
f. Bottom outlet valve closed and sealed if required;
g. Tyres in visually sound condition;
h. Vehicle lights in operational condition;
i. Dangerous Goods signage as required for product on-board;
j. In the case of a vehicle that had to discharge (off-load) on-board product due to a spillage or incident, verification that the compartments are empty as per the system off-loading reconciliation.

3.6.4 Exit documentation and system requirements

a. Product-specific sampling and testing done and certificates available;
b. Gantry control system reconciliation that product has been loaded on specific vehicle/s and the final volume loaded per compartment by product;
c. In the case of a vehicle that had to discharge (off-load) on-board product due to a spillage or incident, the system off-loading reconciliation;
d. Where a load has not been completed due to an incident, the completed incident report.

3.6.5 Procedures for vehicle not meeting exit requirements

In a case where the vehicle does not pass the exit inspection (for reasons described below), the following will apply:

a. Product certification outstanding:
Action: Obtain product certification before release;
b. Sealing requirements not carried out in accordance with load instruction:
Action: Carry out sealing as per requirements prior to release;
c. Visible leakage/seepage from vehicle compartments and or product pipes:
Action: Loading facility shift supervisor shall investigate and evaluate the situation. If leaks are minor and can be repaired *in situ*, this must be done and the tanker can be released. If the situation is regarded as unsafe, the shift supervisor will act accordingly and pump product back as required and then release the vehicle;
d. Loose equipment, hoses not stowed, dust-caps not fitted:
Action: Driver to rectify the situation. If equipment went astray whilst the vehicle was in the facility, driver to search and if unsuccessful, the missing equipment will be noted on the load instruction and the vehicle released;
e. Fire extinguisher missing/not in place:
Action: Under no circumstances may a vehicle be released if the requisite number of fire extinguishers is not on-board. The vehicle shall remain at the facility until a replacement extinguisher is available;
f. Lights not working, and/or flat tyre/s:
Action: Vehicle brought to a safe area and the situation rectified prior to release;
g. Dangerous Goods signage incorrect:
Action: Driver corrects the situation prior to release.

3.6.6 Documentation

Vehicle exit inspection checklist.

3.7 Load authorisation and confirmation

Each loading facility and marketing company has its own unique accounting system and manner of authorising and recording product loading transactions. As a general rule an electronic order is generated by the marketer and placed on the Transport Provider of choice.

The Transport Provider makes arrangements (in some cases by prior appointment with the loading facility) to load and deliver the product to the customer/consumer. It is therefore the responsibility of the Transport Provider to establish and maintain a secure process for providing BRT drivers with documentation that adequately authorises the loading of bitumen at a loading facility. This load authorisation documentation shall at least contain the following information:

a. Name of the Transport Provider (as registered with the loading facility);
b. Identification of the vehicle to be loaded (as registered with the loading facility);
c. Name of the vehicle driver that will load at the facility (as registered with the loading facility);
d. Product name/code and quantity to be loaded;
e. Contact details of the Transport Provider representative that may be contacted for verification purposes.

4. Design standards and technical specifications for BRT's

4.1 Objective

The objective of this section is:

a. To reference the minimum acceptable legal and industry design standards and technical specifications for bitumen BRTs and the associated equipment operating from or loaded at any bitumen bulk vehicle loading facility;
b. To provide additional guidance, and highlight as appropriate, selected 'safety critical' requirements to ensure that all bitumen BRTs are operationally suitable prior to a contract being awarded or the vehicle registered to operate;
c. To provide a standard for on-going operational inspections of BRTs and equipment.

4.2 Minimum technical specifications for BRTs

4.2.1 General requirements

a. The BRT will be suitable for the product to be carried in all respects. Products carried may include:

Product name	Trade names	UN number
Tars, liquid (including road asphalt and oils), bitumen and cutbacks	Cutback bitumen, bitumen emulsion	1999
Elevated temperature liquid, N.O.S., at or above 100°C and below its flashpoint (including molten metals, molten salts etc.), filled at a temperature higher than 190°C	Bitumen, penetration grade bitumen, modified bitumen	3257

Note: *The correct identification of the product is of critical importance as it determines the BRT design requirements. For example, there is a significant difference in design requirements between using UN 1999 and UN 3257.*

b. The tanker will be suitable for top loading at an installation loading hot product at 25°C to 230°C;
c. All equipment and fittings requiring periodic operation should be positioned to avoid risk to operating personnel;
d. Areas of unintended product and vapour entrapment will be avoided;
e. Where no specific requirement is stated in this standard, all equipment and systems installed will be in conformance with the latest industry practices and any applicable statutory requirements;
f. It is recommended that all reasonable precautions be taken in the tanker design to prevent overloading and abuse. No tanker should be constructed with a capacity in excess of that required to carry the intended product.

4.2.2 General design standards and specifications

a. The vehicle will comply with relevant statutory standards at the time of construction with regards to vessel design, tank fittings, openings and closures, plating and bitumen heating systems.

These are:

i. SABS 1518-1996 if first registered prior and up to 31 March 2004;
ii. SANS 1518-2004 if first registered from 1 April 2004 onwards until the publication of SANS 1518-2008;
iii. SANS 1518-2008 from the effective date thereof;
iv. Any future standard from the effective date.

b. Other design features and equipment will be as specified in this document. This includes items such as mudguards, spray suppression, spill containment, ladders, handrails, side under-run protection, bonding, electrical installations and fire extinguishers;
c. Specific attention will be paid to material thickness requirements in order to prevent metal fatigue and deformation caused by the top loading and carriage of hot products.

4.2.3 Manhole covers

a. Each compartment will be fitted with a hinged or bolted manhole cover designed and manufactured to an acceptable industry standard;
b. The manhole cover will comply with the requirements of the relevant tanker design specification. If no specific requirements are contained in the design specification, the compartments will be fitted with manhole covers that:

    i. Provide an opening into the tank compartment of at least 500 mm diameter;
    ii. Will form a liquid tight seal when closed by a single person without having to employ undue force or additional mechanical means;
    iii. Will remain tightly sealed in a tanker roll-over situation.

c. The manhole cover will be fitted with a suitable PV vent with roll-over protection, meaning that it will maintain a tight seal should the tank be in a roll-over situation. Such vent may however also be fitted directly to the highest point of the tank shell;
d. An ullage marker, showing the maximum load level, will be fitted inside the compartment in such a position that the maximum load level will be clearly visible by the operator while standing on the tank top, at the manhole cover opening.

4.2.4 Insulation and temperature control

a. Insulation will be provided to ensure that in-transit temperature loss will be restricted to a minimum. Typically this would be a maximum of 1°C per hour while taking into account the variance between product and operational ambient temperature;
b. Cladding overlap and sealing should be designed and constructed to prevent the ingress of water and product into the insulation material;
c. Each tank compartment will be provided with an easily accessible and readable externally mounted thermometer to display the product temperature inside the tank;

d. The tank shell and frame must be protected against external corrosion caused by condensation and moisture ingress and contact between dissimilar metals.

4.2.5 Bottom discharge adaptors

a. Each bottom discharge point of the tanker will be fitted with a 100 mm (4 inch) Mil spec/cam-in groove male adaptor;
b. Each bottom loading adaptor will be equipped with a suitable lockable dust-cap attached to the adaptor by means of a suitable retaining cable or chain.

Note: *For a product classed as a Flammable Liquid (Class 3), SANS 1518-2008 requires three closures on a pipeline; the Bottom Outlet Valve (BOV) being one, a second isolating valve being another and the dust-cap being the third. A proper "sealing" dust-cap is therefore always required.*

4.2.6 Compartment bottom valves and pipelines

a. - Each compartment will be fitted with a BOV suitable for the product and in compliance with the relevant tanker design specification.
- The valve will preferably be fitted directly to the lowest point of the tank. If this is not possible, the pipe connecting the draw-off point at the bottom of the tank to the valve will be kept as short as possible.
- The valve will be suitably and reasonably protected from accidental damage that could result in a loss of sealing ability.

Note: *SANS 1518-2008/ADR actually requires an internally opening and self-closing valve. Due to the viscous nature of the product, it does however allow for the valve to be fitted as close as possible to the bottom of the tank (i.e. no need for an internal valve) and it can be a standard stop valve. It however needs to be provided with protection against accidental damage.*

b. The BOV actuator will be easily accessible to the operator. Any suitable means of actuation may be used that will minimise the occurrence of the outlet becoming clogged when the product sets;

c. The BOV actuator will be provided with clear indication of the direction of operation and will be protected from inadvertent or accidental operation;
d. An additional stop valve will be fitted downstream of the BOV. *(Only if the UN number used is for a Flammable Liquid. If UN 1999 is used, the tanker requires three closures. If UN 3257 is used, it requires two closures only. That is why it is important to decide under which number and MSDS transportation will take place.);*
e. Wherever possible, the bottom valve will be provided with an external, easily visible indicator that will show whether the valve is in the closed or open (even partly open) position.

4.2.7 Tank top access

a. The tank will be provided with a suitable fixed access ladder to the tank-top. The ladder will be of safe construction with non-skid rungs;
b. The area on top of the tank must be kept free from obstructions and tripping hazards and the walking surface will be of a non-skid type;
c. A retractable handrail will be fitted over the length of the tank top walking area. The handrail will be provided with a positive lock when in the raised position. It will be easily raised by a person still standing on the upper part of the access ladder;
d. The raising of the handrail will not be used to activate the handbrake. It may however be fitted with an interlock that will require the handbrake to be applied before the handrail can be raised.

4.2.8 Spill containment

a. The area around the manhole covers and vents at the top of the tank must be completely enclosed along the sides, front and rear in order to form a liquid tight spill containment dam, more commonly known as a spill box;
b. The spill box will be provided with suitable drain pipes, preferable at the front and rear, extending down to the bottom of the vehicle allowing drainage to a safe area (i.e. away from the engine, exhaust pipe, electrical fittings and junction boxes and running gear). The material and size used for flexible tank-top drains must be compatible with the products carried.

4.2.9 Bonding

a. A sturdy brass earth lug will be securely bolted to the tank frame in the proximity of the centre of the tank on the left hand side bottom or at the tank-top access ladder. The surface of the earth lug must be free from paint. The position of the earth lug will be at such a height that it can be reached by a person standing on the ground and will be clearly indicated by a suitable label;

b. For tanks mounted on rubber mounting pockets, at least one suitably sized bonding cable will be fitted between the tank frame and the chassis.

4.2.10 Fire extinguishers

a. The vehicle will be fitted with fire extinguishers as follows:

   i. A rigid tank truck:
      - 1 x 2 kg dry powder type extinguisher inside the cab.
      - 2 x 9 kg dry powder type extinguishers fitted externally.

   ii. A truck tractor:
      - 1 x 2 kg dry powder type extinguisher inside the truck cab.
      - 1 x 9 kg dry powder type extinguisher fitted externally.

   iii. A trailer:
      - 2 x 9 kg dry powder type extinguishers.

b. Fire extinguishers will be housed in sturdy quick-release type holders;

Note*: Dry powder type fire extinguishers should be mounted at an angle of between 30 and 60 degrees from the horizontal. This will allow the powder to be agitated every time that an extinguisher is removed (such as during deliveries). If it is mounted in a vertical position, the powder can become compacted rendering the extinguisher inefficient. (In-cab extinguishers need not comply with this requirement as the cab is not subjected to the same vibrations as the vehicle chassis.)*

c. Fire extinguishers will be fitted with service decals in a position where they can be observed without having to remove the extinguisher from its holder;

Note: *It is recommended that the service decal be applied to the shoulder (the rounded area between the side and neck) of the extinguisher and not the side in order to make inspection possible without having to remove the extinguisher from the holder.*

d. Placement of fire extinguishers will be such as to allow easy access, in a position that will not pose an injury risk to the operator during routine removal and replacement.

4.2.11 Electrical

a. Electrical wiring will conform to the requirements of the relevant tanker design specification;
b. All electrical connections will be made in suitable junction boxes with cable entries through suitable glands;
c. Truck tractors and rigid tank trucks will be fitted with a suitable switch as close as practicably possible to the batteries. The means of actuating the switch must be in an easily accessible position and will be clearly marked, and the “On” and “Off” positions will also be clearly indicated. The switch may be provided with an actuation device fitted directly to the body of the switch or mounted remotely.

   A four pole (also called double pole) isolator or a two pole (also called a single pole) isolator may be used. In the case of a two-pole isolator, it must isolate the “Live” supply from the battery. The switch will be of IP 65 rating and if not housed inside the battery enclosure, the electrical connections will be protected to IP 54. *Activation of the battery isolator should result in shutting the engine down;*

Note: *Vehicles built to SANS 1518-2008 (ADR 2005 or later) must be fitted with a remote actuation device inside the cab.*

d. All external circuits requiring electrical power while the battery isolator is in the “Off” position (such as tracking systems), will be provided with suitable protection through a fuse or a re-settable breaker;
e. The truck batteries will be housed in a suitable battery enclosure fitted with a cover made of a non-conductive material (i.e. it will not

cause sparking if it makes accidental contact with the battery terminals.

4.2.12 Miscellaneous and loose equipment

a. Each tanker (rigid tank truck, and/or each trailer), will be equipped with two suitable wheel chocks. Wheel chocks will be made from a non-sparking material;
b. Each truck tractor or rigid tank truck will be equipped with a front charge line with an F+J male coupler. This connection will be used to supply plant air to the vehicle should it run out of air in the loading bay and for removing it from the bay should it fail to start;
c. All vehicles will be fitted with suitable dual-rail side under-run protection devices where practical. The purpose of the side under-run protection is to fend pedestrians and cyclists off and away from the wheels of the vehicle;
d. All loose or removable equipment, such as ladders, hoses and chocks, will be provided with proper stowage and retention methods;
e. The truck exhaust system will be properly shielded to prevent any product spillage from coming into direct contact with the exhaust. The exhaust outlet will also be positioned at least one metre from any product outlet or in a hazardous area;
f. A vehicle will be fitted with effective mudguards over all wheel positions. If a truck tractor does not have mudguards over the drive wheels, the semi-trailer will have the mudguards fitted for that position and *vice versa*. Suitable mud flaps (or stone guards) will be fitted behind the rearmost wheels of each axle or axle unit;
g. Where interlocks are fitted, they may not interfere with the vehicle braking system. Interlocks may be used to release a locking bar only once the handbrake has been applied or to prevent the handbrake from being released before stowage of an item has taken place, but they may not be used to apply the brake;
h. The required Dangerous Goods documentation holder in compliance with the applicable standard will be fitted in an easily accessible position inside the truck cab;
i. At least two red reflective triangles will be carried.

4.2.13 Plating

a. The tank will be fitted with the manufacturer's plate as required by the tanker design standard indicating *inter alia* the manufacturer's serial number, the compartment gross capacities, the test pressure, last test date, maximum flow rates, product density and manufacturing date;
b. For a compartmented tank, a compartment load plate will be fitted in close proximity to the top loading position and in an easily readable position. The load plate will show the maximum permissible volume that can be loaded into the compartment taking into account the ullage requirements for the product of least density and the product of highest density for which the tanker has been designed;
c. All plates and licence holders will be placed in such a position that they are easily accessible and can be easily read.

4.2.14 Signage

a. All tanks must be fitted with the required Dangerous Goods placards bearing the required contact details, in accordance with the applicable standard;
b. All tanks will be fitted with **No Naked Lights**, **No Naked Flames** and **No Cell Phones** decals on the sides and rear of the tank;
c. Truck cabs will be fitted with the required Dangerous Goods orange diamond at the front in accordance with the relevant standard.

4.3 Deviations from the standard

a. No deviation from this minimum specification may be applied unless agreed to in writing by the signatories to this document.
b. No deviation will be granted on a permanent basis. A deviation will only be sanctioned for a specified period until either the equipment has been brought into compliance with the standard or the standard has been amended.

5. Operating Procedures

5.1 Objective

a. The objective of this section is to detail the general operating procedures in connection with the bulk loading of bitumen road tankers;
b. This section will also detail the operating procedures for associated functions and activities that have not been included under specific parts elsewhere in the CoP.

5.2 Bulk loading of bitumen Bulk Road Tankers

5.2.1 Before entering the loading gantry

a. Ensure that loading documents/load authorisation is in order before proceeding to load;
b. Ensure that the vehicle is in a safe operating condition;
c. Ensure that on-board bitumen heating systems have been completely shut down and isolated;
d. Ensure that all the required Personal Protective Equipment is available and worn as necessary;
e. Where applicable, stop at the designated/demarcated stop line and ensure that air tanks are full;
f. DO NOT enter the gantry if any obvious safety hazards are observed.

5.2.2 Arriving at the loading gantry

a. Stop the vehicle in the designated loading bay in such a position that the loading arm can be inserted safely and without undue effort;
b. Apply the handbrake;
c. Put the transmission into **Neutral**;
d. Shut the engine down;
e. Switch the battery isolator switch to the “Off” position;
f. Locate the loading gantry’s fire alarm switch, emergency switches and fire extinguishers;
g. Observe safety signs and read gantry operating instructions. If instructions are not clear, ask for assistance.

h. Place the wheel chocks ahead and behind the wheels of the vehicle as a precaution to prevent any accidental forward or backward movement of the vehicle;
i. Perform a walk-around inspection of the combination to ensure that no unsafe situations exist;
j. USE BARE HANDS and attach the gantry earth clamp securely to the earth lug of the vehicle;
k. Put on safety gloves;
l. Access the tank top safely in accordance with the site-specific requirements;
m. Open the manhole covers and ensure that compartments are free of any visible water;
n. If applicable, ensure that correct switch loading procedures are followed.

5.2.3 Loading the vehicle

a. Loading will always be attended by two persons. The gantry loading operator will operate the gantry pump and metering equipment whilst the driver will remain at the top of the tanker to perform the necessary manoeuvring and placement of the loading arm assembly;
b. Remove any drip trays/buckets and place the loading arm and drop tube into the manhole opening. Ensure that the positioning is secure and at the required depth;
c. Open the loading valve slowly until fully open;
d. Observe for steam escaping from the manhole opening. Stop loading immediately if steam is observed as this is an indication of water in the compartment. Should water be present, the vehicle must be removed to be cleaned and dried prior to accepting further loads;
e. When loading of the required quantity has been completed, stop the loading pump and close the loading valve;
f. If the vehicle has to be moved to continue loading (such as for a combination of vehicles), it can now be moved to the new position. Repeat loading steps as above;
g. Extract the drop tube and funnel to a safe height and allow it to drip any remaining product into the compartment;
h. Withdraw the drop tube completely and position the drip tray/bucket underneath and stow in the loading arm as required.

i. Check that the maximum load level has not been exceeded. If it has, revert to the incident management procedure;
j. Perform any further dipping and sampling requirements;
k. Close and latch the manhole covers securely and alight from the tank top.

5.2.4 After loading

a. Disconnect and stow the earth clamp and cable;
b. Remove and stow the wheel chocks;
c. Complete a walk-around inspection to see that all is safe to move the vehicle;
d. Switch the battery isolator to the “On” position;
e. Attend to required documentation;
f. Move the vehicle out of the loading bay with due caution and proceed to the exit inspection point.

5.2.5 Documentation

Gantry load meter ticket or other verification as appropriate

5.3 Switch loading of bitumen

a. Switch loading shall be controlled in accordance with the following table:

Previous load	Next load			
	Pen, R-grade or hard bitumen	Polymer modified bitumen	Cut-back or fluxed bitumen	Bitumen emulsion
Pen, R-grade or hard bitumen	Yes	Yes	Yes	Yes
Polymer modified bitumen	Yes	Yes	Yes	Yes
Cut-back or fluxed bitumen	No	No	Yes	Yes
Bitumen emulsion	No	No	No	No

b. Tanks carrying bitumen emulsion should be dedicated to that product. If switch loading cannot be avoided, the tank must first be cleaned. If this cannot be done, the tank must be treated as would a tank with suspected water content.

5.4 Product pump-back procedure

5.4.1 Pump-back decision

a. The decision to pump-back shall always be based on safety and operational requirements with safety being paramount;
b. The decision to pump-back will be taken after consultation between the driver of the vehicle and the shift/gantry supervisor of the loading facility;
c. The following table provides the rationale to be used for each incident or occurrence and the action to be taken:

Incident/Occurrence	Action
Tanker leaking	Full off-load
Product off-spec	Full off-load
Vehicle overloaded or overfilled	Endeavour to balance load and if that is not possible, partial off-load until correct level is reached
Product spillage from tank due to overfill	Endeavour to balance load and if that is not possible, partial off-load until correct level is reached

d. In the event of a spillage, the vehicle must first be weighed to determine the amount of product spilt/lost. Calculating the quantity of lost product is done as follows:

   Product spilt = Un-laden vehicle mass on entry ***plus*** mass of product loaded ***minus*** vehicle mass after incident.

e. If hot work or confined space (compartment) entry is necessary all such work shall be strictly controlled in accordance with appropriate Permit to Work procedures. The role of the driver in such instances shall be limited to the complete discharge of all product prior to handing over the vehicle for repair work;
f. A vehicle will not be off-loaded, either in part or in full, due to a product return (i.e. once the vehicle has left the gate and the order is

closed.) Returned product will be treated as LOB product and will be accounted for in the generation of the load instruction for the following load.

5.4.2 Pump-back procedure

a. When the decision has been made (and taking into account the site emergency response procedures in case of a spill) move the vehicle safely to the designated pump-back area;
b. Position the vehicle at the pump-back facility, ensuring that the off-loading couplers can be connected safely and easily;
c. Apply the handbrake;
d. Put the transmission into **Neutral**;
e. Shut the engine down;
f. Ensure that the required Personal Protection Equipment is being worn;
g. Switch the battery isolator switch to the “Off” position;
h. Locate the loading gantry’s fire alarm switch, emergency switches and fire extinguishers;
i. Observe safety signs and read operating instructions. If instructions are not clear, ask for assistance;
j. Place the wheel chocks ahead and behind the wheels of the vehicle as a precaution to prevent any accidental forward or backward movement of the vehicle;
k. Perform a walk-around inspection of the combination to ensure that no unsafe situations exist;
l. Attach the earth clamp securely to the earth lug of the vehicle;
m. Remove the dust-cap from the applicable loading/off-loading adaptor and connect the off-loading coupler ensuring that a proper connection occurs. Make sure that the correct adaptor has been selected on the vehicle and likewise that the correct off-loading coupler has been selected. Open the bottom outlet valves;
n. Start the off-load pump (reset the meter to zero if the facility is equipped with a meter);
o. Continue pumping until the required level is reached (for a partial pump-back), or until the compartment is empty. Visually verify that the compartments have drained completely;
p. Close the applicable compartment operators;
q. Close the bottom outlet valves;

r. Disconnect and stow the off-loading hose;
s. Disconnect the plant air connection, if attached;
t. Disconnect and stow the earth clamp and cable;
u. Remove and stow the wheel chocks;
v. Complete a walk-around inspection to see that all is safe to move the vehicle;
w. Switch the battery isolator to the “On” position;
x. If the vehicle has to be moved to continue off-loading (such as for a combination of vehicles), it can now be moved to the new position;
y. Repeat pump-back steps as above.

5.5 Weighbridge procedures

The procedures governing the use of the weighbridge upon entry and exit of vehicles will be dictated by site-specific requirements. However, in order to achieve a measure of standardisation in the approach, any such site specific procedures should include at least the following steps:

a. Weigh the empty combination upon arrival to determine the entry mass;
b. Compare to the un-laden mass of the combination (as held on the loading facility system), to determine any major deviation and thus the allowable payload;
c. Calculate the allowable payload by subtracting the entry mass from the maximum permissible mass for the combination (as held on the loading facility system);
d. Calculate the payload in kilograms and compare with the order quantity;
e. Adjust the order quantity to ensure that it does not exceed the calculated payload by more than 1%;
f. Convert the allowable payload to litres and compare this with the maximum payload in litres of the tank (as held on the loading facility system);
g. Ensure that the tank is not loaded to less than 75% or more than 100% of the payload capacity in litres (as held on the loading facility system);
h. Weigh the combination on completion of loading to determine the actual mass and volume of product loaded;

i. Incident management to prevent overloaded tankers from exiting the facility.

5.6 General conditions of operation

5.6.1 Conditions

All Transport Providers operating from or at the loading facility will do so in full compliance of the following conditions:

a. No company will be allowed to operate bitumen Bulk Road Tankers at or from any loading facility unless a commitment to compliance with these conditions has been confirmed in writing;
b. Transport Provider employees entering a loading facility premises shall adhere to the applicable general safety rules and requirements;
c. Transport Provider employees shall obey the reasonable instructions of the loading facility employees responsible for particular areas of operation or functions;
d. The Transport Provider accepts full responsibility for the acts or omissions of its employees whilst operating at a loading facility;
e. The BRT driver is responsible for the safe loading of his/her vehicle. The loading facility staff will provide assistance as necessary to ensure that all safety rules and procedures are adhered to;
f. The Transport Provider is responsible for ensuring that the vehicle and associated equipment used is suitable for the operation both in terms of the product being carried and the loading operation;
g. The Transport Provider will ensure that its employees are sufficiently skilled, trained and experienced in order to safely operate the equipment used and react to any emergencies;
h. The Transport Provider accepts sole custodianship of the product loaded, once the vehicle has been allowed to exit the facility;
i. The Transport Provider is responsible to ensure that all of the required product change-over procedures have been adhered to in order to ensure that the vehicle is suitable for the load to be carried;
j. The BRT driver is responsible for the accurate and correct reporting and accounting of any product left on board;
k. The inspections performed by the loading facility prior to entry and upon exit, do not guarantee absolutely that the vehicle, associated equipment and driver are suitable and qualified for the operation and

tasks and it therefore does not transfer the responsibility onto the loading facility;

l. The Transport Provider is solely responsible to ensure that the loaded vehicle does not contravene any of the applicable legislation with regards to axle or vehicle mass loads.

6. Health, Safety and Environment (HSE)

6.1 Objective

The objective of this section is to provide guidance and some basic rules to ensure that generally acceptable practice is adhered to in connection with aspects of Health, Safety and Environment (HSE) management at bitumen loading facilities.

6.2 General HSE considerations

6.2.1 The operating environment

Oil refineries are generally considered to be HIGH RISK operations and as such associated operational activities are usually strictly governed by well designed and structured HSE management systems. A mature HSE culture is also usually prevalent in refineries and refinery management expects visitors to its facilities to respect this culture and to behave in a similar manner while resident on the premises.

Bitumen is a hazardous product and loading of bitumen is a hazardous and potentially HIGH RISK task performed in a HIGH RISK operational facility. Bitumen Transport Providers and employees must therefore expect, and be prepared for, firm and strict HSE governance whilst operating at bitumen loading facilities.

6.2.2 Bitumen loading hazards and effects management

Sabita has developed a generic HSE Management System (HSEMS) for its members and the expectation is that members (including Transport Providers) shall adopt and implement this (or a similar) system to demonstrate that HSE within the (member) organisation is managed to an acceptable standard. The Hazards and Effects Management Process for bitumen hazards is described in greater detail in the Hazard Register appended to the Sabita HSEMS.

Herewith follows a brief summary of the most critical HSE considerations in connection with the loading of bitumen:

a. The loading gantry is a high risk area and the products handled are all flammable or potentially flammable when conditions are favourable. Employees of Transport Providers shall familiarise themselves with the site/loading facility operating procedures, rules and instructions AND OBEY these rules - ALWAYS;
b. The loading operation involves the moving and manoeuvring of heavy vehicles in an area where personnel also move around on foot. NEVER move a vehicle backwards in a loading gantry. If moving backwards is absolutely necessary it shall be done with the assistance of a guide person positioned behind the vehicle in clear view of the rear view mirrors;
c. During the process of loading bitumen a number of MEDIUM and HIGH risk scenarios are present and the following hazards and threats require specific controls:

    i. Personnel working at height (falls from tank top resulting in serious or fatal injuries);
    ii. Personnel exposed to bitumen vapour or fumes (Inhalation may cause acute health effects);
    iii. Flammable liquids/static electricity (ignition of flammable mixture results in fire or explosion);
    iv. Extreme temperature (overfilling/hose rupture/coupling failure could result in serious injury or death from hot bitumen burns).

    Transport Providers shall assure that specific attention is directed to these risks by conducting comprehensive risk assessments and proper job hazard analysis to ensure that vehicle drivers receive the necessary training to manage the risks.
d. HSE is everyone's responsibility. You have an obligation to report unsafe acts and conditions without delay to the gantry supervisor and/or to your immediate supervisor.

6.2.3 Specific safety rules to be observed in the loading area

a. All signage, procedures, and control measures shall be adhered to – ALWAYS;
b. No person shall remain inside the cab of the vehicle during the loading process;

c. The BRT driver is responsible for the safe loading of his vehicle. He shall be in full control of the process at all times and ensure that he is fully familiar with the operation of the vehicle, the loading equipment and control systems, the loading gantry meter, bonding and earth equipment. If the loading facility provides load operators the driver will act as loading assistant but his responsibility for the safety of his vehicle may never be delegated;
d. The driver shall remain at the loading point at all times whilst loading. If the driver has to leave the load area for whatever reason, the process must be stopped and re-started on his return;
e. Whenever in doubt about any rule or procedure, terminate the operation and call for assistance;
f. During the loading process, the driver must constantly be aware of product flow progress and load levels and check for equipment malfunctions and other obvious abnormalities. If any unsafe situation develops or is eminent, loading must be terminated immediately and the situation attended to;
g. The driver shall ensure that the correct product is loaded into the correct compartment;
h. The driver shall ensure that the requested load quantity does not exceed the allowable quantities applicable to the vehicle combination;
i. The driver shall not allow any unauthorised person to operate any equipment on the vehicle or the loading facility under any circumstances;
j. Unnecessary manoeuvring of vehicles will be avoided. The loading bay will not to be used as a thoroughfare;
k. Vehicles shall **NOT** be reversed in or around the loading facility designated area;
l. Repair work to the vehicle shall **NOT** take place inside the loading facility designated area;
m. A vehicle shall **NOT** be “jump-started” inside the loading facility designated area;
n. Personal Protective Equipment shall be worn as indicated in areas designated by signage;
o. When required to queue upon entry to the loading bay, such queuing will take place not closer than the demarcated stop line. Keep a proper following distance from the vehicle ahead. Radios/CD players must be switched off when queuing in this area;

p. Do not enter the loading bay if an obvious hazardous situation is present;
q. Do not knowingly operate or use faulty equipment and report faulty equipment immediately;
r. Adhere to the product change-over procedures;
s. A vehicle may not be moved whilst any form of connection between it and the gantry is in place;
t. Overriding of any safety or overfill prevention system is **STRICTLY PROHIBITED**;
u. Any overfill situation that occurred during loading will be rectified prior to departure. This will take place either by means of transferring product from one compartment to another or by pumping the product back to storage;
v. The following access controls are generally strictly enforced at refineries:

    i. Site speed limits;
    ii. Smoking in designated areas only. Smoking is not allowed inside vehicles;
    iii. Pedestrians always have the right of way and vehicles shall proceed with due caution;
    iv. The use of or being under the influence of alcohol is not permitted;
    v. Cell phones may not be taken into the loading area. Vehicle drivers will hand cell phones in for safekeeping at reception;
    vi. Firearms, weapons, explosives, incendiary devices, intoxicating beverages, illegal narcotics, dangerous drugs, controlled dangerous substances and unauthorised cameras are strictly forbidden on the premises;
    vii. All persons, vehicles and hand-carried items are subject to security inspection when entering the refinery, and may also be inspected whilst on the premises or upon departure.

7. Training requirements for bitumen loading personnel

7.1 Objective

It is acknowledged that Transport Providers may have their own internal standards, competence requirements and processes for training of bulk vehicle operators/drivers over and above the legal requirements for PrDP-D. The purpose of this section is to detail the minimum training requirements that shall be included in the training programmes in order to be fully compliant with this CoP.

The following persons are identified as 'critical' to the safe execution of loading a bitumen Bulk Road Tanker (BRT) at a bulk loading facility:

a. The bulk loading facility 'gantry operator' (this position may be known by different job titles in the various organisations that operate bulk loading facilities);
b. The BRT driver (could also be known as Bulk Vehicle Operator and various other titles).

7.2 Training and experience requirements

7.2.1 Loading facility personnel

Each bulk loading facility provides training for its gantry operators and it is accepted in good faith that such training is appropriate and sufficient to assure the competence of operators. It is therefore not appropriate, or intended, to prescribe training requirements to operators of loading facilities.

7.2.2 Training syllabus and experience requirements for a BRT driver

The training modules shall include and adequately address the expected outcomes as detailed below:

Topic	Expected outcome
Operation of BRT and equipment	Comprehensive understanding of the functions and operation of the equipment fitted to a bitumen BRT. An awareness of possible system variations between different BRTs in the company fleet.
Emergency response procedures	Can explain how to act in various emergencies, response to alarms, evacuation procedures.
General loading gantry HSE standards and procedures	Comprehensive understanding of the loading gantry HSE standards and procedures and the implications if these are not adhered to.
Product knowledge	Knowledge of the product that will be handled, the risks involved, colour codes and consequences of exposure and special handling precautions.
Pre-loading site entry requirements	Comprehensive understanding of requirements, the procedure and documentation involved for driver and vehicle entry at the loading facility.
Vehicle inspection	Basic understanding of the contents of the vehicle inspection checklist, the procedure and documentation involved, and can identify items that are not compliant with minimum technical specifications.
Loading procedure	Comprehensive understanding of the loading procedure and any documentation involved. To include consequences for non-conformance and accounting for Left On Board.
Incident management procedure	Basic understanding of the incident management procedure (for gantry incidents), the actions to be taken and the documentation involved.
Operation of loading gantry equipment	Comprehensive knowledge of the functions and operation of the loading gantry equipment.
Exit requirements and procedure	Comprehensive understanding of the post-loading exit requirements and procedure, inspection and any associated documentation.
Static electricity	Basic understanding of the causes, effects and control of static electricity associated with bitumen loading.
Product change-over procedure	Comprehensive understanding of the procedure for product change-over.
Product pump-back procedure	Basic understanding of the product pump-back procedure.

7.2.3 Competence assurance process

A Transport Provider (employer) of a BRT driver shall provide for a basic competence assurance process to evaluate the effectiveness of training and the ongoing maintenance of the required knowledge and skills. This process shall include as a minimum the following:

a. A written or (documented) oral examination to test the knowledge of trainees at the completion of theory training;
b. Practical “on-the-job” coaching/mentoring of ‘new’ drivers by an experienced driver. This process shall comprise AT LEAST THREE separate occasions of loading bitumen at a loading facility;
c. At the completion of the above the trainee may be accompanied by a CERTIFIED trainer and evaluated whilst loading bitumen at a loading facility. If the competence criteria are met an Operating Passport is awarded to the trainee driver;
d. If the trainee driver fails the evaluation by the trainer, the trainee shall be re-trained, as appropriate, and re-evaluated. This process will be repeated until the trainee demonstrates full competence or is otherwise dealt with in terms of internal personnel policy;
e. UNDER NO CIRCUMSTANCES shall a driver, who fails to produce a valid Operating Passport, be permitted to enter and load a vehicle at a bitumen loading facility. The obvious, and only exception to this rule is a trainee driver accompanied by a certified trainer or a driver with a valid Operating Passport.

7.2.4 Ongoing evaluation and re-training

a. After the initial awarding of the Operating Passport every driver shall be subjected to at least TWO practical evaluations in every 12 month period of loading bitumen;
b. If a driver has not loaded bitumen at a loading facility for a period in excess of six months, the OP will be withdrawn and complete re-training will have to be undergone;
c. Re-training may also be instituted as corrective action due to an incident attributed to a failure of a driver to comply with HSE requirements.

7.2.5 Documentation

a. BRT driver training course.
b. Competence evaluation records of drivers.

8. Documentation

8.1 Process documentation and forms

The documentation and forms necessary for proper administration of this CoP are listed in the table below:

Document ID	Document description
BL/ARTP	Application for Registration as Transport Provider (schedule of information)
BL/ADR	Application for Driver Registration
BL/AVR	Application for Vehicle Registration
BL/OP	Operating Passport (suggested layout)
BL/VEIR	Vehicle Entry Inspection Record
BL/SLPIR	Safe Loading Pass Inspection Record
BL/SLP	Safe Loading Pass (suggested layout)
BL/BLIP	Bitumen Loading Incident Report

8.2 Content and format of documentation and forms

Sabita recognises that the various bitumen loading facilities may already have some or all of the necessary documents and forms in place. However, as the purpose of this CoP is to standardise as far as possible, it is strongly recommended that the forms in use are reviewed and, if necessary re-designed to at least include the content as detailed in the appendices to this CoP.

9. Reference documentation

9.1 Normative references

a. Road Traffic Act – Act 93 of 1996;
b. SABS 1398 -1993 – Bulk Road Tankers for petroleum-based flammable liquids;
c. SANS 1518-2004 – Transportation of dangerous goods – Design requirements for road tankers;
d. SANS 1518-2008 - Transport of dangerous goods — Design requirements for road vehicles and portable tanks;
e. SANS 10231 – Transportation of dangerous goods – Operational requirements for road vehicles;
f. SANS 10232 – Transportation of dangerous goods – Emergency information systems;
g. SANS 10228 – The Identification and classification of dangerous substances and goods;
h. SANS 1142-1979 – Diesel engines modified for operation in a hazardous location;
i. SANS 60079/IEC 60079 – Electrical apparatus for explosive atmospheres – All relevant parts;
j. SANS 10108-2005 – The classification of hazardous locations and the selection of apparatus for use in such locations.

Note: *Each of the above standards may contain its own normative references.*

9.2 Informative references

a. Sabita Health Safety and Environment Charter, December 2009;
b. Sabita Health Safety and Environment Management System, Issue no. 1, revision 1, February 2010

10. Supplementary

This section is intentionally left blank and is reserved for future use to incorporate load facility-specific requirements that may not currently be addressed in this document.

11. Appendices

The following pro-forma documents are included for reader guidance at the back of this booklet:

Annexure 1	**BL/ARTP**	-	Application for Registration as a Transport Provider.
Annexure 2	**BL/ADR**	-	Application for Driver Registration.
Annexure 3	**AL/AVR**	-	Application for Vehicle Registration
Annexure 4	**BL/OP**	-	Operating Passport
Annexure 5	**BL/VEIR**	-	Vehicle Entry Inspection Record.
Annexure 6	**BL/SLPIR**	-	Safe Loading Pass Inspection Record
Annexure 7	**BL/SLP**	-	Safe Loading Pass.
Annexure 8	**BL/BLIP**	-	Bitumen Loading Incident Report

12. Appendices

Annexure 1 BL/ARTP - Application for Registration as a Transport Provider

Schedule of information in support of an Application for Registration as a Transport Provider and Operator of Bulk Road Tankers for the loading of bitumen at the bulk loading facility of:

_____

(Insert the Oil Company/Refinery)

A. Applicant particulars

Company name				
Company registration number				
Postal address				
			Postal Code	
Business address				
			Postal Code	
Business contact details	Tel No.		Fax No.	
Responsible person's name				
Contact responsible person at	Tel No.		Fax No.	
	Mobile No.		E-mail	
Alternative contact persons				
Name				
	Tel No.		Fax No.	
	Mobile No.		E-mail	
Name				
	Tel No.		Fax No.	
	Mobile No.		E-mail	

B. Particulars of companies/clients for whom bitumen will be loaded

Company/client name				
Responsible person's name				
Contact responsible person at	Tel No.		Mobile No.	
Company/client name				
Responsible person's name				
Contact responsible person at	Tel No.		Mobile No.	
Company/client name				
Responsible person's name				
Contact responsible person at	Tel No.		Mobile No.	

Particulars of companies/clients for whom bitumen will be loaded

Company/client name				
Responsible person's name				
Contact responsible person at	Tel No.		Mobile No.	
Company/client name				
Responsible person's name				
Contact responsible person at	Tel No.		Mobile No.	
Company/client name				
Responsible person's name				
Contact responsible person at	Tel No.		Mobile No.	

C. Attachments

Have the following documents been attached to the application for registration?	YES	NO
Proof of HSE accreditation with the relevant oil company		
Workmen's Compensation registration (copy of latest "Letter of good standing)		
?		
?		
?		
?		

Annexure 2 BL/ADR - Application for Driver Registration

Application for registration of a Bulk Road Tanker driver to load bitumen at the bulk loading facility of:

_____

(Insert the oil company/refinery)

A. Applicant particulars

Company name				
Company registration number				
Business address				
			Postal Code	
Application submitted by Contact details of applicant	Tel No.		Fax No.	
	Mobile No.		E-mail	

B. Driver particulars

Surname													
Full Names													
Known by name of													
Identity number													
Other (e.g. passport)													
Nationality													
Date of birth (year/month/day)													

C. Attachments

Certified copies of the following documents are attached to this application:	✓
Driver's Professional Driving Permit (PrDP-D)	
Driver's "foreign" driving licence (if applicable)	
Driver's SA ID	
Driver's passport	
Driver's certificate of competence (Operating Passport)	

C. Verification of signatures of applicants

Signature of applicant		Signature of driver	
		Date of application	

D. Consideration of application by the Loading Facility

Name of authorised person		Application is	Approved	Rejected
Reason for rejection				
Signature of authorised person		Date		

Application for Registration of a Bulk Road Tanker to load bitumen at the bulk loading facility of:

_____

(Insert the oil company/refinery)

A. Applicant particulars

Company name (Operator)				
Company registration number				
Business address				
		Postal Code		
Application submitted by	Name		Job title	
Contact details of applicant	Tel No.		Fax No.	
	Mobile No.		E-mail	

B. Vehicle particulars

Item	Information
Owner	
Registration number	
Licence expiry date	
Operator fleet number	
Contracted for (marketing company)	
Sub-contracted to	
Chassis make	
Model	
Vehicle type	
Tank manufacturer	
Year of first registration	
Year of tank manufacture	
Tank design standard	
Tank material	
Tank test pressure	
Last pressure test date	
Product tank is suitable for	
Vehicle drive/wheel configuration	

B. Vehicle particulars (continued)

	Compartment capacities (litres)		
	Gross	**Payload allowable (1)**	**Payload allowable (2)**
No.			
1			
2			
3			
Total			

	Mass Data		
	Unladen/Tare	**Manufacturer's rating**	**Permissible mass**
Front Axle/Unit	**N/A**		
Rear Axle/Unit	**N/A**		
Total			

C. Attachments

Certified copies of the following documents are attached to this application	✓
Vehicle licence disc	
Operator card	
Weighbridge certificate	
Permission from owner to register (if applicant is not owner)	

C. Verification signature of applicant

Signature of applicant _____ Date of application _____

D. Consideration of application by the Loading Facility

Name of authorised person _____ Application is | Approved | Rejected |

Reason for rejection _____

Signature of authorised person _____ Date _____

Annexure 4 BL/OP - Operating Passport

Suggested layout and format for BRT driver Operating Passport

Page size 110mm high X 80mm wide

Laminated for security and wear protection

OP No.

Operating Passport

Authorisation to operate a Bulk Road Tanker at a bitumen bulk loading facility.

Issued to:

Surname:

First names:

ID Number:

Employer company:

Name of authorised issuer

Signature of issuer

Date issued

Issued in accordance with the requirements of the Sabita Code of Practice - Loading bitumen at refineries

Front

Restrictions and endorsements

This passport is issued subject to the following operating restrictions

Endorsements:

Back

Loading facility		Date of inspection	
Inspected by		Time of inspection	
Vehicle Operator		Registration No.	
Vehicle Operator		Vehicle Type	
Vehicle Operator		Driver OP No.	

Item	Requirements	Load Safety Critical Item	Condition of item	
A. Signage and documentation			☺ = ✓	☹ = X
i	Display of valid Safe Loading Pass (for each vehicle in the combination).	**Yes**		
ii	Display of valid roadworthy certificate disc.			
iii	Display of valid Fire Certificate (Fire Permit).			
iv	Display of Dangerous Goods (Hazchem labels) notices, appropriate for product to be loaded, in good condition and with required telephone numbers.	**Yes**		
v	Display of "No Naked Flames", "No Smoking", "No Naked Lights" and "No Cellphones" signage.			
vi	Document holder in cab with TREM card, MSDS for relevant products, and Dangerous Goods manifest.			
vii	Verification on Left On Board (LOB) product.	**Yes**		
viii	Valid "order and authorisation to load" documents.	**Yes**		
ix	Certificate of cleanliness, including water free check.	**Yes**		
B. General vehicle roadworthiness				
i	All road lights in place and in good working order.			
ii	Tyres in good condition and no signs of obvious under-inflation.	**Yes**		
iii	Windscreen in sound condition and driver's line-of-sight not impeded by any damage.			
iv	External rear-view mirrors present and in good condition.			
v	Starting of engine under own power.	**Yes**		
vi	Chevron in place and visible.			
vii	Red reflective triangles in place.			
viii	Presence and condition of reflective marking tape on sides and rear of vehicle.			
ix	Number plates and rear number plate light in place and operational.			
x	Tank manufacturer's plate, chassis plate and compartment load plates.	**Yes**		
xi	Signs of severe oil leaks from engine or driveline.	**Yes**		
xii	Hooter in working order.	**Yes**		
xiii	No visible/audible signs of defective exhaust system.	**Yes**		
C. Vehicle 'fit for loading' condition				
i	Battery isolator in place and suitably marked.	**Yes**		
ii	Condition of electrical wiring, especially cable entries to junction points.			
iii	Correct number of fire extinguishers in working order, securely stowed.	**Yes**		
iv	Two wheel chocks.			
v	Battery cover in place and in good condition.			
vi	Bonding points (earth lugs) in place and clearly marked.	**Yes**		
vii	Condition of fixed tank-top access ladder.	**Yes**		
viii	Tank-top handrail fitted and operational.	**Yes**		
ix	Presence and condition of spill-box drains (check for signs of blockage).			
x	Drains terminate away from ignition sources (hot vehicle components).	**Yes**		
xi	Dust caps of bottom outlet couplings in place.			

Item	Requirements	Load Safety Critical Item	Condition of item	
C. Vehicle "fit-for-loading" condition (continued)			☺ = ✓	☹ = X
xii	Bottom valvs closed.			
xiii	Manholes closed and latched.			
xiv	Check for signs of leaks on the tank body			
xv	Vehicle generally in a reasonable clean condition.			
xvi	No loose items on tanker top or vehicle chassis			
D. Product Left On Board (LOB)				
i	Product quantity LOB confirmed as			
ii	How was LOB quantity determined			
E. GO/NO GO decision (mark with ✓ or X as appropriate)				
i	☺ **= GO**	Vehicle is fully compliant and may proceed to loading gantry		
ii	☹ **= NO GO**	Vehicle is not compliant and entry to the loading facility is refused		
iii	**Reasons for refusing entry**			
	(a)			
	(b)			
	(c)			
iv	**Immediate action taken**			
F	**Inspection verification**			

Signature of inspector

Signature of driver

Date and time signed _____

Date and time signed _____

_____

_____

Loading facility		Date of inspection	
Inspected by		New or renewal SLP	
Vehicle operator		Registration No.	
Fleet number		Vehicle type	

Item	In place Yes/No	Condition ✓ or X	Reference/Comment
Design specification			
Tank manufacturer's plate			
Compartment load plate/s			
Chassis plate			
Vehicle licence disc			
Valid operator disc			
Valid fire permit			
Manhole covers			
Manhole cover PV vents			
Loading adaptor with dust caps			
Bottom outlet valves			
Tank-top access ladder			
Tank-top walking area			
Tank-top handrail			
Spill containment area/Spill box			
Spill box drain pipes			
Bonding/Earth lugs			
External tank-chassis bonding cables			
Fire extinguishers			
Electrical wiring			
Battery cover			
Battery isolator			
Triangles			
Wheel chocks			
Front charge line			
Side under-run			
Rear under-run			
Exhaust system position and shielding			
Mudguards			
Mud flaps			
Tyres			
Service fuel tank cap, sender unit wiring			
Headlights			
Direction indicators			
Stop/Tail lights			
Windscreen			
Rear view mirrors (external)			
Reflective chevron (rear)			
Reflective tape (vehicle sides)			
Number plates			
Document holder in cab			
Dangerous goods diamond			
Dangerous goods signage			
No Smoking etc. signage			

Item	In place Yes/No	Condition ✓ or X	Reference/Comment
Tank and pipelines free of leaks			
General condition			
Engine starting			

Inspection outcome

Authorisation for issue of a Safe Loading Pass for this vehicle is	**APPROVED**	**NOT APPROVED**

This vehicle may be presented for re-inspection if the following defects have been rectified:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Signature of inspector _____ **Date** _____

Annexure 7 BL/SLP - Safe Loading Pass

Suggested layout and format for a Bulk Road Tanker Safe Loading Pass

Page size 110mm high X 80mm wide

Laminated for security and wear protection

SLP No. _____

Safe Loading Pass

"Certificate of fitness" of a Bulk Road Tanker to load bitumen at a bitumen bulk loading facility.

Vehicle registration number: _____

Vehicle type: _____

Operator: _____

Issuing company: _____

_____

Name of authorised issuer

_____

Signature of issuer

Date issued: _____

Expiry date: _____

Issued in accordance with the requirements of the Sabita Code of Practice - Loading bitumen at refineries

Restrictions and endorsements

This passport is issued subject to the following operating restrictions:

_____

_____

_____

_____

_____

Endorsements:

_____

_____

_____

_____

_____

_____

_____

_____

Annexure 8 BL/BLIP - Bitumen Loading Incident Report

Bulk Road Tanker Bitumen Loading Incident Report

Incident number

Loading facility | **Date** | **Time** | **Reported by**

Driver and vehicle detail

Driver name | **OP No.** | **Employer company**

Vehicle SLP No. | **Date SLP issued**

Incident detail

Location | **Bay** | **Meter No.** | **Product loaded**

Preset volume | **Volume loaded** | **Spillage (Y/N)** | **Spillage quantity**

Brief description of incident:

Immediate action taken:

Notification of incident sent too:

Preliminary investigation done by:

_____ _____

_____ _____

Probable immediate cause of incident:

_____ _____ _____ _____

Signature of Load Controller/Shift Supervisor | **Date** | **Time** | **Signature of driver**