

RISK ASSESSMENT

Pre-Start Hazard Assessment (PHA) – Semi Water Tanker Operation

Form Reference:	ISO-BMS-RA-021
Plant/Vehicle/Machine Type:	Prime Mover + Semi Water Tanker Trailer Combination
Project/Location:	

Purpose & Scope: This Pre-Start Hazard Assessment (PHA) identifies the tasks, hazards, and required control measures for the safe operation of this vehicle across Consolidated Group of Companies (CG/CTS/JG) sites, including Pilbara mining and civil construction environments. It must be read, understood, and signed by every operator prior to first use, and reviewed whenever conditions, plant, or the system of work change.

ALL OPERATORS MUST SIGN BELOW TO ACKNOWLEDGE THEY HAVE READ AND UNDERSTOOD THIS PHA, AT LEAST ONCE, PRIOR TO THE OPERATION OF THIS MACHINE.

Name	Date	Time	Signature

Approval & Sign-Off

Supervisor/s Responsible for this Document:	
Full Name:	
Location/Project ID:	
Date:	
Signature:	

Follow-Up Review Triggers

Follow-up trigger – review this PHA on change to: use of plant, system of work, plant environment, new information, or plant modification.	Y	N
Is the plant designed to perform the task?	☐	☐
Has the plant been modified from the original condition?	☐	☐

Follow-up trigger – review this PHA on change to: use of plant, system of work, plant environment, new information, or plant modification.	Y	N
Is the plant in good working condition and free of leaks, damage, mud and vegetation build-up?	☐	☐
All identified action items closed out/addressed (plant checks)?	☐	☐
Is the plant safe to operate? (on completion of PHA and any action closures)	☐	☐

Task, Hazard & Control Assessment

Task	Hazard	Initial Risk	Current Control Measures	Residual Risk	Responsible
PRE-START					
Operator competency & fitness for work	Unqualified, unlicensed, unfit, or fatigued operator	H17	- Operator holds current VOC (Verification of Competency) for this specific plant item and has completed site induction. - Fit for Work declaration completed; zero tolerance for alcohol and non-prescription drugs. - No operation while affected by fatigue, medication, drugs or alcohol - report to supervisor immediately if unfit.	L4	Operator
Pre-start inspection	Undetected plant defect leading to failure during operation	H17	- Complete documented pre-start/prestart book covering the items specific to this plant (see below), guards, isolators, e-stops, reversing alarm, beacon, fire extinguisher, first aid kit and spill kit. - Regular scheduled servicing/maintenance per manufacturer's schedule; defects tagged out and reported - do not operate a tagged/defective item. - Registration/inspection current where applicable.	M8	Operator
COUPLING & COMBINATION					
Coupling/uncoupling prime mover and tanker trailer	Crush injury coupling/uncoupling, or trailer runaway if not correctly secured	H17	- Trailer parked on level ground with park brake applied and wheels chocked before uncoupling. - Fifth wheel/coupling visually confirmed locked and air/electrical lines connected before moving off; pre-trip coupling check completed every time. - No personnel between the prime mover and trailer during coupling manoeuvres.	M8	Operator
FILLING & TRAVEL					

Task	Hazard	Initial Risk	Current Control Measures	Residual Risk	Responsible
Filling at hydrant, dam, or bore connection	Overfilling, hose failure, or slip/trip hazard at the fill point	H14	- Fill point/hydrant connection inspected before use; hoses and camlock fittings checked for wear or damage. - Tank level monitored during filling to prevent overfilling/overflow.	M9	Operator
Travel with a full/partial load (water surge)	Jack-knife or loss of combination stability from water surge inside the tanker, particularly when braking or cornering	H18	- Baffled tank design relied upon where fitted; speed reduced on corners, uneven ground, and when braking with a partial load. - Obey site speed limits and haul road rules; IVMS/journey management followed where required by client. - Combination mass and axle loads kept within registered limits for this configuration.	M9	Operator
Reversing the combination	Struck-by or jack-knife injury reversing a prime mover/trailer combination	H17	- Spotter used for all reversing manoeuvres; reversing alarm and camera (where fitted) operational. - Reversing carried out slowly with awareness of the trailer's swing path.	M8	Operator
Spray bar operation for dust suppression	Struck-by or slip hazard from spray discharge, or reduced visibility for other road users	M8	- Spray bar directed away from personnel, other vehicles, and the roadway edge. - Spray rate adjusted to conditions; operator maintains awareness of following traffic.	L4	Operator
BREAKDOWN & MAINTENANCE					
Roadside breakdown	Struck-by from passing traffic while stopped on the traffic side of the combination	H14	- Position the combination as far off the road as possible; hazard lights on; reflective vest worn and triangles placed at correct distance front and rear. - Stay with the vehicle and contact supervisor for assistance.	M9	Operator
Maintenance and servicing	Injury during servicing, or unit returned to service with an unresolved defect	M8	- Combination isolated (keys removed/tagged) and stationary, trailer chocked, before any maintenance task begins. - Tank, pump, spray bar, coupling and hoses inspected per service schedule; defects tagged and reported immediately.	L4	Operator / Mechanical Team

Post-Task Activities

Post-Task Activities	Y	N
Ensure all tools are collected & returned to store/workshop.	☐	☐
Remove all waste materials from the area & place in the appropriate bins.	☐	☐
Report any damaged equipment.	☐	☐
Remove any barricades erected if no longer required.	☐	☐
Leave area clear of hazards.	☐	☐
Check area for hydrocarbon spillages.	☐	☐
Remove isolations and complete any permits/certificates if applicable.	☐	☐
Clean the cabin for the next person on shift to ensure a healthy work environment.	☐	☐

Additional Notes

Important: Every person on site must read this document and be familiarised with the underlying risks associated with operating this vehicle. It is the site supervisor's responsibility to check every team member has been briefed and has signed to acknowledge. Please add a note for any new risk identified during operation.

Risk Matrix

Likelihood \ Consequence	1 Insignificant No injury / near miss	2 Minor First aid / medical treatment	3 Significant LTI or restricted work duties	4 Major Fatality or serious permanent injury	5 Catastrophic Multiple fatalities – 50 or more health effects
Almost certain – Expected to happen	H11	H16	E20	E24	E25
Likely – Could happen frequently	M7	H12	H17	E22	E23
Possible – Could happen occasionally	L4	M8	H13	H18	E21
Unlikely – May occur sometime	L2	L5	M9	H14	E19
Rare – May only occur in exceptional circumstances	L1	L3	M6	H10	H15

Risk Rating – Actions Required After Ranking Risk

E STOP	H REVIEW	M PROCEED	L PROCEED
Eliminate or reduce the hazard to acceptable level (e.g. Medium or Low) in order to proceed	Controls to reduce hazard as far as reasonably practicable	With stated controls and supervision	And monitor for changes in conditions

Control the Risk – Hierarchy of Controls

Hierarchy of Controls	Examples of Controls
Elimination	• Design change, change of construction methodology

Hierarchy of Controls	Examples of Controls
Substitution	• Use safer substance/chemical • Environmental catchments/sedimentation pools
Isolation	• Guards on power tools; effective screens, barriers and edge protection • Enclose noisy machinery; environmental swales, booms or barriers, paint washout station
Engineering	• Earth leakage device (safety switch) on electrical sources • Use a machine to lift heavy objects; use scaffold rather than a ladder as a working platform
Administration	• Change work practices and safe work method procedures • Tagging and testing procedures or waste sorting
PPE	• Hard hats, glasses, hearing protection, hi-vis vests, safety boots/shoes • (Note: PPE should be the last option to protect people)