

SITE ADDRESS: _____

DATE/TIME OF INSPECTION _____



SITE AUDIT

The site audit has been compiled from the RBA Code of Practice for the Safe Delivery of Bitumen Products.

Procedure.

It should be remembered that the audit must be carried out as a joint exercise between the supplier's representative, the site manager, or his appointed representative.

The procedure is in two parts. Firstly the physical audit, followed by completion of the Risk Assessment Form.

Therefore:

1. A suitably convenient date should be arranged. Allow approximately 2 hours for the audit.
2. The audit should be carried out with both parties present.
3. The audit record form should be used to record conditions on the day of the audit, giving as much detail as possible. Guidance on completion of the audit is included at the end of this section.
4. All non compliances should be discussed as they arise and noted
5. For all non-compliances the Risk Assessment Matrix must be applied to quantify level of risk. Further action should then be agreed, and a time period for the rectification to take place.
6. The site management should sign both the audit document & the Risk Assessment. A signed copy should be kept on record by both the supplier and the site. Copies may be supplied to the Safety Manager/Officer for the company.
7. The site should be re-visited after the agreed time period has elapsed, to ensure task completed. Supplier procedures should apply in event of reluctance to rectify hazards, which will involve escalation within the customer's and supplier's organisation.
8. The Risk Assessment process should be completed prior to any initial delivery, then at least every two years, or when there is a change to the plant, equipment, or procedures. One should also be considered following any incidents.



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SITE AUDIT

The Audit booklet has been compiled from the RBA Code of Practice for the Safe Delivery of Bitumen Products.

In the Rating column a C will be used for compliance, and an N will be used for non-compliance to the RBA Code of Practice for the Safe Delivery of Bitumen Products.

1.	CUSTOMER SITE	AUDIT FINDINGS	Rating
a)	Clearly designated safe routes to and from the delivery points should be provided including access to and from weighbridge for both vehicles and personnel.		
	- If drivers are required to weigh in and out, a walkway must be provided to enable safe access to and from the vehicle.		
	- All approach routes should be well lit, particularly during the hours of darkness.		
b)	<p>A safe and readily accessible delivery point should be provided and the following should be considered</p> <ul style="list-style-type: none"> - In selecting the delivery point, due regard should be paid to nearby haul roads and traffic routes. The need for vehicle reversing must be kept to a minimum. - A flat even surface for the vehicle where the driver can discharge the load in safety and is protected from other traffic movements. - Unrestricted movement around the vehicle. (2 metres around the vehicle is required. - No access within 6 metres to pedestrians not involved in delivery operation. - Adequate lighting should be provided in the discharge area. - An area, which is, tidy and clear of obstructions. - No surrounding or adjacent operations which could impair a safe delivery. - A safe exit route in the event of an emergency. 		



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1.	CUSTOMER SITE (Continued)	AUDIT FINDINGS	Rating
c)	An emergency shower must be provided within 20 metres of the discharge point, together with signs indicating its position. Advice on the treatment of bitumen burns should be displayed in the delivery area.		
d)	Instructions for safe operations should be posted in the delivery area.		
e)	All receipt facilities, including discharge points, tank gauges and vent pipes should be regularly cleaned checked for serviceability and any defects logged and rectified.		
f)	A facility should be provided for the collection and disposal of all hose drainings.		
g)	A dry powder fire extinguisher should be provided in close proximity to the delivery flange.		
h)	Customers and suppliers are jointly responsible for ensuring that drivers are aware of the Site Safety and Emergency Procedures.		
i)	The customer is responsible for ensuring drivers are in possession of a RBA Drivers Passport.		

2. PERSONAL PROTECTIVE EQUIPMENT

All drivers delivering bitumen products have been provided by their employer, Personal Protective Equipment and have received training in its use and maintenance.

Are the driver's and company representative's PPE complying with the RBA Code of Practice PPE guidelines.
 (See Appendix 1 - RBA Code of Practice for the Safe Delivery of Bitumen Products)

Drivers PPE/Comments	Rating
Customers Representatives PPE/ Comments	



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3. DRIVER VEHICLE EQUIPMENT	AUDIT FINDINGS	Rating
Refer to RBA COP Appendix 2.		

4. CUSTOMER STORAGE & ASSOCIATED PIPEWORK	AUDIT FINDINGS	Rating
a) Sufficient tank ullage to take the load + 10% safety margin should be provided. (For correct calculation refer to RBA Recommendation for 10% safety margin, see Appendix 3 of COP)		
b) Each tank and its associated delivery pipe should be independently and uniquely identified with both the tank number and grade.		
c) Adequate and reliable means of gauging the tank contents and ullage, should be available. Such gauges should clearly identify which tank they refer to, and be visible from the driver's position at the discharge point. Serviceability of content gauges should be regularly checked and maintained to the highest standard, plus systems documented. Wherever possible a duplicate system should be provided in the plant control centre.		
d) A High-level Alarm system must be installed. The activation of the alarm system should be independent of the content gauging system. To avoid product spillage, whilst the delivery hose/line is being cleared, the alarms should be set to trigger at the maximum tank content less 10%. Alarms should be clearly identified with which tank they refer to when activated.		
e) Content gauges and High Level alarms should be clearly visible and audible to all those responsible for the safe receipt of product. As with content gauges, high-level alarms should be regularly tested and maintained.		
f) Vent pipes should be located where they do not pose a risk to personnel or vehicles, and should be kept clear at all times.		
g) Tank lids should be kept closed at all times, during the delivery. If in the event of a product overflow, there is a danger of bitumen spilling onto the discharge area, or any other populated areas action should be taken to provide protection.		



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4.	CUSTOMER STORAGE & ASSOCIATED PIPEWORK (Cont)	AUDIT FINDINGS	Rating
h)	Customer delivery pipework must be of adequate design, well supported and maintained and fitted with a standard delivery flange, 15mm minimum thick, located 0.5m - 1m above ground level. (It is recommended that all new installations are fitted with flanges of the design, shown in RBA COP Appendix 4 and all existing flanges are replaced as soon as is practicable with this design.		
i)	Access to the customers delivery flange must be such as to allow for safe and easy connection of the delivery hose.		
j)	Some customer tanks may have fill pipes that go to the bottom of the tank to minimise oxidation. Such fill pipes must be slotted, or fitted with an alternative device, to prevent siphoning.		
k)	Distance between vehicle and the storage tank flanges should not be more than 2.5 metres.		
l)	A flange security system, such as padlocks, should be fitted to maintain control & prevent cross contamination and possible spillage. Each system should be robust, tank specific, and fit for purpose.		
m)	Tanks must be fitted with a correctly designed drain valve, to enable the safe emptying of the tank for cleaning and maintenance.		
n)	Should there be a requirement to take product samples, a purpose-designed valve must be permanently fitted to the tank or corresponding pipework. Under no circumstances should sample be taken from the delivery vehicle or hoses at the delivery site.		
o)	All access ladders and walkways on tank roofs should be fitted with suitable guards to prevent falls.		
p)	Where bitumen EMULSION tanks are present, it is imperative that all supply and return pipework are segregated from the bitumen pipework system. Fill point connections should be of the screw type, to prevent accidental connection.		



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4.	CUSTOMER STORAGE & ASSOCIATED PIPEWORK (Cont)	AUDIT FINDINGS	Rating
q)	Where bitumen tanks are being returned to service, great care should be taken to ensure that the tank is free of water (a checklist is available on the RBA website) Is the customer aware of checklist?		

5.	PROCEDURES FOR CUSTOMER ATTENDED DELIVERIES	AUDIT FINDINGS	Rating
a)	The customer must confirm that the grade and quantity being delivered are correct.		
b)	The customer's representative is responsible for <ul style="list-style-type: none"> - Verifying connection to the appropriate tank and receiving flange for the delivery - Certifying that there is sufficient ullage to receive the full vehicle load. - Signing the driver's documentation prior to delivery. - Ensuring lines and valves are routed to correct tanks 		
c)	The customer is responsible for the drivers' well being whilst on their premises. Their representative must monitor the drivers safety during the discharge process by one of the following methods: <ol style="list-style-type: none"> 1. Visually monitoring e.g. line of sight or CCTV 2. Regular checks made on the delivery process as per site risk assessment. 3. Attend the discharge process with the driver. (N.B. When the customer's representative is in the vicinity of the discharge point they must wear appropriate protective clothing as stated in RBA COP Appendix 1) 		
d)	All unauthorised personnel must be kept away from the area surrounding the delivery hose. Where tanks are situated inside buildings that are poorly ventilated, entry into that building must be restricted to authorised personnel only, and during discharge, activities inside the building must be kept to a minimum. At no time during the delivery should any person be on top of the storage tank.		



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5.	PROCEDURES FOR CUSTOMER ATTENDED DELIVERIES(cont)	AUDIT FINDINGS	Rating
e)	Split loads are not recommended and should be avoided. However, if the load is to be delivered into more than one tank, then each tank should be treated as a separate delivery point. If the vehicle needs to be moved, the delivery procedure must be repeated in full. This will require the removal of the delivery hose from both vehicle outlet and customer flange. Delivery documents shall be endorsed accordingly to identify the additional tank(s) and in particular, that ullage and grade checks have been completed prior to delivery.		
f)	On completion of delivery, the driver will clear all discharge pipework and disconnect the tanker hose. All hose drainings must be disposed of in the receptacle provided by the customer for this purpose.		
g)	On completion of delivery, the customer's representative shall complete and sign the delivery documents to acknowledge receipt of the load. The customer shall also confirm that the flange security system is re-instated		
h)	The driver is solely responsible for the operation of his vehicle and equipment throughout the discharge procedure, and shall remain by the vehicle shut off valve whilst discharge is taking place. The driver shall wear full Personal Protective Equipment at all times during the discharge process, as stated in RBA COP Appendix 1.		
i)	Any deficiency in tanker drivers' delivery procedures must be promptly reported to the bitumen supplier who will take corrective action.		
j)	Drivers are encouraged to report any defects that they identify at customers' sites, firstly to the customer, secondly to the bitumen supplier so that joint corrective action can be taken.		



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6.	BITUMEN SPECIFIC TRAINING	AUDIT FINDINGS	Rating
a 1	All drivers employed in the transportation and deliveries of bitumen products receive regular training under the following headings. <ul style="list-style-type: none"> • ADR – International Agreement for Dangerous Goods by Road. • Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004 U.K. • RBA Hazard Awareness • Employer specific training programmes. 		
a 2	During the audit if a delivery is being carried out, check with the driver if he/she is in possession of the RBA Drivers Passport.		
b)	Customer representatives and delivery drivers should receive training on the safe handling, storage and receipt of bitumen products. Training requirements should be reviewed regularly.		
c)	Training records of all individuals must be kept on file.		
d)	Most bitumen suppliers will offer on request, assistance and advice on bitumen training.		

7.	ADVICE ON THE TREATMENT OF BITUMEN BURNS	AUDIT FINDINGS	Rating
a)	Comprehensive advice on the treatment of bitumen burns has been issued by the Eurobitume (European Bitumen Association). The RBA fully supports the advice given and includes it in the Code of Practice.		

Customer Representative

Name: _____

Position: _____

Signature: _____

Supplier Representative

Name: _____

Position: _____

Signature: _____



Guidance Notes to assist in the completion of the Site Audit

1. Customer Site

- a) How safe is the route to and from the delivery point? Is there a designated route?
What signs are provided? Is there /a camber/an incline/etc?
What is the road surface like; slippery, potholes etc?
What form of safe access is provided to/from a vehicle on the weigh-bridge?
- What lighting is provided on the approach routes? How do you know it is adequate?
This should be checked during hours of darkness.
Obtain driver report if unable to check during hours of darkness.
Is there vehicle/pedestrian segregation?
- b) How safe is the delivery point relative to adjacent haul roads and traffic routes?
Are there adjacent site activities?
What distance are they (traffic routes/other activities) from the delivery point?
- How far does the truck have to reverse to the discharge point?
Measure the distance. (Maximum 25 metres without assistance).
Is assistance provided if more than 25 metres?
- What sort of surface is provided for truck at the discharge point?
What is the surface (concrete, asphalt etc) is it flat/inclined/even etc?
- What is there restricting driver movement around the vehicle?
Is there at least 2 metres at each side of the truck?
Is discharge flange in a safe position relative to the Homer valve (opposite side)?
- What distance is the closest pedestrian route from the discharge point?
Are cones/chain/etc used to restrict area around the discharge point?
Are there signs restricting access close to the discharge point?
- What form of lighting is provided in the discharge area?
How do you know it is adequate? Should be checked during hours of darkness?
Can documentation be read? Are there any areas of darkness?
Obtain drivers report if unable to check during hours of darkness.
- What obstructions/rubbish/etc is there in the discharge area?
- What adjacent operations are there that could impair a safe delivery?
Is there dust/aggregate silos/conveyors/etc?
- What is the exit route in the event of an emergency?
- c) What sort of emergency shower is provided?
How do you know it is suitable for purpose? Does it work? Is it heated? Is it alarmed?
- What is the distance of the emergency shower from the discharge point?
Maximum 20 metres, but also consider if it is too close.
- What obstructions are there on the route? Are there directional signs to the shower?
- What advice on the treatment of burns is displayed? Where is it displayed?

- d) What instructions for safe delivery are displayed in the delivery area?
- e) What procedures are in place to ensure all receipt facilities and safety equipment , including discharge point, tank gauges, vent pipes etc are regularly cleaned and checked for serviceability? What records are kept to record the procedures?
What system is used to log defects?
What system is in place to ensure defects are followed up and rectified?

In each case above in e) describe briefly the procedures used/records kept.
The records etc should be seen by the auditor.
- f) What facility is provided to collect hose drainings? What is the disposal method?
- g) What fire extinguishers are provided in the delivery area?
How do you know they are serviceable? Is there a last service date on the extinguisher?
Can be CO2 or foam. NOT water.
- h) What mechanism is in place to ensure driver is aware of the Site Specific Safety & Emergency Procedures? Auditor should sight the procedures.

How are the procedures communicated to the driver?
Does the driver sign for them?
- i) Check how many audits of driver RBA 'Driver Passports' have been carried out in previous twelve months.

2. Driver's / Customers PPE

Is a delivery taking place at the time of the audit?
If 'yes' what PPE is the driver / customer wearing?
Does it meet COP requirement?
Does it meet site requirements?

3. Delivery Vehicle Equipment

Refer to appendix 2 of COP. Not a site audit requirement.

4. Customer Storage & Associated Pipework

- a) Does the customer apply the RBA COP recommendations in ascertaining the safe working volume of storage tanks (RBA COP appendix 3)
How does the customer determine the order volume?
- b) Record the details provided on each tank and associated delivery pipe to identify it?
- c) What type and make of tank level gauging is provided?

How does each gauge identify which tank it refers to?
What tank level information is available at the discharge point?
Can the driver see the tank gauge/s?
What system is in place to ensure level gauges are regularly serviced and maintained?
What records are there? What tank level information is available in the plant control centre?
- d) What type of high level alarm is fitted to each tank?
Are they independent of the level gauging system?
(If no HLA is fitted is there a satisfactory mitigating procedure in place)
At what volume relative to the safe working volume are they set at?

- e) What system is in place to ensure driver is aware that a high level alarm is activated and what tank it refers to? Are there visible and audible alarms? Can the driver see and hear them? What system is in place to ensure HLA's are regularly serviced and maintained?
- f) How far is each vent pipe located from the i) the discharge point/driver and ii) general pedestrian access ways? Are the vent pipes clearly identified? What system is in place to ensure vent pipes are kept clear?
- g) What is the status of the tank lid on each storage tank during delivery?
In the event of a discharge from the vent or manlid , on each tank, how far is it from i) the discharge area/driver and ii) general pedestrian access ways?
Are the vent pipes clearly identified? Is any overflow contained or diverted?
Failing the overflow being contained/diverted is there an alternative system to protect the driver and pedestrians?
- h) What thickness is the delivery flange for each tank?
Is there any distortion of the flanges? Is there any wear on the flange?
What height is each flange above the ground? Should be 0.5m – 1m above ground level.
How is each flange/pipework supported?
- i) How difficult is it to connect the delivery hose?
It would be preferable to either witness connection by driver or ask driver.
- j) Does the fill pipe for each tank go 1) to the bottom of the tank or 2) into the side of the tank? What arrangements are in place to prevent siphoning (where pipe goes to bottom of tank)?
In both cases in j) it will probably be necessary to ask.
- k) What is the distance from the delivery vehicle and each delivery flange?
Should not be more than 2.5 metres.
- l) What arrangement is in place to ensure the security of each delivery flange and prevent cross contamination? Are padlocks fitted?
Is there a different padlock for each delivery flange?
Is the key management system robust? Is there a different key for each padlock?
- m) What facility is fitted to each tank to enable it to be emptied/cleaned/maintained?
Would working at height regulations be contravened? Driver not permitted to access top of tank.
- n) What type of product sampling facility is fitted to each tank and/or pipeline?
- o) What facilities are in place to prevent falls from tank access ladders and walkways?
- p) What system/mechanism is in place to provide segregation from bitumen EMULSION tanks? Are the connections different?

5 Procedures for Customer Attended Deliveries

A meaningful audit of this section is best carried out whilst a delivery is in progress! Failing this reference to documentation will satisfy some questions.

- a) How does the customer confirm that the grade and quantity being delivered are correct?
How does the customer's representative
- verify the appropriate storage tank and receiving flange for the delivery?
 - Certify there is sufficient ullage to receive the full vehicle load?
 - Ensure pipelines and valves are routed to the correct tanks?

Does the customer's representative sign the delivery documentation prior to delivery?

- b) How does the customer's representative monitor the delivery process and the well-being of the driver? What is the frequency of physical checks? (Should be at least every 10 minutes)
If/when in the vicinity of the discharge point what PPE does the customer's representative wear?
- d) What unauthorised persons (if any) were in the vicinity of the delivery hose?
Are the tanks inside a building? What unauthorised personnel (if any) entered the building?
Are there any signs?
- e) Was the load delivered into more than one tank?
How did the customer's representative identify the delivery tanks?
How did the customer's representative identify the grade and quantity to be delivered into each tank?
- f) Where did the driver dispose of the hose drainings?
- g) How did the customer's representative acknowledge receipt of the load?
How did the customer's representative confirm that the flange security system was reinstated?
- h) Where was the driver situated for the duration of the discharge? Should remain by vehicle shut-off valve.
- i) Did the customer's representative identify any deficiency in the delivery driver's procedure?
If 'yes', what were they and to whom did he/she report it?
- j) Did the driver identify any defects at the customer site?
If 'yes', what were they and how was this to be reported?

6. Bitumen Specific Training

What records are there to confirm drivers are carrying a RBA 'Drivers Passports' and have received training in accordance with:

ADR-International Agreement for Dangerous Goods by Road.
UK-Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004.
RBA Hazard Awareness training.
Employer specific training programme.

What training records are there for each driver?

What records are there to confirm customer's representatives have received training on the safe handling, receipt and storage of bitumen products?

What system ensures training requirements are regularly reviewed?

What training record is there for each customer employee involved in bitumen receipt?

7. Advice on the Treatment of Bitumen Burns

What advice on the treatment of bitumen burns is available at the customer site?

RISK ASSESSMENT MATRIX




Consequence or Severity	P R O B A B I L I T Y				
	Extremely unlikely	Not likely to occur	Possibility of occurring at some time	Possibility of isolated incidents	Possibility of repeated incidents
Slight injury or less	L	L	L	L	M
Minor Injury	L	L	M	M	M
Serious Injury	M	M	M	H	H
Fatality	M	M	H	H	H

Risk Ratings: H = Unacceptable M = Further controls required L = Acceptable



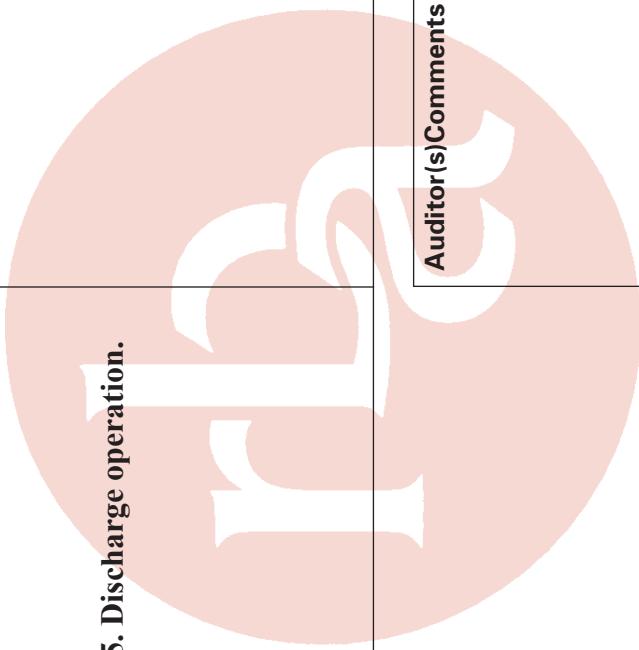
DISCHARGE OF BITUMEN AT CUSTOMER PREMISES - SITE RISK ASSESSMENT:

Activity	Potential Hazards	Persons at Risk	Current Controls	Risk Rating	Further Controls to Minimise Risk (if required)	Residual Risk	Review Date
<p>1. Reporting to site office and weighing vehicle</p> <p>2. Accessing -leaving delivery point</p> <p>3. Positioning vehicle.</p> 							

DISCHARGE OF BITUMEN AT CUSTOMER PREMISES - SITE RISK ASSESSMENT



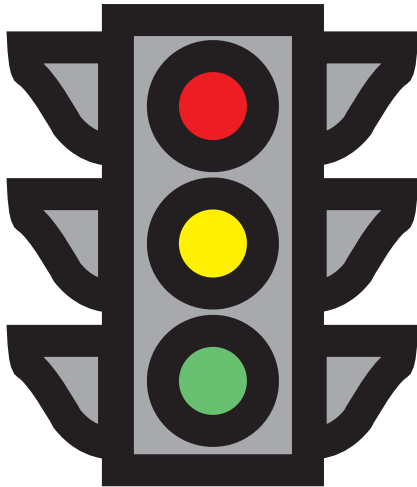
Activity	Potential Hazards	Persons at Risk	Current Controls	Risk Rating	Further Controls to Minimise Risk (if required)	Residual Risk	Review Date
4. Connecting & disconnecting hose - flex.							
5. Discharge operation.							



Auditor(s)/Comments	Customer Representative	Supplier Representative
	Name	Name
	Position	Position
	Signature	Signature

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RBA Customer Site Traffic Light System

Red: A red situation would mean Bitumen delivery to the site is suspended.

Amber: Site is not complying in certain areas of the RBA Code of Practice 2006.

1. Identify actions necessary for the reduction of any risk highlighted within the non compliance.
2. An agreed action timescale between customer and supplier must be implemented.
3. Failure to complete actions within agreed timescale for compliance could lead to a RED situation.

(Note: Please refer to Page 1. Reference 7. of this booklet)

Green: The site is in compliance with the RBA Code of Practice 2006.

Site Rating:

On completion of this audit, this site has been rated	<i>(Please write Red, Amber or Green)</i>
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